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Chapter 2

Long-term vision, planning and governance in Japan

This chapter considers the institutional and policy framework that Japan is putting into place in order to secure national prosperity and a sustainable settlement pattern in the face of the quite radical demographic changes now under way. It starts with an analysis of the National Spatial Strategy adopted in 2015 and a look at the work of the Government Headquarters for Overcoming Population Decline and Revitalising the Local Economy. This is followed by a discussion of the relationship between revitalisation efforts and policies aimed at greater decentralisation in Japan's public governance. Two further sections focus on inter-governmental revenue-sharing and grant allocation and on possible pathways for reforming inter-governmental transfer mechanisms. The final portions of the chapter consider national infrastructure policies and the future of local public corporations, particularly – but not only – those working in infrastructure sectors.

As seen in Chapter 1, the prospect of a large-scale and sustained fall in population has led to considerable debate about how the settlement pattern of the country will – or should – change. The trends in question are not new – the Basic Act on Measures for the Ageing Society was adopted as long ago as 1995 – but they are unfolding only gradually, so it has taken some time to generate a sense of urgency about them. That is now changing, and the current government has made Japan's demographic transition one of the central items on its domestic policy agenda. This chapter therefore examines the broad national frameworks shaping the response to Japan's economic and demographic challenges: first, it looks at the national-level spatial vision embodied in the Grand Design for National Spatial Development to 2050 and the National Spatial Strategy; it then provides an overview of the activities and agenda of the new Government Headquarters for Overcoming Population Decline and Revitalising Local Economies. Because so much of the spatial dimension of Japan's adaptation to economic and demographic change will depend on subnational governments, the discussion then shifts to multi-level governance issues, particularly the systems of municipal finance, intergovernmental transfers and infrastructure maintenance and renewal.

The local revitalisation project that the government has developed since early 2013 is intended to provide a framework for coherent, long-term policy aimed at turning Japan's forbidding demographic and economic challenges into opportunities for growth, innovation and enhanced well-being. This was embodied in the Grand Design, published by the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) in July 2014.[1] The Grand Design's very long-term perspective has, in turn, been incorporated into key government strategies, including the new ten-year National Spatial Strategy (NSS) adopted in August 2015 and a five-year comprehensive development strategy prepared by the Government Headquarters for Overcoming Population Decline and Revitalising Local Economies. These efforts are predicated in part on building on a sense of crisis (*kikikan*) in order to overcome institutional inertia and the tendency of bureaucratic structures to operate within narrowly defined sectoral policy "silos". There are important potential complementarities among different strands of public policy that can only be realised with a whole-of-government approach, and that is precisely what the government has been working to realise. At the same time, there has been clear emphasis on the need to combine stronger leadership from the centre of government with bottom-up processes that allow the policy response to demographic change to reflect Japan's economic, geographic and social diversity (Box 2.1).

These two emphases – a move from sectoral to integrated policies and from a very top-down approach to one that combines top-down and bottom-up initiative – are central both to the government's long-term spatial vision and in its creation of new institutions and strategies for co-ordination of policy across sectors and levels of government. The next sections consider these two central-level innovations. The discussion will then turn to the multi-level governance issues involved in realising that vision.

Box 2.1. **Transcending sectoral approaches to policy**

Speaking to the first meeting of the Government Headquarters on Overcoming Population Decline and Revitalising Local Economies in September 2014, Prime Minister Shinzō Abe stated that "vertically-segmented ministries and agencies with hand-out style responses must be resolutely eliminated. Regional characteristics will be respected to ensure that approaches are not adopted that seek to apply identical frameworks nationwide". Two months later, he reiterated the point emphatically at the Council's November meeting:

"The most important aspect of measures to be implemented by this Council is that they eliminate vertical segmentation and employ one-stop responses. For some time, eliminating vertical segmentation and employing one-stop responses have been points of emphasis. Our mission is to make solid progress with the areas that have yet been addressed or advanced. I would like our response to be truly beneficial to regions. For this reason, at the end of last month I instructed Minister Ishiba and relevant ministries to reorganise and integrate similar policies, and actively endeavour to review new issues from the standpoint of concentrating on effective policies while eliminating vertical segmentation and redundancies".

Source: Prime Minister and Cabinet (2014a), "Headquarters for Overcoming Population Decline and Vitalizing Local Economy", web site of the Prime Minister of Japan and His Cabinet, 12 September, *http://japan.kantei.go.jp/96_abe/actions/201409/12article3.html* (accessed 15 July 2015); Prime Minister and Cabinet (2014b), "Headquarters for Overcoming Population Decline and Vitalizing Local Economy", web site of the Prime Minister of Japan and His Cabinet, 6 November, *http://japan.kantei.go.jp/96_abe/actions/201411/06article2.html* (accessed 15 July 2015).

The National Spatial Strategy

The government sees Japan's future as compact, networked and diverse

The NSS adopted in August 2015 focuses squarely on issues of depopulation and regional revitalisation, as well as disaster resilience and environmental sustainability. The new plan also places particular emphasis on competitiveness and innovation. Its adoption represents an important step beyond the 2014 Grand Design in two important respects. First, it is a truly horizontal initiative, in the sense that it has been adopted by the government as a whole, not merely a single ministry. Its adoption followed an intensive exercise in inter-ministerial co-ordination and consultations extending beyond the government itself under the aegis of the National Land Council, which brings together parliamentarians, academic experts, representatives of the private sector, elected officials from the cities and regions, and others. This process represents an important source of legitimacy for the NSS.[2] Secondly, at least twenty other national laws reference the NSS in one way or another, stipulating that their provisions must be implemented in harmony with the National Spatial Strategy.[3] This makes it a more potent instrument of policy than the Grand Design. It also means that many other plans drawn up by ministries and other bodies will need to be coherent with the NSS.

The central concepts defining the Strategy's national-level vision are **compact** and **networked**.

- In order to ensure effective service delivery, the settlement of Japan should become more compact. At a national scale, the NSS acknowledges that some areas will become effectively depopulated, though it seeks to sustain a broad settlement pattern throughout the national territory. At smaller scales, it addresses the restructuring of urban and rural settlements that will be needed to maintain their cohesion and the efficiency of service delivery.

- A Japan in which cities and towns are shrinking will need to be networked: improved connectivity will be critical to maximising the potential economic benefits of agglomeration. Better connectivity among towns and cities, as well as within them, is meant to offset to some extent the loss of agglomeration potential that will occur as a result of a shrinking population (and, even more, as a result of a shrinking workforce). This applies to both transport and communications connectivity. Better networking of people and firms should help encourage innovation and the exchange of ideas as well as goods and services.

Box 2.2. **Key policy directions of the National Spatial Strategy (National Plan)**

1. Attending to both local revitalisation and global competitiveness

The NSS expresses a clear commitment to harmonising the pursuit of the two key objectives identified in Chapter 1 of this review: revitalising regional and rural economies and strengthening the global competitiveness of the major metropolitan areas, especially the Tokyo-Osaka-Nagoya urban region. In addressing the challenges of population ageing and decline, it emphasises such instruments as collaborative core urban areas, compact city policies and small stations. The NSS looks outward, to Japan's global position, as well as inward at changing settlement patterns. It therefore places great emphasis on competitiveness and future development of the main urban centres, especially Tokyo. The Strategy thus includes sections on the 2020 Olympic Games and the construction of the *Chūō Shinkansen* magnetic levitating train from Tokyo to Nagoya and Osaka. At the same time, it identifies steps to improve the innovation performance of Japanese cities, to increase their resilience to shocks, to make cities better adapted to the needs of the elderly and to families with children.[4] Other competitive priorities in the strategy include the attraction of investment from other countries, and strengthening external connectivity by using both the Japan Sea side and Pacific Ocean sides of the country to tap into the dynamism of East Asia and Eurasia continent.

2. Safety and managing land/infrastructure

A second major set of concerns set out in the NSS concerns national resilience to natural disaster, which is a particular challenge for Japan in view of its location, topography and geology. The country is unusually subject to earthquakes, volcanic eruptions, typhoons, floods and heavy snowfalls, making resilience a central concern of spatial policies. The strategy also addresses sustainable development priorities, emphasising policies for appropriate natural resource management, and the need to make better use of infrastructure, while maintaining and upgrading it more efficiently.

3. Participation and cooperation

A final emphasis that should be mentioned concerns the human dimension – not merely human resource development to support regions but also mechanisms to enhance collaboration among and within regions, as well as to ensure that cross-cutting issues are addressed in the kind of integrated fashion described above.

Source: Ministry of Land, Infrastructure, Transport and Tourism (2015a), "National Spatial Strategy", Ministry of Land, Infrastructure, Transport and Tourism, August, available (in Japanese) at: *http://www.mlit.go.jp/common/001100233.pdf*.

These concepts – compact and networked – are to be applied differently at different scales and in different circumstances (Table 2.1). For example, the notion of compactness is intended not merely to adjust the physical structure of shrinking places in order to streamline service delivery (an essentially defensive response); it is also meant to prompt regions and cities to adopt more innovative approaches to inclusive growth and higher

productivity (a pro-active strategy). For very large cities, it reflects a determination to concentrate high-level urban functions, so that such cities can be effective engines of growth for their regions (e.g. Collaborative Core Urban Areas). One major concern is to avoid the emergence of sprawling, car-dependent cities, which would be economically and environmentally undesirable. The focus in cities is thus on concentrating key urban functions (especially medical care, elderly care, welfare functions and commerce) in city centres or in residential core areas, connected by public transport networks, and preventing further spatial expansion. For example, major hospitals would be located very centrally, while smaller clinics and elderly care or childcare facilities would be placed in core residential areas. In smaller towns, villages and rural areas, by contrast, the emphasis is on creating basic service-delivery hubs that will help sustain rural communities around small, multi-functional cores (the so-called small stations). Networking will likewise operate at different scales, from improved connections between very small hamlets and nearby service hubs (small stations) to the linking of proximate medium-sized cities and the creation in the heart of the country of an urban mega-region encompassing Tokyo, Nagoya and Osaka (see Chapter 3 for details).

Table 2.1. **Instruments for compact and networked places**

Name of initiative	Concept	Targets	Drivers	Plans contain the name of initiatives
Collaborative core urban areas (Renkei Chusu Toshi Ken)	To urge subnational governments to co-operate	No targets *60 areas are identified as candidate areas (MIC).	Subnational government is the unit, LAT and subsidies support from MIC are utilized.	Comprehensive strategy (Prime Minister and Cabinet, 2014a), National Spatial Strategy (MLIT, 2015)
Sustainable residential areas (*Teijyu Jiritsu Ken*)	To make smaller cities and villages that are sparsely populated to be sustainable	140 areas by 2020 (Comprehensive strategy, National Spatial Strategy) from 79 areas in 2014.	Municipality is the unit, LAT is utilised.	Comprehensive strategy (Prime Minister and Cabinet, 2014a), National Spatial Strategy (MLIT, 2015)
Small core station (*Chisana Kyoten*)	Ensure smaller cities and villages are sustainable. School districts (1 000 to 20 000 people) could be the sample size.	No targets	Subsidies from the Government Headquarters on Overcoming Population Decline and Revitalising Local Economies	Comprehensive strategy (Prime Minister and Cabinet, 2014a), Grand Design 2050 (MLIT, 2014), National Spatial Strategy (MLIT, 2015)

Source: OECD synthesis based on the Grand Design and the NSS.

With respect to regional development, the NSS emphasises diversity and collaboration. The logic here is fairly straightforward. As the population declines, the competition among regions and cities for people and resources will intensify – it will, indeed, be a negative-sum (not merely a zero-sum) game. This competition will be driven largely by similarities among them – similar endowments, needs and aspirations. However, since the majority of places must lose in any such competition, it is their diversity that offers the best hope for the future. First, most regions and cities will need to identify their specific assets and potentials in order to attract people and investment successfully. Secondly, this very diversity of endowments and strategies creates the possibility for collaboration, because it gives rise to the possibility of identifying complementarities among places and building strategies to exploit them. Fostering diversity thus offers a way to promote both regional innovation and collaboration across different communities.

Connectivity among cities is an important theme of the NSS. Linking proximate cities that are losing population could help them to prosper. For example, MLIT points to the cities of Matsue (Shimane Prefecture) and Yonago (Tottori Prefecture). Their respective populations in 2010 were 220 000 and 326 000, but both are shrinking. The projections for 2050 are 156 000 and 209 000 – a loss of roughly one-third (almost 30% for Matsue and 36% for Yonago). Connecting the cities with an expressway could reduce the population loss, albeit only slightly: the MLIT estimate with the expressway is 373 000 in 2050, as opposed to 365 000 without. However, the main effect would be to preserve a single FUR of over 300 000. This threshold is not accidental: the government reckons that a city with a population of 300 000 or more will be able to offer the full range of urban amenities and services.

Another theme that is central to the NSS's approach to future spatial organisation is the creation of small stations in rural areas. These will concentrate basic service delivery, including administrative services, healthcare, shopping and so on, in specific places with transport networks organised so as to make them as accessible as possible to the rural population of the surrounding areas. These, too, are to vary with scale: some will be quite basic and limited to essential functions, while others, where population and resource permit, may come to act as local centres of innovation, playing a role in supporting efforts to bridge primary, secondary and tertiary activities in rural areas (the so-called sixth industry initiative – see Chapter 4 for details) and in promoting renewable energy generation. These and similar initiatives are intended to promote a degree of de-urbanisation, in an effort to deconcentrate the economy and the settlement pattern and help revive rural areas and non-metropolitan regions. Indeed, promoting migration to rural areas is an explicit aim of the NSS, as well as a central priority for the government's new Headquarters for Overcoming Population Decline and Revitalising Local Economies (see Chapter 4).

The creation and maintenance of small stations will largely be left to prefectures and local authorities, although the funds involved will often come from the central government (see below). This is clearly an area where prefectures can play a central role: the ministries in Tokyo lack the local knowledge and information needed to plan the location of small stations, but leaving it to municipalities alone risks triggering a race to invest public funds into too many small stations in an effort to stem local population decline. Even the prefectures may be inclined to over-supply them, though. For example, Kochi prefecture, on the south coast of the island of Shikoku, plans to create 130 small stations over the next decade. This implies a catchment area for each small station of about 54 km^2, meaning that one would never be more than 4-5 km from a small station. On a nation-wide basis, this would imply the construction of around 7 000 small stations.

The small stations initiative is similar to approaches to service provision undertaken in some other OECD countries, such as France's *Maisons de service au public* (Box 2.3). Similar initiatives may also be observed in places like Australia (the Rural Transaction Centres) and Finland (Citizen Service Offices), to name but two others. These and other one-stop shops (OSS) can cut provider costs and increase access by rural dwellers to necessary services. The range of services offered by OSS in OECD countries can include anything from education, childcare, government information, referrals and advice, health/elder care, social support services (rehabilitation, housing support), to cultural and recreational activities. Driven largely by community need and involvement these "all purpose" service centres are expected to continue to grow in rural areas because they allow governments to provide rural services on the basis of cost-efficiency (OECD, 2010). Having said that, Japan's small station initiative looks in some ways even more ambitious than OSS found in most

other OECD countries, since small stations are to play a role in concentrating the delivery of private as well as public services, in reshaping the settlement pattern over time and in some cases acting as centres of innovation.

Box 2.3. **France's Maisons de service au public**

After an initial experimental period, the French government decided in July 2013 to develop one-stop shops for citizens, called *Maisons de services au public* ("Public services houses"), offering access to such public services as post offices, public transport ticketing, energy utilities, unemployment insurance and welfare services (pensions, family allowances, health insurance, etc.). The purpose of the *maisons* initiative is to guarantee public service delivery in low-density or isolated territories by sharing costs and employees as far as possible. For technical and statutory reasons, the sharing of employees has proved more complex than the sharing of costs or premises.

The *maisons* are usually financed by local authorities (50%), public operators (25%) and the national government (25%). Beyond subsidising them, the French government plays an important role in promoting this policy, harmonising the services provided and giving them a common label. It has also set up a partnership with the French postal service, *La Poste*, to transform some post offices with low activity (mainly in rural or mountainous territories) into *Maisons de services au public* in order to make them more profitable and to avoid financing specific buildings.

In March 2015, the government's Inter-ministerial Committee for Rural Development set a goal of increasing the number of MSPs threefold, up to 1 000, by 2017, in accordance with the departmental schemes for the accessibility of public services that are enshrined in legislation for a new territorial organisation of the French Republic adopted in the summer of 2015.

Source: Information provided directly by the Commissariat Général à l'Égalité des Territoires.

The NSS also addresses resilience concerns. At a national level, the focus is on creating multi-modal corridors connecting the Pacific Rim and Japan Sea sides of the country in order to improve resilience to earthquakes and other natural disasters.[5] This reflects to some extent the experience of the Great East Japan Earthquake in 2011, when relief efforts were hampered by transport bottlenecks.

The Strategy offers a coherent long-term vision to serve as a framework for policy

The new NSS marks an important milestone in the evolution of Japan's response to demographic change. It is, of necessity, a very broad vision and it remains to be seen whether and how certain of its basic strategies (Box 2.2) will be realised in practice. Even so, at a time when Japan needs an integrated, cross-sectoral policy approach to ageing, it offers a coherent framework against which more specific concrete initiatives can be assessed and within which they can be rolled out. Together with the Grand Design for National Spatial Development to 2050, it also represents an important source of data and analysis for central and subnational governments to draw on. Overall, the strategy's compact and networked approach seems broadly correct. The aim is to sustain a settlement pattern that facilitates the realisation of agglomeration economies while avoiding the abandonment of very large parts of the national territory.

The evidence on the economic benefits of connectivity is compelling. While the evidence is overwhelming that, other things being equal, agglomeration benefits are increasing with city size, smaller cities are not that much disadvantaged where they are well-connected.

They can "borrow" agglomeration from neighbouring cities. OECD (2015a) finds that, for a doubling of the population living within a 300-km radius around a city, the productivity of the city in the centre increases by 1.0-1.5%.[6] Nor are such positive spillovers limited to cities; cities typically increase the prosperity of the whole region in which they are located. The spread effects of growth generated by a city of 2 million people can extend 200-300 km outwards. So the emphasis on networks clearly makes sense. This emphasis on the link between networks and agglomeration effects reflects the authorities' recognition of the distinction between concentration and agglomeration. Though closely related and often treated almost as synonyms, the two are not identical. Agglomeration is not simply about density or concentration but about the ease with which agents can interact and transact with a large number of other agents. Concentration can increase if the density of firms or inhabitants rises, but if this leads to congestion or runs up against bottlenecks to internal connectivity, there may be little agglomeration effect. Conversely, if connectivity is improved and transaction costs fall, agglomeration can increase even if no firm or household changes location. The current vision for the future turns in no small measure on finding ways to increase agglomeration benefits without necessarily increasing the concentration of population or economic activity.

Policy makers will need to adapt the NSS's core concepts to widely differing circumstances

It is important to remember that the NSS is an overall vision. It provides a framework for thinking about Japan's future and trying to ensure overall policy coherence, rather than a set of highly prescriptive measures and indicators. The vision itself is based on one of a number of possible scenarios reviewed by MLIT and it may need to be adapted if Japan's evolution departs too far from that baseline scenario. The implementation of this overall vision will in many cases be up to other ministries and levels of government. In translating its broad parameters into concrete policies, they will need to recognise that its core concepts must be applied in different ways in different places.

For example, the emphasis on "compactification" need not imply a need for strong densification policies across all cities. As will be seen in Chapter 3, compact development is about much more than just increasing densities. The economic and environmental benefits of well-planned urban density depend in part on scale, so there will be a strong case for trying to ensure that large cities retain fairly dense cores as their populations decline. It will also be important to avoid the emergence of "perforated" cities, patchworks of settled and abandoned territory with huge random chunks of wasteland. In some ways, ensuring the coherence and cohesion of major cities will be more of a priority, economically and environmentally, than their density. In smaller towns and cities, lower densities could be welfare enhancing at low cost in terms of productivity or the environment.

Moreover, allowing different settlement patterns and lifestyles in different places will be critical to sustaining communities across the country and limiting tendencies to over-concentration. That is one reason why the NSS's emphasis on diversity is so important – and should not be forgotten when it comes to turning the other broad concepts into concrete policies. One of the problems with some past urban policies in Japan (e.g. zoning legislation, urban planning) was a tendency to standardise too much, often extending to the entire country policies that made sense for Tokyo but that were far less relevant to conditions elsewhere. This cuts against the logic of diversity and collaboration. The more alike places become, the harder it will be for the smaller ones, in particular, to compete

and the harder it will be to allow collaboration to emerge on the basis of complementary endowments. Policies designed in keeping with the vision embodied in the NSS should thus allow plenty of room for local experimentation and adaptation, including sustainable low-density living.

The networked dimension of the vision should also be approached carefully. The emphasis on networking will require improved connectivity, but this does not necessarily imply that extensive new connective infrastructure must be built. Some new connections will surely be needed but, at a time when the country has major public finance challenges and increasing difficulty in maintaining its already dense physical infrastructure, the emphasis in the first instance will probably need to be on optimising the use of existing networks and incremental investments in them to remove bottlenecks and increase efficiency. In some parts of the country, population decline may even point to the need for the downsizing of some infrastructures. Yet for many local authorities, additional social and connective infrastructure may be seen as central to their longer-term viability. Infrastructure issues are addressed at greater length below and in chapters 3 and 4, but it should be emphasised at the outset that resource constraints and declining population will make infrastructure investment decisions both more important and more difficult.

The NSS's emphasis on urban-to-rural migration raises important questions. The authorities understandably view the movement of young people to the major cities as a threat to the economic vitality and even viability of many smaller towns and cities and rural areas. The government also notes that birth rates are lowest in the big cities and higher in rural areas, implying that reverse migration could help raise fertility. Moreover, survey evidence suggests that a significant proportion of urban Japanese would welcome the opportunity to live in more rural settings. As seen in Chapter 1, the principal challenge here concerns job creation: in recent years, Tokyo, in particular, has been the only significant generator of new employment in Japan. Any attempt to rebalance the economy, then, should begin with efforts to promote the creation of more and better jobs in non-metropolitan areas. This would be a most welcome development and, as will be seen, there are steps the authorities can take to promote it. Two caveats are in order, though. First, the scale of the task and the state of public finances mean that such job creation can only be sustained if it does not depend on constant infusions of central support in the form of tax breaks, subsidies or public investment. Secondly, even a very successful policy is unlikely to have dramatic results: large-scale urban-to-rural migration in peacetime is almost unprecedented in the absence of famine, epidemic or natural catastrophe.[7] In any case, given Japan's productivity challenge, the emphasis must be on creating high-productivity employment, whether in Tokyo or the regions.

The National Spatial Strategy will have an important influence on the future settlement pattern

Policy makers cannot determine or know in advance where people will live in future. People and firms will "vote with their feet" in response to demographic, economic and other changes. However, national policies play a critical role in shaping the choices that households and firms confront and in avoiding undesirable social, economic or environmental outcomes. Central policies regarding spatial planning, infrastructure provision and the organisation of public services clearly influence the location decisions of households and firms: in some cases, infrastructure investment decisions can to have a decisive impact on the long-term viability of one community as opposed to another.

This, of course, is true of most countries at most times, but it is a particularly important issue in a Japan that is experiencing rapid demographic decline. The trade-offs involved in such choices were far less painful in a fast-growing economy with a rising population. Yet while shaping agents' location choices, policies will also need to respond to them. Infrastructure plans will have to adjust as and when forecasts of population trends, economic growth or migration patterns prove to be off the mark. Infrastructure investment, in particular, will involve very difficult and politically contentious decisions about where to renew or expand provision and where to downsize.

The National Spatial Strategy is the most important of a number of key planning documents. There are also eight regional plans, which are prepared as part of the National Spatial Strategy process. On the basis of the National Plan, the central government and the relevant prefectural governments work together to formulate regional plans for eight broad regions defined in the legislation.[8] Hokkaidō, the northern-most of the large Japanese islands, and Okinawa, a chain of islands scattered over a large area of the ocean to the south, have statutory regional development plans prepared for each of them under separate statutes, with the necessary arrangements made to align them with the National Spatial Strategy. In addition, there are three areas in which joint committees or subcommittees work across the regional planning boundaries, to ensure coherence and address connectivity issues:

- Hokuriku and Chūbu co-operate to address the need for a regional transport system connecting the Japan Sea and the Pacific Ocean in central Honshū and to manage the mountainous areas of Chūbu in an integrated manner.
- The Chūgoku and Shikoku areas are to address joint projects to develop connections across the Sea of Japan to the Pacific and to manage the natural environment of the Seto Inland Sea.
- A subcommittee was formed to address the development of the three northern prefectures of North Kantō and the prefectures of Fukushima and Niigata in the Tōhoku area.

The plans are being prepared in parallel with the national strategy, but the timescales for completion are staggered in such a way that the regional plans can be prepared relatively quickly following approval of the National Spatial Strategy.

The history of past plans highlights both the potential and limits of national spatial planning

Japan has practised national-level spatial planning for over half a century, following the adoption of the Comprehensive National Land Development Act of 1950. The first Comprehensive National Development Plan was adopted in 1962, with a horizon to 1970. That plan, like its successor, the New Comprehensive Development Plan adopted in 1969, was oriented to guiding the spatial development of Japan's then fast-growing economy. This was a time of rapid population growth, urbanisation and industrialisation, each of which had important spatial consequences. Two further Comprehensive National Development Plans were adopted in 1977 and 1987, each with a horizon of about a decade or more. However, as economic and population growth slowed, the settlement pattern and economic geography of the country were more stable and there was less urgency about spatial planning. By the end of the century, this was changing again, leading to the approval in 1998 of a Grand Design for the 21st Century that – despite its name – targeted the 2010-15 period and explicitly addressed the consequences of globalisation, demographic change and the information technology (IT) revolution. In 2005, the 1962 legislation was fundamentally revised and

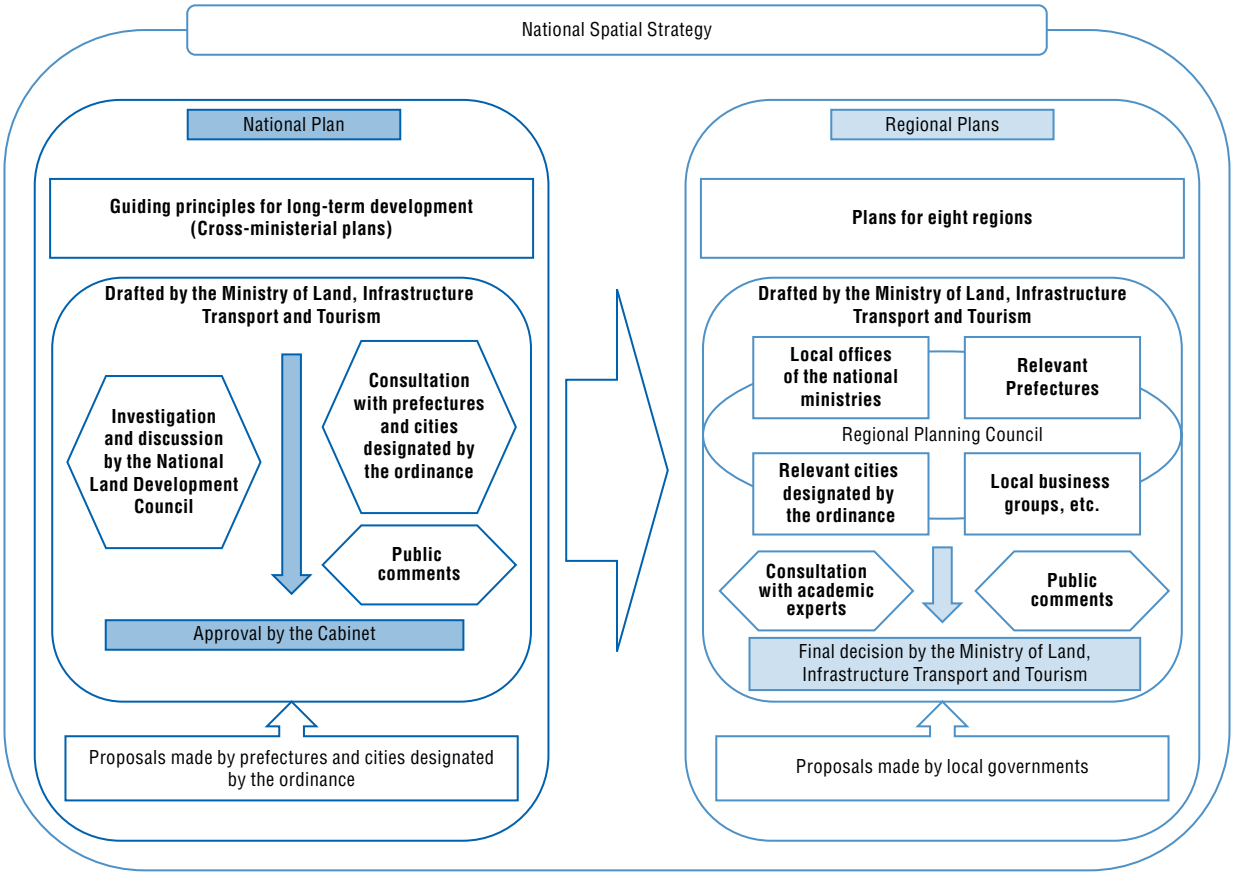
was renamed the National Spatial Planning Act. The new act places more emphasis on the efficient use of existing stocks of land and resources and on their preservation, reflecting a very important shift from a planning regime driven by growth and development goals to one concerned with demographic decline and the sustainable use of the national territory.[9] The 2008 National Spatial Strategy reflects this change in priorities.

The history of spatial planning in Japan illustrates both its limits and its potential. On the one hand, the ability to shape the economic and human geography of the country is constrained. The decentralised location choices of households and firms have consistently overwhelmed any policy preference for a more balanced settlement pattern. As early as 1962, the Comprehensive National Development Plan explicitly aimed to decentralise the industrial structure in an effort to correct what was perceived as overpopulation in the largest cities. Similar aims were set out in the 1969 and 1977 plans, as well as in the 1998 Grand Design for the 21st Century and the 2008 spatial strategy.[10] While these plans led to infrastructure investments and other initiatives to encourage manufacturing and other activities to relocate away from the Tokyo-Nagoya-Osaka urban region, the dominant trend has been towards further concentration of both people and economic activity. Yet it would be a mistake to overlook the extent to which the plans provided a framework for significant policy shifts and investments, such as growth pole strategies, the industrial development of the Pacific coast of Honshū, the 1964 New Industrial City Development Act, and the national networks of motorways and high-speed railways (*Shinkansen*).

Both the limits and potential of national spatial planning efforts should be borne in mind when assessing its role in addressing demographic change. The national-level planning system does not offer a definitive solution to the problem of "what goes where". What it does provide, which is critical in a context of uncertainty and demographic change, is a coherent, long-term vision of the government's priorities and objectives and thus a framework within which to ensure the coherence of various sectoral policies with spatial impacts and, in particular, the co-ordination of more detailed land-use, transport and infrastructure planning processes. Such co-ordination is particularly important given Japan's population density and settlement pattern. It is noteworthy that the four countries identified by OECD (2001) as placing relatively great emphasis on the role of the central government in spatial planning (e.g. Belgium, Japan, Korea, the Netherlands) are all densely populated and face important land-use constraints. In a situation characterised by high levels of uncertainty, the strategy also provides a body of analysis and evidence on the basis of which to present or evaluate options for the future, consistent with the principle of reversibility in planning.

In a real sense, such national plans and strategies are primarily as a co-ordination instrument, involving a large number of public and private sector players and contributing to the formation of a consensus around shared goals (OECD, 2001). Indeed, the process of planning is arguably more important than the specific plans that result. A truly dynamic, participatory planning process can strengthen communication among public and private sector stakeholders, reveal information and promote economic self-discovery. The plans that are prepared along the way are understood to be provisional documents, snapshots of something that is constantly changing, but they are crucial in providing agents with the data, analysis and projections of future scenarios needed to operate in an uncertain environment. At a time when the government is devoting enormous energy to overcoming traditional sectoral approaches to policy in favour of an integrated, government-wide approach to the challenges of demographic change, such a co-ordinating device is indispensable.

Figure 2.1. **Formulation of the National Spatial Strategy**



Source: Ministry of Land, Infrastructure, Transport and Tourism (2014a), "Grand Design of National Spatial Development Towards 2050, Japan", Ministry of Land, Infrastructure, Transport and Tourism, Tokyo, July, available at: *www.mlit.go.jp/common/001088248.pdf*.

A new government headquarters

Since September 2014, co-ordination of local revitalisation efforts has been the responsibility of a newly designated Minister for Overcoming Population Decline and Revitalisation of the Local Economy. The Minister oversees the Headquarters for Overcoming Population Decline and Revitalising the Local Economy created in 2014. Its mission is also central to the "third arrow" of Abenomics. It is significant that the revitalisation minister is in charge of another new government initiative, the National Special Strategic Zones (Chapter 4 for details). This is a clear recognition of the need for these two strands of policy to be closely aligned. The Headquarters, formed under the aegis of the Cabinet Secretariat, operates on two levels: at a political level, there is a Council on Overcoming Population Decline and Revitalising the Local Economy, chaired by the Prime Minister and bringing together ministers concerned with demographic change and regional revitalisation. At a working level, there is a staff of civil servants to support the minister day-to-day. The Headquarters is supposed to bring together previous local revitalisation initiatives and ensure coherence among them – a serious challenge, given the enormous number of initiatives spread across central government agencies.

The Headquarters has made a fast start

In its first months, the Headquarters prepared a long-term vision for Japan's population and a five-year comprehensive strategy starting with fiscal year (FY) 2015 to support the revitalisation of local economies.

- The long-term vision estimates that the total fertility rate will rise from 1.43 in 2013 to around 1.8, if young people are provided with an adequate environment. If the fertility rate recovers to replacement levels, around 2.07, in 2040, then Japan's population could be around 100 million in 2060 and would stabilise around 2090. Among the central problems it identifies is the over-concentration of population (especially youth) in Tokyo, not least because the capital is not such an attractive place for those wishing to raise children. Fertility rates in Tokyo are the lowest in the country and other big cities also have very low fertility.
- The five-year strategy for the most part builds on existing measures – more could hardly be expected less than half a year after the Headquarters' creation. For the most part, it consists of new types of central support and subsidies that towns, villages, prefectures could use at their own discretion to promote measures for stopping population decline and revitalising their economies. The strategy provides for preferential corporate income tax treatment to urge companies to enlarge their activities in the regions. Among the key weaknesses it identifies in past policies are: the prevalence of sectoral approaches; a tendency to impose standardised solutions across the country; and the use of subsidy schemes without adequate monitoring and evaluation of effectiveness and efficiency.[11]

One explicit aim of the strategy, which is consistent with the National Spatial Strategy's broader vision, is to eliminate the net inflow of population from the regions to Tokyo – currently running at about 100 000 per year – by 2020. This is to be done by both reducing migration to the capital and increasing flows from Tokyo back to the regions. Given the 2020 Olympic preparations and the *Chūō Shinkansen* project, however, this target is very unlikely to be realised. In any case, the goal is perhaps poorly framed. As seen in previous chapters, Tokyo has played a huge role in preventing the emergence of larger inter-regional income disparities or pockets of very high unemployment in many regions. The key challenge is not to deter people from going to Tokyo but to attract them elsewhere. This will require the creation of sustainable, productive jobs in the regions.

In FY 2015, the government is requiring local governments to work out their own revitalisation plans in light of the national strategy. All prefectures and municipalities are to formulate local long-term visions of their populations and five-year comprehensive revitalisation strategies beginning with FY 2105. The strategies are to include clear objectives and key performance indicators, as well as to follow the PDCA cycle when implementing them.[12] They are expected to prepare these documents with the active participation of experts, private firms, citizens' groups and elected politicians. While more attention tends to focus on plans and strategies, the population visions are a critical step; if prefectures and localities are made to adopt a rigorous approach to this exercise, then most will have to acknowledge the likelihood of further demographic decline, something many of them have long resisted. It has long been a common joke among officials in Japan that the sum of municipalities' population projections is two or three times the country's actual population. The joke reveals a key problem: everyone knows that the population is falling but no local authority wishes to admit that it is destined to shrink or disappear. The problem is by no means unique to Japan, but it is rendered particularly acute by Japan's demographic

situation. Getting Japanese regions and municipalities to face their demographic futures realistically would be an important step forward.

The Office for Revitalising the Local Economy, based in the Cabinet Office,[13] is to provide informational and financial support for local and prefectural authorities in undertaking these exercises, as well as human resources where required. The government is putting a "regional economy analysis system" on line, along with a great deal of data (including private-sector big data) to support prefectural and local analyses; it will in some cases dispatch civil servants to help smaller municipalities with their visions and strategies. At a municipality's request, the government may appoint a "concierge", a central official with ties to the region or municipality who can act as a consultant and advisor.

Sustaining a coherent, whole-of-government approach will be difficult

The Headquarters produced two important policy documents in a matter of months, an impressive and highly visible start. The emphasis it has placed on combining an integrated, cross-sectoral approach to revitalisation with respect for local diversity is to be commended. Such a co-ordinating body is surely needed, given the transversal nature of the demographic/revitalisation agenda and the number of line ministries involved. These include, in addition to the Cabinet Office[14], at least seven line ministries:

- The Ministry of Land, Infrastructure, Transport and Tourism (MLIT) is in charge of spatial planning, land use, urban and rural development, infrastructure policy, transport and tourism.
- The Ministry of Economy, Trade and Industry (METI) is in charge of regional economic development, particularly support for small/medium enterprises and some aspects of innovation policy.
- The Ministry of Internal Affairs and Communications (MIC) is the principal central body responsible for subnational governments, including local finance, decentralisation, municipal mergers and inter-municipal co-operation.
- The Ministry of Finance (MoF) is responsible for the central government budget and debt management, both of which have significant implications for subnational public finances.
- The Ministry of Agriculture, Food and Fisheries (MAFF) is in charge of agricultural policies and active in rural development;
- The Ministry of Education, Culture, Sports, Science and Technology (MEXT) is responsible for education and for some facets of innovation policy.
- The Ministry of Health, Labour and Welfare (MHLW) is responsible for policies with respect to the labour market, vocational training, etc., and health.

More generally, the Headquarters has helped the government to create a sense of urgency about the issue, as is evident in the increasing press discussion and the activism of prefectural and local governments on revitalisation issues. The National Governors Association, groups of mayors and even an association of credit unions, agricultural banks and other local financial institutions have all mobilised around different dimensions of the revitalisation agenda.

Sustaining this momentum will be a challenge for the Headquarters, given the historically independent nature of Japanese ministries. The fate of the past "Headquarters" provides a reminder of the difficulty of sustaining such a transversal approach. In 2003,

the government created a Headquarters for Regional Revitalisation, supported by the newly created Office for Regional Revitalisation, to promote economic growth and job creation outside the three big metropolitan areas. It, too, was a ministerial-level initiative, chaired by the Prime Minister and run from the centre of government. It, too, called on local governments to prepare regional revitalisation plans, and in 2005, the Local Revitalisation Act came into force. The menu of policy instruments was broadly similar to much of what is under discussion now and many of them are still administered by the Office. Yet its achievements were limited. Nor is it only the experience of the early 2000s that is relevant here: local revitalisation policies have been launched, often with great fanfare, since at least the 1980s: there were grants for "hometown revitalisation" in the late 1980s, "regional promotion coupons" at the end of the 1990s, and a "hometown tax" system in the late 2000s. The critical challenge now is to ensure that the momentum generated by the new revitalisation agenda is not dissipated.

Reliable and focused resourcing will be part of the solution. At present, many of the recent revitalisation initiatives are financed – or to be financed – from an amalgamation of previous spending, as well as expectations of future gains from shrinking specific subsides, enhancing the efficiency of local service delivery, and other measures (see below for detail). Many of these funding sources are not guaranteed, suggesting that a more solid fiscal base is needed. This could be implemented in tandem with expanding the role of general subsidies and thus enhancing the scope for local decision making. This issue is addressed in greater detail below, but the key point in respect of the Headquarters is the need to ensure that revitalisation programmes are linked to adequate, stable resources and are administered so as to encourage real initiative and not a local culture of dependence on central resources. This issue will be explored below in the larger context of intergovernmental fiscal relations.

The emphasis on revitalisation raises questions about some policies affecting Tokyo

There is a need for the government to better align policies targeting Tokyo with the NSS and the vision advanced by the Headquarters. The Grand Design and the current Headquarters strategy both place great emphasis on the need to generate a significant degree of "de-urbanisation" and, in particular, to halt the increasing concentration of people and activity in and around Tokyo. The authorities recognise that this has to be done without undermining the capital's competitiveness: enhancing Tokyo's global competitiveness is important to Japan's prosperity and need not imply neglect of other cities or rural regions (the Headquarters' remit does not extend to the big city). The question is how the government aims to harmonise these two ambitions. There are some policies that clearly promote further concentration in and around Tokyo.

Clearly, both goals are legitimate – indeed, both are essential. The government cannot afford to neglect the global position of a metropolitan area that is home to more than one-quarter of the population and that generates around a third of GDP. Neither can it afford to turn its back on the regions and rural areas. This should not be seen as a contradiction in policy but as an unavoidable tension. However, if they are to be well managed, such trade-offs need to be acknowledged and confronted. A whole-of-government view on spatial development should make that possible, but so far, it is not clear how the government wishes to balance these ambitions. Simply put, large public investments in things like the 2020 Olympics and the super-high speed magnetic levitating train from Tokyo to Osaka[15] are difficult to square with the goal of ending the concentration of population in Tokyo by 2020.

Governance, decentralisation and revitalisation

The compact and networked future that the NSS envisages will need to be built in large measure from the bottom up. There is no way that central ministries or other national actors can understand all the myriad opportunities and constraints confronting regional and local economies, let alone design responses to them. Revitalisation will require ensuring that prefectural and local authorities have sufficient resources, know-how and authority to design and implement their own strategies. More local decision making should also facilitate better co-ordination across policy sectors. The role of the central government will be to provide a healthy framework within which local governments can build on its broad national vision in ways that reflect local potential and conditions. That framework is critical, because one important aspect of this process will be increasingly intense competition among places for people, fiscal resources and investment. That is not all bad: some forms of inter-jurisdictional competition are healthy and should be encouraged. Japan will be better off in the long run if prefectures and municipalities compete with one another to attract people and firms by offering, e.g. better and more efficient service provision, cleaner environments, a better business environment or more innovative schools. Other forms of inter-jurisdictional competition, however, may be negative: many countries have observed "race-to-the-bottom" competitions to attract firms with tax breaks or lax regulatory conditions, for example.

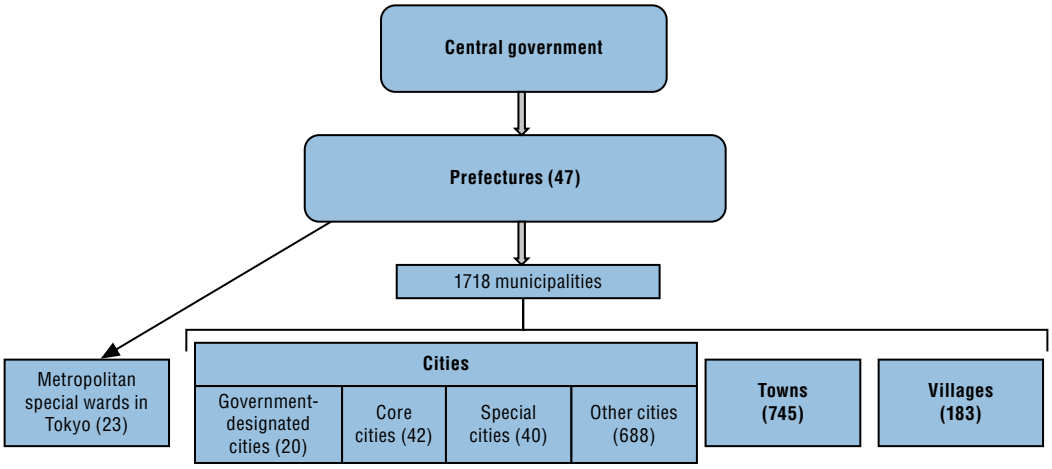
The central government, including MLIT, MIC and the Headquarters, thus has a vital role to play in structuring this competition.

- It should ensure that prefectures and municipalities ultimately bear the costs of the success or failure of the strategies they adopt; many of the worst forms of inter-jurisdictional rivalry are essentially lobbying competitions to attract an open-ended flow of resources from higher levels of government.
- It should emphasise the need for collaboration as well as competition across jurisdictions. While they may compete on some dimensions, municipalities and prefectures also need to co-operate on many others, to address challenges that none can tackle on its own. OECD experience suggests that higher levels of government have a critical role to play in fostering such collaboration (OECD, 2013a).
- It is necessary to recognise that real decentralisation may require Japan to tolerate wider territorial disparities than it has been accustomed to until now: some communities may adapt and prosper, while others will fail to prosper and may even disappear, particularly in rural places. Decentralisation offers greater scope for effective adaptation to demographic change, but it also implies great variation in outcomes.

Japan is a unitary state with a two-tier structure of subnational government

Subnational governments (SNGs) in Japan are separated into 2 tiers: a regional tier comprising 47 prefectures and a local tier made up of 1 718 municipalities and the 23 special wards within Tokyo (Figure 2.2). The prefectures, which include Metropolitan Tokyo, have considerably stronger administrative and fiscal powers than the municipalities and also have different tax bases. The municipalities are not uniform, being subdivided into 20 designated cities, 42 core cities, 40 special cities, and 688 other cities (Box 2.4). The 20 designated cities and the 23 Tokyo wards enjoy more administrative and fiscal autonomy than the rest of the municipalities, whose major differences are population size.

Figure 2.2. **The structure of territorial governance**



Source: Adapted from Uda, N. (2015), "Japan: Fiscal Discipline of Local Governments," paper given to IMF, ADB, PRI Conference on "Fiscal Policy for Long-Term Growth and Sustainability in Ageing Societies," 10-11 June, 2015, Tokyo, *www.mof.go.jp/english/pri/research/conference/tff2015e.htm* (accessed 15 July 2015).

Box 2.4. **Types of cities in Japan**

Tokyo

The city of Tokyo has the status of a prefecture governed by the Tokyo Metropolitan Government (TMG). It is further subdivided into 23 special wards. The wards are in many respects independent cities and, indeed, enjoy more powers than many cities elsewhere in Japan.

Designated cities (*shitei toshi*)

A city designated by government ordinance, must have a population in excess of 500 000 and must have been grated designated city status by an order of the central government under Article 252 of the Law on Local Autonomy. Designated cities are delegated certain functions in fields normally managed by prefectural governments in fields such as education, social welfare, sanitation, business licensing and urban planning. The prefecture still retains authority over major decisions but administrative functions are often devolved to the designated cities. Designated cities are subdivided into wards, which perform various administrative functions for the city government. Their duties vary, as the structure and responsibilities of the wards are determined by municipal ordinances.

Core cities (*chūkakushi*)

Core cities are likewise delegated many functions normally carried out by prefectural governments, but not as many as are assigned to designated cities. A core city must have a population of at least 300 000 and an area of at least 100 km^2, although special exceptions may be made by order of the government for cities with populations in the 200-300 000 range.

Special cities (*tokureishi*)

A special city has a population of at least 200 000 and performs a subset of the functions delegated to a core city.

Japan is a unitary rather than a federal state, so its SNGs – both the prefectural and local levels – are a creation of the central government, which has substantial authority to define their borders, structure, resources and responsibilities. In general, the national level of government in a unitary system has much more fiscal and administrative authority in relation to the SNGs than is the case in a federal or quasi-federal system, but there is great diversity within these broad categories and political realities often limit the freedom of governments in unitary states to reshape local institutions. For example, Japanese subnational governments are often seen as being dominated by the central government, whereas local governments in Sweden's unitary system enjoy considerable fiscal and administrative autonomy (Mochida, 2008: 14-15).

The prefectures, which are led by directly elected governors and prefectural assemblies, are responsible for a range of functions in the fields of economic development, social assistance, child care, public health, agriculture, environment, policing, and primary and secondary education. However, central legislation in many of these spheres often establishes uniform policies and standards for the whole country, and many subnational competencies were formally described in law as "agency-delegated functions" under the 1947 Law on Local Autonomy. Governors, though elected, were thus viewed as agents of the central government under the supervision of the relevant central ministry (Hooghe, Marks and Schakel, 2010). In 1999, the Omnibus Decentralisation Act changed this. It established that central state control of subnational governments had to have an explicit basis in statute (an effort to restrict the informal pressure exerted on SNGs by central ministries) and increased SNGs' autonomy over most of the previously deconcentrated agency-delegated functions. These were re-designated "inherent functions."

The long-standing debate over how tightly the central government controls subnational governments will not be resolved here. Such an assessment is beyond the scope of this review and would require an inquiry into the distribution of effective authority across the multiplicity of tax bases, fiscal transfers, debt finance, and spending programmes at both intermediate and local levels.[16] What is clear, and pertinent to this review, is that Japanese SNGs are embedded in a system that institutionalises a commitment to regional development as well as inter-regional equity. Moreover, Japan's SNGs have a large presence within its overall fiscal system and are enmeshed in a fiscal structure that links general subsidies, specific subsidies and debt finance in ways that appear unique among OECD countries.

Metropolitan governance solutions could help Japanese cities

The number of municipalities in Japan was nearly halved during 1999-2006 in the so-called "great Heisei merger wave" (*Heisei no daigappei*). Newly merged municipalities benefited from financial concessions and subsidies, as well as special merger bonds (Machida, 2006). The mergers still provoked resistance, as there was a perceived risk that smaller towns and villages would be treated as appendages of their larger neighbours if they merged. In several case studies on Honshū in the late 2000s, Elis (2011) found that the cost-cutting that followed mergers did indeed come frequently at the expense of the smaller municipalities: staff and infrastructure tended to be concentrated in the central settlements. School closures, healthcare downsizing and even the cutting of loss-making public transport services were more apparent in the peripheral areas of the new municipalities. In many cases, this may well have represented a sensible rationalisation of investment and services – the motivation for the mergers stemmed in large measure

from the fact that the smaller partners could not sustain the infrastructure and service obligations they were carrying and they were in most cases losing population. The mergers also led in some places to innovations in local governance, including the devolution of responsibilities to non-governmental institutions on the sub-municipal level. In some places, local volunteers receive lump-sum payments to work at the level of districts. This is driving a broader trend towards networked local governance in Japan, involving greater participation by local groups, associations and NGOs.

Little has happened since 2006, because the Heisei mergers were followed by a ten-year moratorium after which the preferential financial arrangements used to incentivise the mergers are to be phased out. However, the issue of the size of Japan's subnational authorities remains a real one. Japan still has many very small and struggling local governments; Weese (2008) suggests that the merger incentives could have been stronger and that the number of municipalities that resulted was still greater than would be efficient, though it should be noted that Japanese municipalities are on average quite large by OECD standards.[17] Whether or not the Heisei mergers should have resulted in further consolidation, the analysis of cities' performance presented in Chapter 3 suggests that many Japanese cities are still too fragmented in governance terms. The problem lies not with the largest cities but with a number of smaller and mid-sized cities. This striking result, which will be discussed further in the next chapter, suggests two things. First, while much of the debate over mergers has focused on merging small, weak municipalities with larger neighbours, fragmentation can be a problem even when all the municipalities involved are clearly viable. Secondly, while the focus of merger discussions has been on fiscal sustainability and cost-cutting, there is also a case for governance consolidation (even if not necessarily for mergers) based on growth.

OECD (2015a, 2015b) present the results of recent analysis based on both case studies and statistical work relying on the OECD Metropolitan Database and a unique survey of metropolitan governance arrangements in the OECD area. These results suggest that urban governance fragmentation is a problem. In many large urban areas, municipalities have grown together to form functional urban areas that encompass many local government authorities. The evidence suggests that greater governance fragmentation (measured simply as the number of local governments per head of population) is associated with poorer productivity performance, poorer service delivery and poorer environmental outcomes. This is typically the case because, although the areas in question have become integrated urban economies, the local governments involved do not manage to co-ordinate dimensions of policy that matter for the whole conurbation – especially transport, land-use planning and economic development policies. The argument is not a new one, but these studies are the first to use cross-national statistical data, based on common definitions of urban areas and governance structures, to substantiate it. As will be seen in Chapter 3, governance fragmentation seems to be a real issue for performance in Japan.

This does not mean that Japan needs a new merger wave. However, the government may want to attach great priority to fostering other metropolitan governance solutions – structures and procedures that facilitate co-ordination among adjacent municipalities in a larger urban area. There is a growing interest in many OECD countries in metropolitan governance bodies – broadly defined as bodies organising responsibilities among public authorities in metropolitan areas, including voluntary associations of municipalities, with few or no legal powers. There are different approaches to metropolitan governance, from informal/soft co-ordination to the creation of inter- or even supra-municipal authorities,

and, in a few cases, the creation of special status metropolitan cities. In most cases, these solutions are more flexible and less costly than mergers. They also can allow for the retention of truly local functions at local level, while permitting collaboration on issues that have a metropolitan significance. This approach would, in fact, be entirely consonant with the Grand Design's emphasis on the high-grade linking of cities. The point is that this is not just a question of infrastructure or economics but also of governance.

One cannot recommend any single metropolitan governance model to Japan, since this is a matter of political and social choice and the best solutions are likely to vary from place to place even within the country. However, OECD experience does suggest some lessons for effective metropolitan reforms.

- It is critical to identify a common cause for collaboration and build on successful collaboration outcomes (e.g. the creation of the metropolitan authority of Barcelona in 2011).
- Metropolitan leadership and ownership need to be developed and may in the first instance need to be provided by a higher level of government (e.g. the leadership of central government in the Paris metropolitan area).
- It is essential to empower and engage stakeholders at an early stage, and ensure accountability and transparency (e.g. the mix committee of elected officials and citizens of the Montreal Metropolitan Community to debate the strategic metropolitan plan).
- Secure sources of financing are critical (e.g. the London Business Board includes members form commerce and industry).
- There needs to be a balance between time frames and flexibility (e.g. Sweden's governance reforms were first tested in a few pilot regions before being extended).

Reform of metropolitan governance is a long-term process. It takes time to create institutions and trust, and even once they are up and running, governance structures may need to be further adapted (OECD, 2015b).

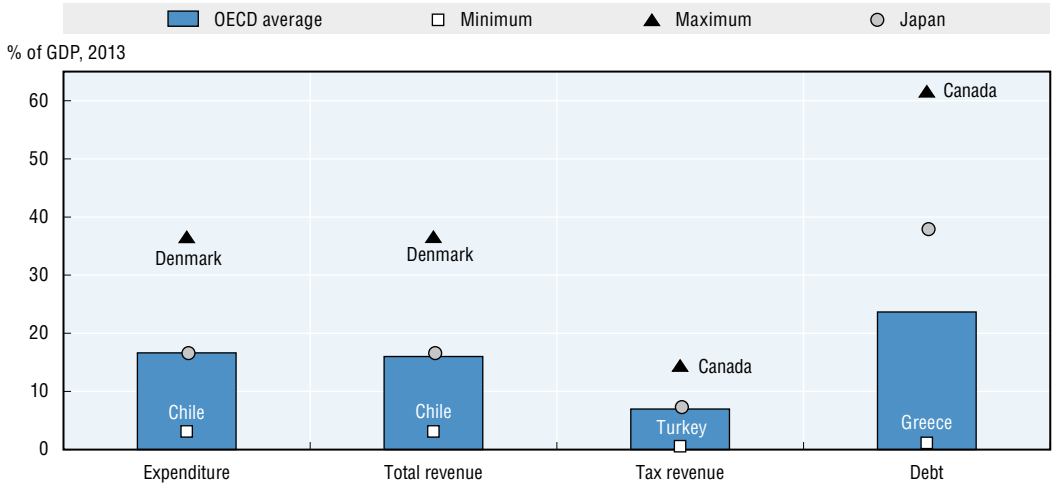
Public spending tends to be very decentralised

At first glance, Japan does not appear to be an outlier in the OECD when it comes to various indices of fiscal decentralisation. Japanese SNG revenue and spending as a share of GDP are both close to the OECD averages (Figure 2.3). SNG debt is far higher than average, a reflection of the generally high public debt that Japan now carries. As will be seen, critics argue that much of this debt was incurred in response to the incentives created by the system of inter-governmental transfers.

Where Japan does stand out is in the weight of SNGs in overall public spending. This is because Japan is not a large fiscal state. General government expenditure in Japan (exclusive of social security accounts) was 15.1% of GDP in 2012, as compared to 19.3% in the United States, 23.9% in the United Kingdom, and 30.4% in Sweden.[18] Moreover, despite the traditional image of Japan as a "construction state", heavily oriented to public works, such expenditures peaked in 1998 at JPY 15 trillion and had dropped to JPY 7 trillion by fiscal year[19] (FY) 2014 (Ministry of Finance, 2015). What this means is that SNG shares of revenue and expenditure that are typical for the OECD when measured relative to GDP are in fact rather large as a share of total public spending. In 2012, Japanese SNGs were responsible for 74% of general government spending (excluding social security), one of the highest shares in the OECD area. The corresponding figure for Sweden, for example, was 71%, though Swedish SNG spending was far higher relative to GDP. The figure for

Canada was 84% of public spending, equivalent to 31.1% of GDP. Thus the share of Japan's subnational government in general government spending is unusually large, though not unique. SNG spending dominates general government expenditure in most major areas in Japan (Figure 2.4), with the exception of agriculture, housing, debt service, pensions and, of course, defence.

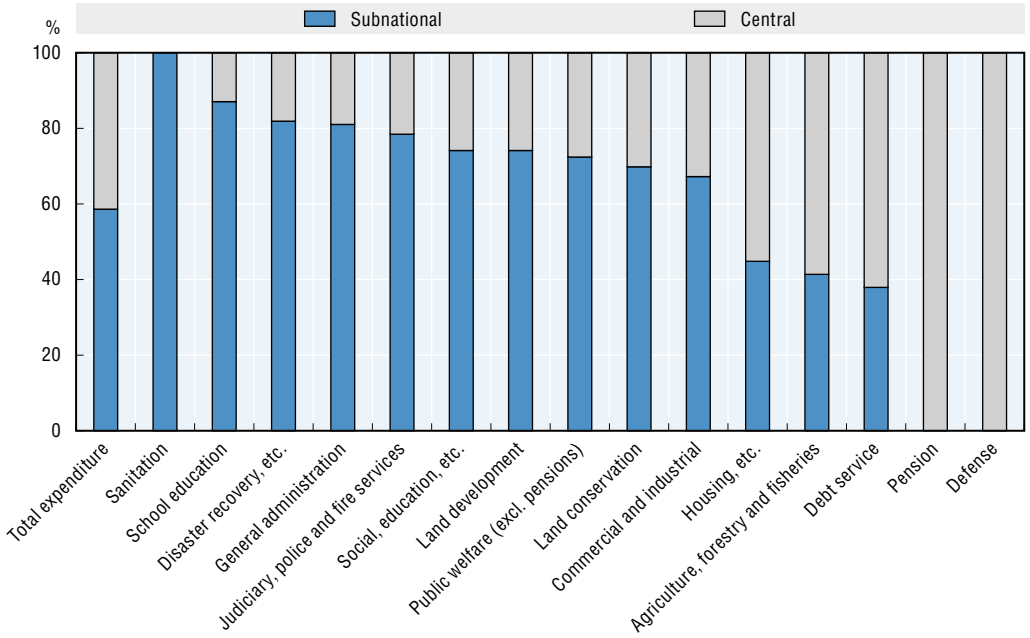
Figure 2.3. **Subnational government revenue expenditure and debt: Japan and the OECD**



Source: OECD (2015c), *Subnational Governments in OECD Countries: Key Data*, Paris, available at: *www.oecd.org/regional/regional-policy/Subnational-governments-in-OECD-Countries-Key-Data-2015.pdf*.

StatLink http://dx.doi.org/10.1787/888933324646

Figure 2.4. **Allocation of spending responsibility by function**

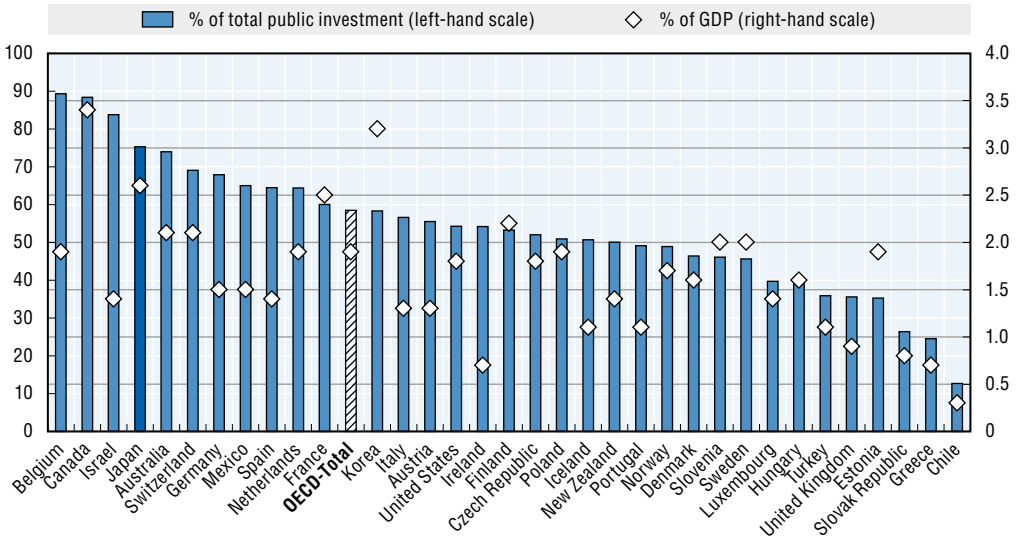


Source: Adapted from Uda, N. (2015), "Japan: Fiscal Discipline of Local Governments," paper given to IMF, ADB, PRI Conference on "Fiscal Policy for Long-Term Growth and Sustainability in Ageing Societies," 10-11 June, 2015, Tokyo, *www.mof.go.jp/english/pri/research/conference/tff2015e.htm* (accessed 15 July 2015).

StatLink http://dx.doi.org/10.1787/888933324658

SNGs in Japan are assigned responsibilities that generally outweigh those assigned to their counterparts in other countries, especially other unitary states. Their role in public investment is particularly great (Figure 2.5). However, this does not make the Japanese state as decentralised as it might appear, because the central government has tended to delegate administrative functions to SNGs while retaining authority over finance and programme design. The prefectures are in charge of a great deal of public infrastructure, including national highways that are not under the national government, class A rivers that are not under the authority of the national government, class B rivers, harbours, and public housing. The prefectures are also prominent in education and welfare, including secondary education, salaries and personnel administration of elementary and middle school teachers, livelihood support in towns and villages, child welfare policy, and employment training. The municipalities have extensive responsibilities for urban planning, municipal roadways, some harbours, some public housing, and sewers. In education and welfare, the municipalities are in charge of elementary and middle schools, kindergartens, livelihood support in cities, child welfare, national health insurance, ageing insurance, waterworks, waste disposal, residential records, and fire-fighting.

Figure 2.5. **Subnational government investment in OECD countries, 2013**



Note: 2012 data for Chile, Japan, Korea and New Zealand; 2011 data for Turkey.

Source: OECD (2015c), *Subnational Governments in OECD Countries: Key Data*, Paris, available at: *www.oecd.org/regional/regional-policy/Subnational-governments-in-OECD-Countries-Key-Data-2015.pdf*.

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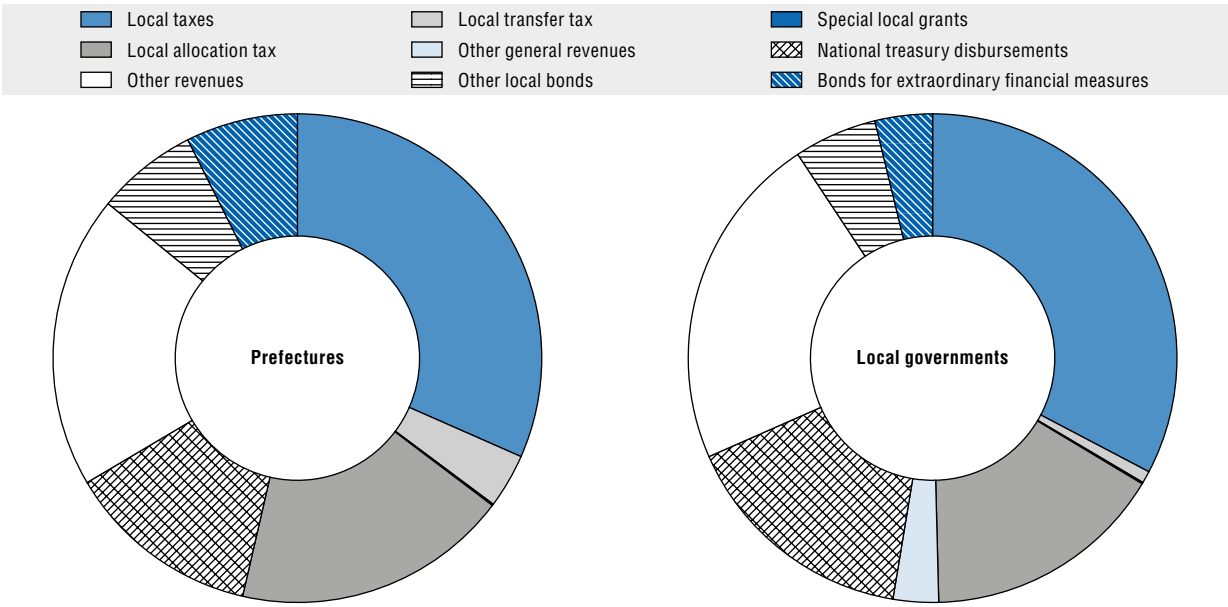
Japanese SNGs depend heavily on transfers from the centre

SNG revenues are nearly evenly split between taxes and transfers from the central government, with 44.1% of subnational revenues derived from taxes, 46.2% from grants and subsidies and the balance from other sources (2013 data). The respective averages for the OECD33 (excluding Chile) are 43.7% for subnational taxes and 37.3% for grants and subsidies. The difference is that other sources of income generate a far more important share of revenues in most OECD countries. For example, Japanese SNGs obtain only 5.7% of their revenue from tariffs and fees, and only 0.7% from property income. The OECD33 averages are, respectively, 15.2 and 2.3%. While social contributions make up 3.2% of Japan's SNG revenues, they only represent an average of 1.5% of subnational government revenues for the OECD33.

The most important taxes for prefectures include the resident's tax, levied on both legal and physical persons (39.8% of prefectural tax revenues in 2012), the enterprise tax (17.9%) and the local consumption tax (18.0%). For municipalities, the municipal resident's tax (44.7%) and the fixed asset tax (42.2%) constituted almost 90% of all tax revenues. Yet for both levels of government, own tax income amounted to less than one-third of revenues. The major income sources of the prefectures and local governments are presented in Figure 2.6.

Figure 2.6. **Composition of subnational government revenues, FY 2012**



Source: Ministry of Internal Affairs and Communications (2014), "White Paper on Local government Finance 2014", Tokyo, Ministry of Internal Affairs and Communications, available at: *www.soumu.go.jp/iken/zaisei/26data/chihouzaisei_2014_en.pdf*.

StatLink *http://dx.doi.org/10.1787/888933324674*

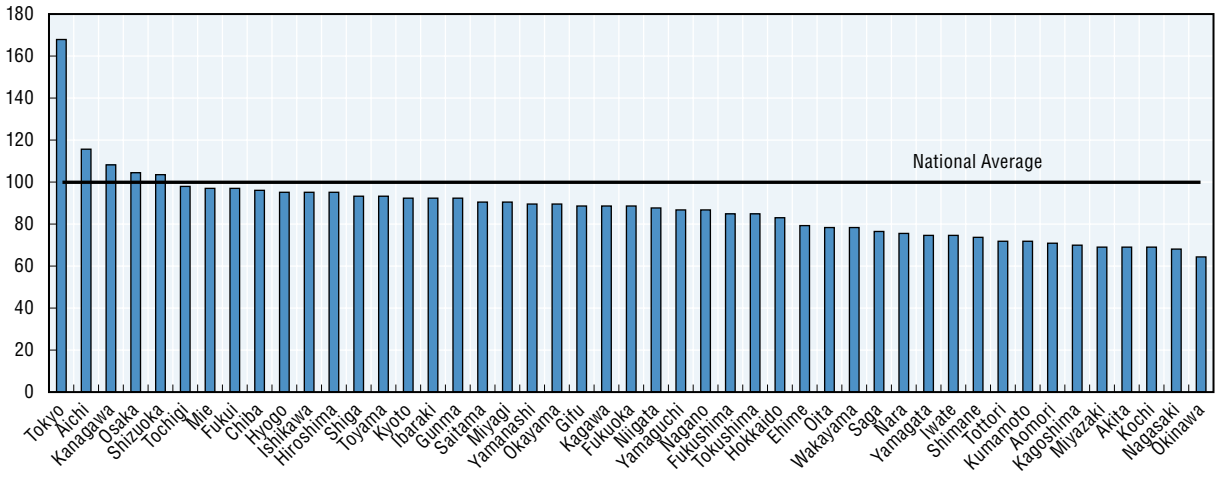
The degree of fiscal dependence varies greatly across prefectures and municipalities. Overall, SNGs in Japan received 36.4% of their revenues in the form of transfers from the centre in FY 2013. However, some, such as Metropolitan Tokyo, were almost entirely self-financing. Tokyo was able to do this because its average income is very high and because it has the nation's most intense concentration of businesses. As a result, it has the highest per capita tax income among prefectures (Figure 2.7). Indeed, 7 of Tokyo's 23 wards were among the nationwide top 10 SNGs for highest average taxpayer income. By contrast, Okinawa, Shimane Prefecture, and most of the Japan Sea coast, are relatively poor and receive well over half of their revenues from the central government's coffers.

The concentration of incomes and wealth in Tokyo has accelerated since the collapse of the bubble economy in the early 1990s. In June 2015, the problem had become so acute that Japan's largest business Federation, Nippon Keidanren, initiated an emergency survey among member companies in Tokyo to gather information on the hurdles in moving head office functions out of the metropolitan area. The government has also presented a proposal to confer tax reductions on firms that moved their head offices to the regions. In this case, "regions" are to be defined as areas that do not include the major cities of Osaka, Kyoto, Kobe, and Nagoya (Suwa, 2015). Towns and villages have especially high reliance on transfers, particularly those disbursed through the local allocation tax (Figure 2.8).

These dependent areas tend to have higher-than-average concentrations of the elderly, unemployed, low-wage workers, and small, low-revenue businesses. Without subsidies from the central government, they would struggle to deliver minimal public services except by imposing damagingly high local tax rates. They are also relatively small, which is why the aggregate numbers show a much smaller role for the local allocation tax in SNG revenues – 18.3% in FY 2012.

Figure 2.7. **Tax revenue per capita by prefecture**

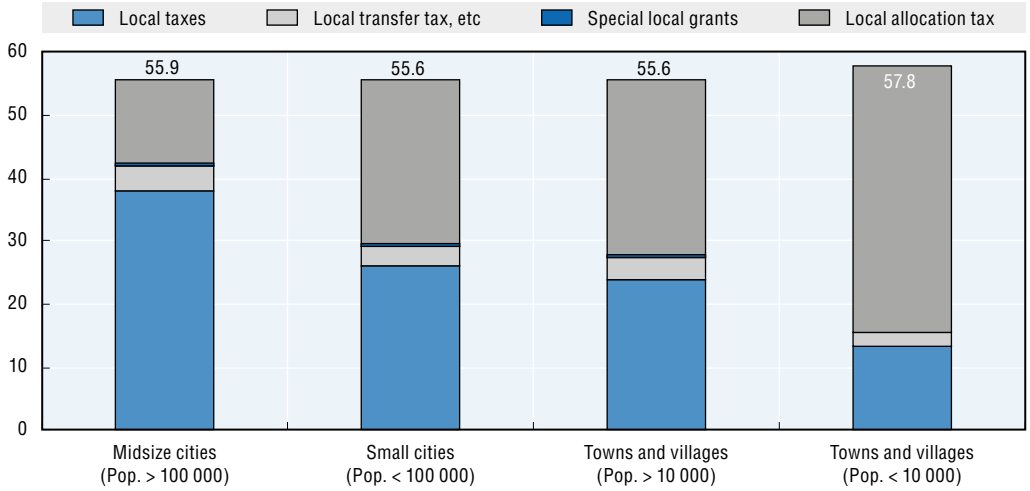
As a percentage of the national average



Source: Ministry of Internal Affairs and Communications (2014), "White Paper on Local Government Finance, 2014", Ministry of Internal Affairs and Communications, Tokyo, available at: *www.soumu.go.jp/iken/zaisei/26data/chihouzaisei_2014_en.pdf*.

StatLink *http://dx.doi.org/10.1787/888933324682*

Figure 2.8. **Breakdown of Japanese municipalities' revenues, 2014**



Note: The midsize and small cities categories exclude designated cities, core cities and special cities. "Local transfer tax" is an umbrella term covering national taxes of which a fixed proportion of revenue collected is transferred to local governments.

Source: Ministry of Internal Affairs and Communications (2014), "White Paper on Local government Finance, 2014", Ministry of Internal Affairs and Communications, Tokyo, available at: *www.soumu.go.jp/iken/zaisei/26data/chihouzaisei_2014_en.pdf*.

StatLink *http://dx.doi.org/10.1787/888933324692*

Inter-governmental revenue sharing and grant allocation

The Local Allocation Tax is the centrepiece of the inter-governmental transfer system

Japan's inter-governmental allocation of revenues does not correspond with the assignment of expenditure responsibilities outlined above. In FY 2013, for example, total national tax revenues of JPY 85.9 trillion were split roughly 60/40 between national and subnational governments, while expenditures (including the social security accounts) were divided roughly 42/58. The gap between SNGs' own resources and their spending responsibilities gives rise to the need for substantial inter-governmental transfers, which totalled almost JPY 37 trillion in 2013 (7.7% of GDP). Japan's inter-governmental transfers play a large role and have been the focus of numerous reform efforts. General and specific subsidies comprise a package aimed at guaranteeing minimal levels of public services throughout the country, in line with the constitution, as well as alleviating fiscal inequality among local governments.

There are both earmarked (conditional or specific-purpose) subsidies from the centre to SNGs and general-purpose transfers (block grants). The most important source of transfer by far is the "Local Allocation Tax" (LAT). The LAT is a mechanism for inter-governmental revenue sharing involving general purpose grants to SNGs. The use of the word tax in the LAT's name derives from the fact that the tax revenues that constitute its base were subnational revenues before fiscal centralisation in 1940. The retention of the LAT designation is more than incidental, however, as this fiscal history is one of the principal rationales underlying the maintenance of revenue sharing. The LAT should not be confused with a smaller (but still substantial) general grant programme, the Local Transfer Tax (LTT). The LTT comprises the local gasoline transfer tax and others that are collected as a national tax and transferred to local governments. The total for this programme is projected to be JPY 2.7 trillion in fiscal 2015. Unlike the LAT, it is not deliberately redistributive.

The LAT is largely funded by legally fixed percentages of the revenues from five major national taxes (the personal income tax, corporate income tax, and others). At present, it is slated to total JPY 16.75 trillion in fiscal 2015, or 19.7% of total subnational revenues. The fixed percentages of the taxes in the LAT's revenues base have repeatedly been changed and the tax base itself amended (Table 2.1), most recently in 2014-15, when 100% of the Local Business Tax (worth JPY 477 billion in 2015) was added to the LAT base in 2014 and the Tobacco Tax eliminated in 2015. Revenues from these sources are consolidated in a special account in the national government's budget. Whether these revenues are adequate (they usually are not) is determined by a macro-level assessment of SNGs' collective revenues and expenditure needs. The LAT account is then supplemented with additional finance, such as debt, as the need arises. As depicted in the above figure, the LAT is then further broken down into two components, an "ordinary LAT" and a "special LAT". The former composes 94% of the LAT funds, and is used for revenue sharing. The ordinary LAT has two core functions, the first being to guarantee local services[20] and the second being to alleviate intergovernmental fiscal inequality via revenue sharing according to SNGs' fiscal capacity. The remaining 6% is transferred to the special LAT, for such extraordinary and emergency expenses as damages from natural disasters.

Table 2.2. **Composition of the Local Allocation Tax revenues, 1999-2016**

Shares of national taxes allocated to the LAT

	Income tax	Corporate tax	Liquor tax	Consumption tax	Tobacco tax	Local business tax
1999	32.0	32.5	32.0	29.5	25.0	--
2000-06	32.0	35.8	32.0	29.5	25.0	--
2007-13	32.0	34.0	32.0	29.5	25.0	--
2014	32.0	34.0	32.0	22.3	25.0	--
2015	33.1	33.1	50.0	22.3	--	100

Source: Ministry of Internal Affairs and Communications (2014), "White Paper on Local government Finance 2014", Ministry of Internal Affairs and Communications, Tokyo available at: *www.soumu.go.jp/iken/zaisei/26data/chihouzaisei_2014_en.pdf*.

A larger issue concerns the LAT finances themselves. For nearly two decades, the LAT's base revenues of five national taxes have been inadequate to fund the estimated local financial demand. In FY 2015, the LAT statutory taxes provided JPY 14.9 trillion in revenues for the scheme, but it still required topping up from various fiscal mechanisms (Ministry of Internal Affairs Local Finance Bureau, 2015). These include a variety of measures derived mainly from two sources: i) the general account of the national government's budget; and ii) debt-financed measures whose burden is split 50/50 between the national and subnational governments. These measures are complicated and do not resolve the core problem. Debates over the financing of local revitalisation offer an opportunity to address this larger issue and revisit the arrangements for financing the LAT.

Box 2.5. **Local debt in Japan**

The Local Government Finance Act provides that the expenditures of local governments must be financed from revenue other than income from local bonds except where the income is to be used:

- to cover expenses required for public transport, gas, water and other local utilities
- to finance capital contributions and loans or to refinance local bonds
- to pay for disaster response, reconstruction or rescue projects, or
- to pay for the construction of community or public facilities, such as schools, nurseries, firefighting facilities, roads, rivers, ports and other civil engineering projects,[21] and
- to purchase land for public use or alternative land to be acquired in advance.

When an SNG intends to issue bonds or change the issuance method, interest rates or redemption methods, it must consult with the Minister of Internal Affairs and Communications or the relevant prefectural governor.

Source: Ministry of Land, Infrastructure, Transport and Tourism (2014b), "OECD National Territorial Review Background Report", Ministry of Land, Infrastructure, Transport and Tourism, Tokyo, December.

The measures employed over the years have generally seen a large part of the shortfall covered by debt financing, with the subnational portion of that debt effectively representing local governments borrowing against their future LAT revenues. This practice was ended in FY 2007 and 2008, but the onset of the global financial crisis in late 2008 led to the introduction of the "expenditure separate item" in FY 2009, at JPY 1 trillion. This special measure departed from previous practice by supplementing the LAT funding base straight from the national government's general account rather than through a 50/50 split of national-subnational borrowing (Tobita, 2014:12-13). The following years saw some

name changes and incremental increases, resulting in FY 2013's "local economic base bolstering and employment and other measures fund" of JPY 1.495 trillion. Similarly, the LAT "special addition", which involved additional revenues, was instituted in 2011 due to the severe economic conditions. This special measure totalled JPY 1.27 trillion that year and JPY 1.1 trillion in 2012.

Finance policy making in 2014-15 has centred on whether or not to eliminate the special measures for the LAT that had bridged the gap in local finance for several years. In December 2014, the Ministry of Finance's Fiscal Institutions Deliberation Committee advised changes to the local finance plan's expenditure separate item (JPY 1.495 trillion in 2013) as well as the special addition for the LAT (JPY 990 billion in 2013). It stressed that these measures were instituted to deal with the severe recessionary conditions and unprecedented challenge to budgeting following the Lehman shock of September 2008 and that in 2013, the national government's general accounts had seen the elimination of the various fiscal measures to stimulate local and national economies. The Committee argued that local public finance should likewise return to normal conditions through planning for the withdrawal of the expenditure separate item as well as the special addition and other measures. The Ministry of Finance made clear when preparing the 2015 budget that it believed the special addition should be ended immediately, arguing that local public debt had not grown over the past decade and that local tax revenues were growing with the economic recovery. By contrast, the national debt had increased 52.7% between 2004 and 2014 (*Sankei Shimbun*, 2014).

The Ministry of Finance argues that these emergency measures to cover the shortfall in local finance do not result in effective consumption and investment. SNGs and the Ministry of Internal Affairs and Communications counter that the measures provide important financing for employment relief, work and livelihood support for recipients of social security, local business creation, countermeasures for empty housing stock and other measures for regions coping with declining populations. Yet if these programmes are necessary, then it is a problem that they are not backed up by more stable, predictable finance (Sawai, 2014). This is why SNGs generally call for such increases. Reflecting a consensus among SNGs, Japan Association of City Mayors argued for a reinforcement of the basic LAT in June 2015 (Japan Association of City Mayors, 2015). Metropolitan Tokyo and the other eight area prefectures and cities also called on the national government to do this. These SNGs are especially adamant that the LAT not be used to impose conditions on SNGs nor to lead their policy-making decisions (Metro Tokyo, 2015).

Earmarked subsidies continue to play an important role, despite efforts to use them less

Specific (earmarked) subsidies accounted for JPY 13.07 trillion in FY 2015, or 15.3% of total local revenues. These subsidies are distributed by line ministries for designated local project costs in education, health, and other areas. The subsidies finance a portion of project costs, generally half or more, leaving the balance to be covered by the local government's general revenues and/or local bonds. Specific subsidies were central to the early post-war reconstruction of depleted and devastated infrastructure, as well as development of the transport and other systems required by high growth and rapid urbanisation. The centralisation of planning and allocation brought efficiencies, albeit at the expense of a greater degree of nationwide uniformity in infrastructure and urban design. However, reliance on such instruments means that a great deal of SNG spending is powerfully influenced by central incentives.

Earmarked subsidies have been the focus of a half-century of discussion and reform,[22] beginning with incremental steps and culminating in a series of ambitious initiatives in the early 2000s (Box 2.6). Until about the mid-1980s, though, specific subsidies constituted a larger proportion of local revenues than the LAT. However, the progress of fiscal decentralisation over the years has seen the role of specific subsidies decline in relation to general-purpose grants. This policy was driven by the confidence that general-purpose grants would allow for freedom of choice at local level and that this, in turn, might moderate the incentives for excessive spending on public works. The composition of specific subsidies has also changed over the decades. The devotion to public works during the high-growth years and into the 1990s has given way in recent years to a greater emphasis on other spending priorities. This is a welcome development. The public-works component of specific subsidies has dropped to under 20% of the total, with most of the rest devoted to social insurance, education and other spending on people. As specific subsidies were reduced, the LAT was increased in order to cover some of the expected expansion in local burdens. Local construction bonds were also increased to accomplish the same end.

As in many other countries, the perennial challenge in such reforms has been ensuring that they did not simply result in savings for the central budget and the shifting of expenditure burdens onto SNGs. This was one of the criticisms levelled by SNG representatives at the changes adopted in the 1980s and at subsequent reforms. Central government support for SNG budgets has long been an area of disagreement between the Ministry of Finance and the Ministry of Internal Affairs and Communications. The former is driven by its concern over national finances and seeks cuts to inter-governmental transfers whenever possible, while maintaining control over the national tax base. It argues that reforms to inter-governmental transfers should be part of local revitalisation. By contrast, the MIC supervises subnational finances, including the timely compilation of budgets and the calculation of general grants. It has resisted what it sees as the finance ministry's efforts to pass the costs of fiscal consolidation onto SNGs and continues to oppose the finance ministry's effort to eliminate special measures for the LAT (Council on Economic and Fiscal Policy, 2015).

Interactions among different fiscal instruments can have unexpected consequences

As noted above, a portion of the local costs for subsidised projects, as well as the local debt payments, has been funded through the LAT by special measures that entered the cost of the projects as well as via the inclusion of the debt repayment into the basic financial demand calculations for the LAT. This means that the LAT, the targeted subsidies, and the local debt need to be viewed together, in order to understand the incentives that SNGs may face. While these measures do not restrict or determine the choices made by SNGs, it is important to be sensitive to interactions among them, which may affect SNG spending priorities. Many local projects were financed by local debt approved by the central government. Because a portion of the principal and interest payments for this debt was included in the calculations of basic financial demand for the LAT, this arrangement became a mechanism for inducing the SNGs to prioritise eligible fiscal expenditures: rather than assessing the costs and benefits of specific projects at the local level, the local governments were selecting projects with reference to the entire scheme. The sums concerned were not trivial: in 2001, the total for the works-related expenses and the debt-related expenses entered into the calculation for the LAT allocation totalled JPY 6.3 trillion, equivalent to 13.4% of the total for "standard financial requirements".

Box 2.6. **Intergovernmental fiscal reforms since 2000**

In 2002, the government launched an ambitious reform of all three major sources of SNG revenues – local taxes, the LAT and specific grants. This came to be known as the "Trinity Reform". FY 2003 saw JPY 4 trillion worth of reforms to targeted subsidies. In the following year, FY 2004, JPY 3 trillion worth of revenues were transferred from the central government to SNGs, with a portion of the income tax shifted to local governments as a personal residents' tax. Altogether between 2003 and 2006, the reforms cut subsidies by JPY 8.8 trillion and devolved JPY 3.6 trillion in revenues (Ikawa, 2007).

One of the striking features of the reform was that, for FY 2005 and 2006, the central government asked local governments to submit proposals on which earmarked grants could be cut, aiming for an overall amount of JPY 3 trillion. After intensive discussions, groups of local government leaders proposed a JPY 9 trillion cut in earmarked grants,[23] thus surpassing the central government's target. The complexity of the arrangements prevailing may be inferred from the fact that the JPY 3.2 trillion in cuts proposed by local governments for 2005-06 involved the abolition of no fewer than 45 subsidies in the social security area, 33 in public works, 15 in education and 55 in other areas.

Strikingly, this proposal raised strong opposition from many central government ministries and members of the Diet, a reflection of the degree to which earmarking remained an important lever for national actors. This remains an issue: many line ministries derive a significant portion of their authority from influencing the character of local spending through their control over targeted subsidies. Decentralisation of finance and decision making thus erodes their ability to pursue their policy objectives, especially at a time of fiscal constraint.

The Trinity Reforms were followed at the end of the decade by efforts to convert a number of specific subsidies into general subsidies. Some central agencies strongly resisted this shift, which would have removed an important lever for delivering on their own policy goals, and they raised such objections as risks to food security and other national priorities. In the end, roughly 10% of public-works related measures were shifted into the general revenue scheme. In FY 2011, a total of JPY 512 billion in specific subsidies was removed from the hands of line ministries, their regulatory regimes loosened, and their finances bundled together. They were then distributed as a general subsidy and through a common gatekeeper: the Cabinet Office. In FY 2012, this figure increase to JPY 833 billion (Mihara, 2013: 33-36). This reform was qualitatively different from previous rounds of subsidy reform. The reform created a new "local autonomous strategy subsidy" that allowed recipient governments to allocate finances as they saw fit. This led to a substantial reduction in central authority over subsidies and disbursements and significant progress on reforming subsidies for public works.

Policy shifted again when the "local autonomy strategy subsidies" were eliminated in FY 2013, in part because the government wished to link more resources to support for local resilience, e.g. better infrastructure maintenance and the strengthening of homes and other assets facing earthquake, fire and other threats. This move away from "general-revenue-isation" of central support to SNGs has been fiercely criticised by some public finance specialists in Japan (e.g. Tobita, 2014), who fear a return to the kind of incentives that induced excessive SNG spending on public works in the past. However, supporters of the change point to potential spillovers from SNG activities (e.g., in respect of climate change, regional growth or resilience) and also to capacity challenges at local level, both of which might point to the need for greater central leadership.

A further problem that attracted attention in the early 2000s was that when local tax revenues declined in the post-bubble "lost decade," local governments that were not LAT recipients restricted their expenditures, whereas those that were recipients of LAT increased them. Local governments with low tax revenues actually saw their per capita general revenues increase. One of the factors responsible for this outcome was the inclusion of calculations to reflect differing natural and social conditions among the local governments

in the calculation of the LAT. In addition, the move to reduce earmarking in favour of a larger LAT probably increased the redistributive character of the system, since the LAT has an explicit equalisation function, whereas many of the previous projects financed by earmarked grants did not. For these and a number of other reasons, policy makers sought as much as possible to simplify the calculations of the LAT and focus them on "objective" measures (Cabinet Office, 2001). During the 2000s, reforms to the mechanisms of the LAT saw a gradual restriction of measures that encouraged public works via support for debt service. Except for a few items, the practice had been more or less eliminated by 2010 (Tobita, 2014: 17).

Policies to promote local revitalisation may reinforce pressures for fiscal decentralisation

Despite a partial reversal of the move from specific to general-purpose transfers in 2013 (Box 2.6 above), the government's current local revitalisation initiative could reinforce to the longer-term trend towards greater decentralisation through greater reliance on non-earmarked transfers and local decision making. One of the main features of the 2015 local finance plan was the creation of JPY 1 trillion worth of funds for local revitalisation – the "community, people, work creation fund". It will be allocated to SNGs to foster projects that maximise local initiative and autonomy. A further JPY 722.5 billion, in the initial 2015 budget, is for specific subsidies aimed at similar goals – supporting the national "community, people, work comprehensive strategy". These subsidies are divided into four broad categories:

- fostering stable employment opportunities (JPY 174.4 billion)
- encouraging people to move to local areas (JPY 64.4 billion)
- enhancing young people's desire to marry and start families (JPY 109.6 billion) and
- fostering networks among modernised local communities (JPY 374.1 billion).

An additional JPY 676.6 billion (which sum, when added to local matching funds, totals JPY 1.36 trillion) in the 2015 budget is aimed at bolstering the social insurance system through supplementing programmes for rearing and raising children, as well as the cost of programmes for taking care of the elderly.

In addition, the Cabinet in June 2015 confirmed a template for its "new-style disbursements" to fund local innovative and outstanding projects as well as overcome bureaucratic sectionalism. The funds are to be aimed at projects that, in principle, could not be covered by conventional subsidies because they are outside the ambit of existing programmes. The total amount of the new-style disbursements is expected to be about JPY 200 billion. These funds are to be distributed on the basis of objective assessments of the costs and benefits of proposed local projects. The disbursements are to continue through FY 2019. It is as yet unclear where the decisions will be taken concerning the relative merits of local proposals.

While the other local revitalisation spending is financed from stable sources such as the consumption tax, funding for the "community, people, work creation fund" will draw on a diverse range of sources. One is the refocusing of existing expenditures, such as JPY 350 billion from the "local revitalisation creation works fund", which will rise to a total of JPY 500 billion. A further JPY 500 billion is to be accrued from 1) JPY 100 billion in finances accruing through alleviation of fiscal inequalities accompanying the shift of

corporate resident's tax corporation levy to the LAT revenue base; 2) JPY 300 billion from the deployment of interest-rate fluctuation reserve funds held by local financial institutions; and 3) JPY 100 billion from using general revenues gained via reductions in debt servicing costs through past cuts to investment expenditures. Some of these sources of finance appear to be a useful and welcome repurposing of existing measures, thus ensuring that old programmes are not simply left in place through institutional inertia. However, many of the fiscal revenues depend on political and policy-related factors that may very well change over the coming years (Tobita, 2015).

Moreover, the revenues to fund the planned "new-style disbursement" are to come from revisions to existing specific subsidies. This requires the acquiescence of individual ministries in the reductions of their specific subsidies (Chunichi Shinbun, 2015). The line ministries have resisted such reforms in the past, at times successfully, but the government is determined to transcend bureaucratic sectionalism and to foster autonomous local development. Indeed, the government may want to extend this approach – of turning specific into general subsidies – to the "community, people, work creation fund," at least in the areas where its finances are also uncertain.

Pathways for reforming inter-governmental transfers

The authorities might want to review the allocation criteria for the LAT

The allocation of ordinary LAT funds among SNGs is determined by a complex formula that measures local fiscal capacity and expenditure needs (Table 2.3). The amount transferred to any given local government depends on the balance between its "standard financial revenues" and its "standard financial requirements". The calculation of standard financial revenues is based on standardised local tax revenues (assessed at standard tax rates) but these are then multiplied by 75% in order to incentivise local tax effort, as well as to allow room for local policies not included in the calculation of standard financial requirements. The local transfer tax and other non-LAT general subsidy allocations are then added. At the same time, the calculation of expenditure needs is based on an assessment of service standards for each local government for such things as education, fire services, etc. The complexity of the formula arises from the large number of indicators used to assess both unit costs for service delivery/task performance and also to calculate the relevant adjustment coefficients. If the result of subtracting a subnational government's standard financial revenues from its standard financial requirements exceeds 1, then it is not eligible to receive ordinary LAT payments. Among the 47 prefectures, only Tokyo falls into this category. In FY 2014, 54 cities and towns did as well.

Table 2.3. **Calculation of the Local Allocation Tax**

Financing gap = Standard financial requirements – Standard financial revenues
Standard financial requirements = unit cost of service provision x measurement unit x adjustment coefficient
Standard financial revenues = standard local tax revenues x 0.75 + local transfer tax allocation, etc.
Unit cost: per-unit expense of each administrative service/task
Measurement unit: population and other indices to assess the fiscal cost of each service/task
Adjustment coefficient: to reflect differences in cost of provision owing to natural or social conditions (e.g. extreme climate, demographic factors, remote location)

Source: Adapted from Uda, N. (2015), "Japan: Fiscal Discipline of Local Governments," paper given to IMF, ADB, PRI Conference on "Fiscal Policy for Long-Term Growth and Sustainability in Ageing Societies," 10-11 June, 2015, Tokyo, *www.mof.go.jp/english/pri/research/conference/tff2015e.htm* (accessed 15 July 2015).

In some cases, at least, there is likely to be room to reconsider the basis for the calculations underlying LAT allocations.

- Allocations should reflect actual needs, not historical levels of provision. Some of the measurements are input-based (numbers of personnel, such as police, or numbers of hospital beds) rather than needs-based. In some cases the numbers are derived from statutes and regulations rather than the actual number employed by a given SNG. The recent change in the calculation of the LAT from the approved number of sick beds to the actually operating number is thus a positive step; more can be done in this direction.
- The calculation also includes some of the cost of principal and interest on local debt floated to finance public works, as well as for other purposes such as revenue shortfalls. This is a fairly unusual feature of the Japanese fiscal equalisation system. It would seem to reflect the willingness of the centre to help SNGs take on debt when that debt is used to finance projects or other purposes supported by the centre. As will be seen, it can create some problematic incentives for SNGs.
- SNGs should not be able to manipulate the criteria for service-cost equalisation. Otherwise, general-purpose transfers can distort spending decisions no less than earmarked grants. For example, the fact that things like road construction volumes and interest payments are part of for the LAT allocation formula may create an incentive for SNGs to overspend (and perhaps over borrow) on roads. In Denmark, the length of local roads was an indicator of road spending need in the 1980s. This prompted local authorities to turn small, private dirt roads into public roads. This was financially attractive, since the cost of maintaining dirt roads was very low. The criterion was eventually dropped (Bergvall et al., 2006).
- Equalisation objectives must be balanced against the need for greater resource efficiency as demographic change proceeds. For example, many local communities with high rates of population decline have relatively high costs for delivering social services. While such an adjustment makes sense in terms of fiscal equalisation, there remain questions about the incentives for greater efficiency confronting such local authorities and about the extent to which shifting more resources to places with fewer people makes sense in a tight fiscal environment.

There is no perfect or final answer to this last question – it is a question of balance between equity and efficiency objectives – but the way the government chooses to manage this trade-off is closely linked to the spatial planning and infrastructure policy challenges discussed above. Fiscal and spatial policies need to be co-ordinated as Japan adjusts to its changing demographic situation. The authorities rightly wish to respect the rights and address the public service needs of people in remote, low-density regions. However, the government must avoid putting itself in the position of transferring ever larger sums of money to places with fewer and fewer people on an open-ended basis. This would be perverse from the perspective of both efficiency and equity. Care must also be taken to ensure that the LAT formula does not encourage a resurgence of the kind of *hakomono* ("empty box") public works spending seen in the past[24] or strategies of inter-municipal competition for people and resources that depend not on local potential, initiative and endowments but on better access to central funds.

The authorities should also be wary of fiscal gimmicks, like the "hometown tax" (*furusato nozei*) introduced in 2008. City residents in Japan are allowed to divert a portion of

their local resident's tax to a hometown (*furusato*) of their choice. Initially conceived as an attempt to mobilise the feelings that many urban Japanese have for their places of origin, it has been transformed into a competition for tax funds in which Japanese municipalities market themselves ever more aggressively. This is because many municipalities began offering gifts in return for *furusato nozei* donations. Often these may consist of locally produced foodstuffs – high-quality beef, exotic sea foods, rice, beer and sake are common – but in some cases they include things like hot-air balloon rides and gold ninja throwing knives. The gifts offered by the city of Nahari include an entire tuna fish, a selection of locally caught fish, 1kg of regional pork, 5 kg of local rice, 500 g of handmade miso and an assortment of regional desserts and sauces. Towns have begun to produce and circulate marketing brochures advertising the gifts that they offer. Since 2011, the *furusato nozei* has also – less controversially – been a popular way for people to support places recovering from the Great East Japan Earthquake.

The programme proved so popular that some 130 000 taxpayers diverted JPY 14.2 billion in donations to rural towns in FY 2014, resulting in JPY 6.1 billion in tax reductions. According to MIC data, the respective totals for the 2009-14 period were JPY 112.6 billion and JPY 37.3 billion respectively. For FY 2015, the government doubled the amount of tax that individuals can divert to their chosen. The requirement to claim the credit via the filing of an income tax return has also been dropped. Both measures are likely to increase uptake of the tax.

Despite its popularity, the programme has problems and aspects of it should certainly be reconsidered. The most common criticism is that the *furusato nozei* diverts revenues from the cities where people live (and therefore consume services) to places where they do not. This is inefficient from a public finance perspective, particularly in a system where fiscal equalisation already plays a large role. In fact, the programme is not yet large enough to distort things too much, and it has barely made a dent in the budget of Tokyo, where most of the donors live. However it is growing. The more serious immediate problem is that the programme results in a net loss to public budgets. The competition for donations is not even zero-sum – it is a negative-sum game. Some localities have spent the equivalent of 60-80% of the donations received, or more, on gifts and promotional efforts. One cannot criticise the municipalities for doing this: conceived as a business venture, it yields many of them a handsome profit. But seen as a fiscal transfer programme, from the perspective of the central government, it looks different: a support scheme that costs the budget three or four times what it yields the intended beneficiaries is not efficient. The scheme is widely (and rightly) seen by individuals as a way to cut their tax bills and it results in substantial foregone income for the general government budget. In a country facing tight fiscal circumstances for the foreseeable future, this is not an efficient way to support struggling rural towns: the costs to the budget far exceed the additional revenue gained by local governments.

Even so, the programme may well have served a useful purpose in that it prompted prefectures and municipalities to reach out to citizens all across the country and helped to stimulate local marketing and branding efforts. Many SNGs have created cartoon mascots to represent them and some of these have become huge popular successes: toys and other products using the image of Kumanon, a pink-cheeked black bear who represents Kumamoto Prefecture, have in recent years yielded the prefecture in excess of JPY 60 billion per year. Thus, in addition to channelling increased resources to SNGs

outside the capital region, it may also strengthen local revitalisation efforts, invigorating local economies and making it easier to attract young people to rural areas and smaller towns. It also offers an opportunity for people who have moved to large cities to maintain a connection to their hometowns if they so choose. The critical test with respect to local economic development is whether consumers will continue to buy such products when they cannot set the purchases against tax. Given the issues with the *furusato nozei* discussed above, the government should monitor trends with respect to the use of the scheme very closely and ensure rigorous evaluation of its costs, benefits and distributional consequences.

Earmarked grants also have a role to play…

Japan has not been alone in wrestling with the balance between general-purpose and earmarked grants. The latter are widely believed to distort SNG spending decisions, undermine fiscal discipline and reduce allocative efficiency (Bergvall et al., 2006; Blöchliger and Vammalle, 2010). For many years, there has been a strong consensus that in most circumstances, general-purpose grants should be preferred.[25] Yet although the problems with earmarked grants are well known and have prompted some countries to reduce their reliance on such instruments, many continue to use them extensively. This is not just an instance of bad policy. On the contrary, there has in recent years been growing recognition that they do have specific advantages in certain contexts:

- One of the attractive features of performance-based grants is thus that substantial prior consultation between donors and potential recipients is reckoned to be a *sine qua non* for their success. This can have a value of its own, contributing to communication and information sharing among levels of government long before they are awarded (Smart and Bird, 2009).
- Borge and Lilleschulstad (2010) conclude that earmarked grants with co-financing requirements may be more effective in shifting local spending priorities when linked to new activities (provision of new services, investment in new infrastructure, etc.). Such grants may even make things easier for local politicians interested in policy innovation, since it can be difficult for them to resist local lobbies and channel expenditure into new undertakings, for which no established local constituency (yet) exists.[26]
- Earmarked grants can be employed to address risk-sharing concerns, such as co-financing investments or supporting innovation and experimentation in public service delivery (Bergvall et al., 2006; Blöchliger and Vammalle, 2010).
- Temporary use of earmarked grants can help to build capacity at SNG level during decentralisation reforms, when new tasks are assigned to SNGs (OECD, 2007). This could be quite relevant in Japan: a recent finance ministry assessment found that the shift towards "general revenue-isation" of grants to SNGs did not lead to greater efficiency of local spending, as had been hoped; local authorities continued to invest in new *hakomono* infrastructure, with too attention to maintenance and other costs (Ministry of Finance, 2014a).
- Earmarked grants can help to finance recovery policies after crises or natural disasters. In the immediate aftermath of the financial crisis in 2008-09, many countries found them to be a very flexible and fast instrument to address exceptional situations which required timely, geographically targeted responses.

In the context of stimulus, earmarked grants were attractive both for their speed and for the perceived assurance of "additionality" – it was feared that general-purpose grants would simply crowd-out expenditure by lower-level governments. A great deal of infrastructure finance, which loomed large in many stimulus packages, was both earmarked and subject to matching requirements (Smart and Bird, 2009; Allain-Dupré, 2011). At the same time, the widespread trend towards attaching performance requirements to general purpose grants or broad categorical grants, in the form, e.g. of minimum service requirements or other conditions, also appears to be continuing (see, e.g. Slack, 2009; Shah, 2009, 2010; Steffensen, 2010). While one might expect a reversion to block grants in the context of fiscal consolidation – in the past, lower levels of support to subordinate governments have often gone hand in hand with greater freedom in the use of that support – earmarking may be seen as a way to protect growth-enhancing expenditure from broader budget cuts. Since the most growth-enhancing investments are likely to generate positive spillovers – benefits that extend beyond the spending jurisdiction – there may be a case for such grants to act as "Pigouvian subsidies"[27] (Oates, 2005). Otherwise, subnational governments may be tempted cut such spending, particularly investment spending, in order to sustain expenditure on consumption and services, where spillovers are likely to be small or non-existent.[28]

Performance-based grants are one option that has recently received increasing attention in many countries (see especially Shah, 2009, 2010). Performance-based grants are often linked to minimum delivery standards in respect of public services. Establishing minimum standards, generally for "essential public services", effectively places conditions on subnational governments but leaves them wide discretion when it comes to deciding how to fulfil those conditions. Standards may apply nationwide or may vary by region, and affect coverage, quality, or the price of services. Education, health, and other welfare services are frequently, but not exclusively, subject to such controls (Joumard and Kongsrud, 2003; OECD, 2007).

...but their use should be limited and co-ordinated across the government

The foregoing thus suggests that any review of the Japanese transfer system should aim not to eliminate, or even to minimise, specific grants but to determine, according to the kind of criteria outlined above, where and when such grants are appropriate. In the context of population decline and intensifying competition among locales for people and resources, earmarked grants may play a particularly important role in fostering co-operation around measures that may have positive spillovers that transcend local or prefectural boundaries (Box 2.7). This is already a key priority for the MIC, which has been working to create "central agglomerations of co-operation" – in essence, co-operation contracts among local governments that facilitate policy co-ordination among them and, in many cases, the concentration of key urban facilities or functions in core cities that can then support service provision to the surrounding population. Earmarked grants can also be of particular use for addressing national priorities like climate change and for addressing capacity gaps at local level.

That said, such grants should be used sparingly and should focus on a few key priorities. To this end, they should be defined and implemented in a whole-of-government perspective. Otherwise, there is a very real risk that different sectoral earmarked grant programmes, each of which might make sense according to one or more of these criteria, will cut across one another, confronting SNGs with contradictory, confusing or even perverse incentives. The experience of some other countries illustrates how easily and rapidly conditional

grant schemes can multiply where such discipline at the centre is lacking; each central ministry or department designs its own disbursements and programmes independently of the others. The result is an erosion of local autonomy, confusion about central priorities and the creation of a plethora of spending programmes are hard to monitor and evaluate.[30]

Box 2.7. **Central government leadership and inter-municipal co-operation**

Local governments may co-ordinate using a range of mechanisms. However, such co-ordination typically requires a degree of intervention from higher-level governments to overcome the number of impediments to collaboration across jurisdictional boundaries, some of which may be rooted in national policies and all of which may be easier to correct if the higher level governments are involved:

- There are collective action problems to be overcome. Even if all the municipalities in a large urban area or region stand to gain from co-operation, there may be none among them with the capacity and incentive to take on the costs of gathering the necessary information, mobilising others, etc. In some cases, municipalities may lack the capacities needed to engage in co-operation: a lack of strategic planning capabilities at the local level has impeded inter-municipal collaboration in such diverse country settings as Canada and Slovenia.
- Big differences in capacity and resources across jurisdictions may aggravate the problem by undermining trust or weakening incentives to collaborate. Differences in size, wealth and priorities can make it difficult for neighbouring municipalities to agree, particularly where very large cities are engaged with much smaller municipalities.
- Competition between municipalities can prevail, particularly if municipalities compete to obtain funding from higher levels of government.
- Where indivisible assets like schools and hospitals are concerned, collaboration can be harder still. Potential economies of scale notwithstanding, individual local authorities may prefer less-efficient local provision if the collaborative solution would deprive them of such facilities. In many places with declining populations, municipalities see the need to collaborate in fields like education and healthcare, but fear that their own long-term viability and attractiveness depend in part on ensuring that the key facilities (and related employment) are located within their own borders.[29]
- Where there are positive (negative) spillovers across jurisdictional boundaries, the benefits (costs) of a policy or investment to the wider region may be greater than to the municipality in which it is implemented. Left to its own devices, that municipality is likely to under- (over-) invest in such activities.

Such cross-jurisdictional co-ordination particularly deserves attention in view of recent empirical findings that suggest that, in some settings, public investment externalities (i.e., investment impacts that spill across administrative borders) are more relevant for regional growth than direct public investment in each region (Rodríguez-Pose, Psycharis and Tselios, 2012). Historically, it has been especially important for physical infrastructure provision where the efficient scale of projects transcends boundaries of individual localities (e.g. regional road networks). This also holds true when physical or social infrastructure must be streamlined or downsized (e.g., regionalisation of hospitals where healthcare demand is falling). It can also pay dividends in areas like human capital development and innovation in conditions where functional economies cross administrative borders.

Sources: OECD (2014a), *OECD Regional Outlook: Regions and Cities: Where Policies and People Meet*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264201415-en*; OECD (2013a), *Investing Together: Working Effectively across Levels of Government*, OECD Publishing, Paris, *http://dx.doi.org/10.1787/9789264197022-en*.

A clearer division of labour between different instruments may be needed

As noted above, decentralisation measures need to be bolstered by steps to ensure that local authorities have strong incentives to co-operate in both service provision and investment in instances where there are obvious spillovers or scale economies. The authorities are already trying to adapt the LAT to the need to promote such co-operation. One example is the use of special measures in the LAT to promote the concentration and comprehensive use of public hospital facilities in local areas. The LAT back-end financing measure applied to public hospitals previously covered 30% of the bond redemption costs for the construction or replacement of a hospital, but for FY 2015 to 2020, that rate has been reduced to 25% for ordinary costs but raised to 40% where the project is aimed at a reorganisation and networking of the public hospital, in accordance with local revitalisation. These measures are part of the overall strategy of building networks in the regions supported by both MIC and MLIT. Moreover, the prefectural role in making these determinations is to be decisive – an effort to ensure that a broader (regional rather than local) view informs such decisions (Hiraoka, 2015; The Daily Engineering and Construction News, 2015).[31]

Another, potentially rather problematic, recent innovation is the inclusion of the "community, people, work creation fund" in the calculation of basic fiscal demand in the ordinary LAT. One of the new initiatives includes the "fund for special measures to deal with declining population and other challenges" which was instituted in 2015 and is calculated on the basis of population and the need for the revitalisation projects, as well as objective measures to reflect its success. The indicators of the need for the projects are quite detailed, and include rates of increase or decrease in population, the proportion of incoming population, the proportion of outgoing population, the proportion of youth, the natural increase or decrease in population, the rate of youth employment, the rate of female employment, the rate of effective labour demand, and the annual sales per capita of area businesses. The measures to reflect success of the initiatives are similarly detailed.

Both these initiatives are in some respects quite promising, but they raise two important problems. The first problem is that they risk making the LAT needlessly complex in an effort to use it as an instrument for the pursuit of too many different priorities. If the formula is overly complex, its incentive effects may be blunted, as it may be difficult for local governments to understand how the relative success of their various initiatives is reflected in the calculations for the LAT. A more explicit measure to achieve that recognition may be necessary in order to incentivise the local governments to deploy countermeasures against population decline (Enatsu, 2015). The second problem is that they raise once again the prospect of SNGs being able to influence their LAT allocations, which is undesirable in the case of a fiscal equalisation mechanism.

The LAT calculations of basic fiscal need have traditionally seen a number of variables used to capture inter-regional differences in conditions that affect the cost of programme delivery, and thus preserve equity. The new measures (from 2015) in the LAT calculations have a different purpose, that of introducing objective measures of performance, as opposed to simply measuring different local conditions affecting programme spending. The new measures are also meant to provide signal to SNGs of the importance that the national government attaches to local revitalisation. However, some analysts warn that

these kinds of incentives in the LAT threaten a return to the inducement of public works spending that became such a problem in the past (Tobita, 2014:17).

One way forward would be to recognise fiscal equalisation and local revitalisation as separate and distinct (even if related) goals. The LAT could be streamlined with a clear focus on ensuring fiscal equalisation in the interests of equity in the delivery of essential public services. Other instruments, including performance-based grants where appropriate, could then be designed to promote revitalisation initiatives. For the most part, support for revitalisation efforts should not have too many conditions attached, even if it is separated from the LAT: if the purpose is to allow prefectural and local actors to identify and mobilise endogenous assets, then the process cannot be too centrally driven. It would also be useful to streamline the indicators used to the core elements of local revitalisation. These would appear to be building local and regional communities attractive to young people. Measures of youth and female employment seem especially relevant in this regard, and could perhaps be refined to reflect income levels and other markers for employment conditions. This is because it is not merely jobs, but good jobs, that will likely be the key to attracting the young to Japanese regions.[32] The multiplication of grant instruments should be limited: as noted above, this can undermine policy coherence. Such instruments need to be embedded in a whole-of-government strategy oriented towards a limited number of national goals.

Infrastructure policy

Japan is exceptionally well-endowed with infrastructure

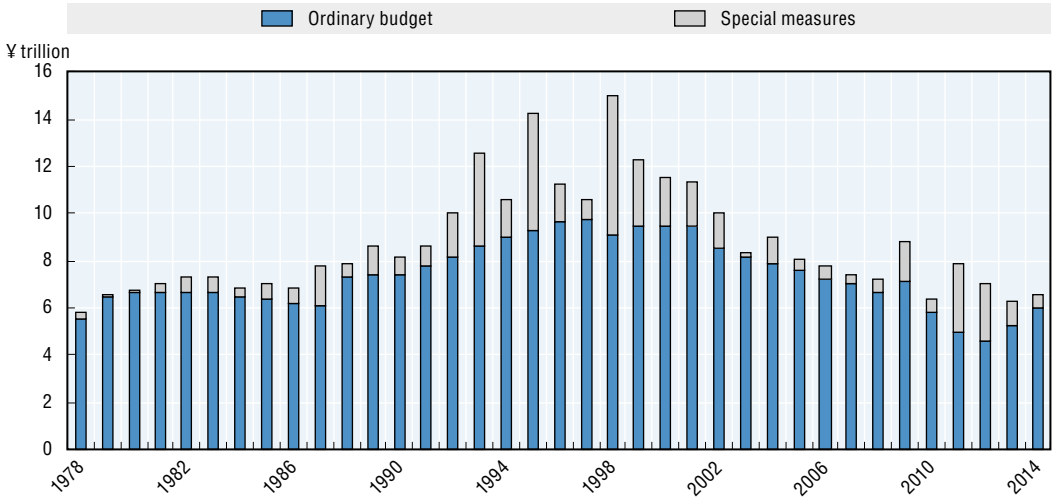
Japan may well be the most infrastructure-intensive major economy in the world. In 2013, CAO (2013) estimated its value in 2005 at JPY 463 trillion, equivalent to around 92% of 2005 GDP, despite the exclusion of some network sectors. In part, this is because, as a rich, densely populated country, Japan has a lot of infrastructure in places with very high land values. It is also very highly urbanised, and this, too, contributes to infrastructure density. Moreover, Japan's topography and geography arguably necessitate far higher levels of infrastructure investment than might be appropriate elsewhere. The mountainous topography of much of the country leads to greater investment in bridges and tunnels, for example, while its exceptional vulnerability to natural disasters – including typhoons, earthquakes, volcanic eruptions, floods and extreme snowfalls – implies higher spending on disaster prevention. A recent finance ministry analysis (Ministry of Finance, 2014b) suggests that Japan has reached saturation with respect to some major infrastructures. The national network of trunk roads, for example, nearly tripled in length between 1986 and 2014, whereas the number of passenger kilometres driven rose only 3.17% – and in fact has largely been unchanged since 1999. Much the same is true of airports and wastewater treatment infrastructures.

Historically, the Japanese state has had a reputation as a "construction state", owing to its traditionally high levels of public investment in physical infrastructure. Indeed, public investment as a share of GDP has long been well above OECD averages, though it has fallen substantially in recent years: in 1996, total public investment reached 8.4% of GDP, but it has since fallen sharply. The largest part of that was spent on public works (Figure 2.9). This spending reflected factors that were fundamentally exogenous to the policy process, including population density; the difficult geography of the country, much of which faces accessibility challenges; and the need for resilience in a country subject to multiple natural hazards. It was also motivated by a deep belief in the growth-promoting role of

infrastructure investment, which was seen by many as the regional development tool of choice, and was the most frequent spending option when fiscal stimulus was required. Political economy factors also played an important role, as public works projects were frequently allocated and financed for political reasons (Kondoh, 2008; OECD, 2009; Yoshino and Mizoguchi, 2010).

Some of the specific estimates of Japan's infrastructure stock are striking. McKinsey reckons that roughly half of this infrastructure stock is in roads (versus 34.7% on the MLIT estimate). Japan's road network of 1.27 million km is sixth largest in the world, exceeding Canada's 1.04 million km and only slightly smaller than Russia's 1.28 million, even though those 2 countries are well over 20 times the size of Japan. In terms of road density per square kilometre, Japan ranked third in the OECD in 2012, behind Belgium and the Netherlands – two other small but densely inhabited and highly urbanised countries. By contrast, it ranked 19th in terms of road density per capita. Roughly 80% of Japan's roads are managed by the prefectures (21%) and municipalities (60%). The country also has 98 civil airports, many of them very close to one another. Japan probably needs more airports than most countries its size, owing to the fact that it is an archipelago; for remote islands, air transport infrastructure is a necessity. However, many are clearly redundant – almost every prefecture in Japan has at least one airport, in some cases located as little as 60 or 70km from one another. The majority are run by SNGs and operate at a loss, well below capacity (Aoki, 2012; Janowski and Kaneko, 2013), as do some run by the central government. That is one reason why the government in 2014 put in place a legislative framework for the privatisation of airports.

Figure 2.9. **Public works expenditure, 1978-2014**



Source: Ministry of Finance (2014a), Ministry of Finance (2014a), "Current situation and issues surrounding social infrastructure", Treasury Budget Bureau, Tokyo, 4 April, available (in Japanese) at: *https://www.mof.go.jp/about_mof/councils/fiscal_system_council/sub-of_fiscal_system/proceedings/material/zaiseia260404/05.pdf*.

StatLink *http://dx.doi.org/10.1787/888933324702*

National-level infrastructure policy is set out in the National Infrastructure plan (Box 2.8), which covers roads, traffic safety facilities, railways, airports, ports, sea route signs, parks and green fields, sewers and sewage works, rivers, erosion and sediment control, and the management of steep slopes and coasts.[33] In practice, however, the management of most forms of infrastructure is shared between national and

subnational governments. For example, the central government is responsible only for major roads; the vast majority of the road network is looked after by prefectures or local governments. Similarly, Japan has over 144 000 km of rivers, of which only about 10 600 km are class A rivers directly under the authority of MLIT. Over 77 000 km of Japan's class A rivers are under the administration of the prefectures, together with 35 800 km of class B rivers.

Box 2.8. **The national framework for infrastructure policy**

The current (fourth) National Infrastructure Plan, approved by Cabinet Decision in September 2015, was drawn up mainly in response to rapid changes including 1) an acceleration of the deterioration of existing infrastructure; 2) vulnerability of the national land, particularly to natural disasters; 3) population decline; and 4) intensifying international competition. The major points of the Plan include:

- The **effective use** of existing facilities. The plan envisages steps to maximise their functions (e.g. reviewing flight routes to and from Haneda Airport with a view to increasing the number of departure and arrival slots), to strengthen and upgrade the functions of existing facilities (e.g. establishing welfare facilities upon the aggregation of public housing), and to promote the multifunctionality of existing facilities (e.g. developing a power-generation facility that leverages the space above a sewage-treatment plant).
- The efficient **maintenance** of infrastructure assets. Much of Japan's infrastructure was built during the high-growth decades of the mid-20th century and is now deteriorating rapidly. Efficient maintenance is required to ensure safety and to reduce and level off medium and long-term infrastructure costs, in part by developing a maintenance cycle (systematic repair and upgrading based on checks and diagnosis).
- The need for a solid outlook for **stable and continuous public investment**. This means not only ensuring that infrastructure development is managed in a systematic and steady way but also securing the necessary skills and workforce, so as to avoid the kind of problems that have in the past been associated with fluctuations in public investment (e.g. entry of disqualified operators, frequent dumping incidents, and a high personnel turnover rate).

A further priority for infrastructure policy is to facilitate mobility for the elderly and disabled. Under current legislation, there are mandatory "Accessibility Standards" for certain categories of newly built facilities (such as passenger facilities, various vehicles, roads, off-street parking facilities, city parks and buildings). There are also requirements for upgrading some existing facilities. In accordance with the local accessibility plans created by municipalities, focused and integrated promotion of accessibility is carried out in priority development districts to increase "caring for accessibility." In addition, "accessibility workshops" teach people how to provide assistance and to provide virtual experience of being elderly or disabled.

The National Infrastructure Plan is implemented in co-ordination with the National Spatial Plan and the Basic Plan on Transport Policy. Implementation is monitored by the Council for National Infrastructure, and administrative evaluation is conducted in light of the priority goals defined in the plan.

Source: Ministry of Land, Infrastructure, Transport and Tourism (2015b), "National Infrastructure Plan", Ministry of Land, Infrastructure, Transport and Tourism, September, available (in Japanese) at: *http://www.mlit.go.jp/common/001104256.pdf*.

The emphasis of infrastructure policy is now shifting to effective use and maintenance

The ageing and decline of Japan's population pose particular issues for infrastructure policy. The population is shrinking fast, and the existing infrastructure is ageing. Maintenance and renewal are fast becoming the most important part of infrastructure investment (Ministry of Finance, 2014a; Ministry of Internal Affairs and Communications, 2014), and MLIT has made this a central priority, even designating 2013 a "maintenance year". This is a welcome shift of focus, but there is still a great deal of pressure from sectoral and local lobbies for new construction. Ministries, prefectures and local authorities continue to advance numerous proposals for more and better infrastructure, when the priority now is (and should be) to use infrastructure more effectively and maintain it more efficiently, which will include downsizing it where necessary – a challenge made all the greater by high levels of uncertainty about future settlement patterns and infrastructure needs. These priorities are at the heart of the new National Infrastructure Plan approved by the cabinet in September 2015 (Box 2.8). To be sure, some new infrastructure will be required, but its type and quantity will be profoundly reshaped by demographic trends.

Shifting the focus of policy from a growth-oriented model to one focused on meeting the infrastructure needs of a shrinking, fiscally constrained Japan will be difficult, as other countries facing demographic decline have also discovered.[34] In part, this reflects the fact that the institutions in place have been oriented to infrastructure growth for decades – it is, indeed, why many of them were created. Engineers and public works professionals are trained to maintain and expand infrastructure networks; the idea of shrinking or decommissioning them is totally contrary to business as usual and can be extremely expensive. However, the real problem is that central policies regarding service and infrastructure provision will clearly influence the location choices made by households and firms. Such policies will also need to respond to what household and firms are doing, of course – infrastructure investment will not determine the settlement pattern on its own, nor should it. But it will be an important factor in shaping how settlement pattern change, which means that the political stakes will be very high when it comes to making difficult choices about where to maintain, renew or upgrade key infrastructures and where to downsize or even decommission them.

Maintenance and replacement costs are a growing burden on SNG budgets

Shared responsibility for infrastructure means that the ageing of this infrastructure stock thus presents yet another serious fiscal challenge for Japan's SNGs (Table 2.4). Most of Japan's infrastructure stock was built in a relatively short period in the 1950s-1970s. There will thus be a huge need to renovate or replace this stock in the coming 40 years, as many infrastructure assets will reach the end of their expected lifespans. The most recent MLIT estimates for replacement and maintenance costs, completed at the end of 2013, are sobering, particularly given that they are exclusive of any new infrastructure investment: annual expenditure for FY 2013 is estimated at JPY 3.6 trillion, rising to JPY 4.3-5.1 trillion in 2023 and an estimated JPY 4.6-5.5 trillion in 2033. In some instances, the infrastructure may indeed need to be downsized as the population declines, and this, too, can be costly. Approaches to the management of infrastructure shrinkage are considered below.

Table 2.4. **Indicators of infrastructure ageing**

	SNG share of sector assets	Percentage of assets over 50 years old		
		2013	2023	2033
Roads and bridges (length > 2 km)	90	18	43	67
Tunnels	72	20	34	50
River management facilities	92.6	25	43	64
Sewerages	100	2	9	24
Port quays (water depth > 4.5 m)	100	8	32	58

Source: Ministry of Land, Infrastructure, Transport and Tourism (2013), "Report on the maintenance and updating of the future of social capital: Overall enhancement of infrastructure policy towards full-fledged maintenance era", Ministry of Land, Infrastructure, Transport and Tourism, Tokyo, December, available (in Japanese) at: *http://www.mlit.go.jp/common/001023146.pdf*.

As the second column of Table 2.4 above suggests, much of the burden of maintaining or replacing these ageing assets will fall on SNG budgets. Moreover, it will fall most heavily on those least able to afford it. In 2012, the Ministry of Internal Affairs and Communications (MIC) conducted a survey of 111 municipalities, representing 14.2% of Japan's population and 7% of its area on the costs of renovation/replacement of five major categories of infrastructure (public buildings, roads, bridges, water facilities and sewage facilities) over the next 40 years. The total estimate is JPY 63 950 per capita per year, equivalent to 262.6% of current expenditure on renovation/replacement. Even if the surveyed municipalities were to stop all new infrastructure investment and use those resources for renovation/replacement, the future costs would be 113.1% higher than the current available budget. However, the really striking numbers concern the cost estimates, both per capita and relative to total budgetary spending, broken down by size category of municipality (Table 2.5). The burden on the budgets of small municipalities will be dramatically greater.

Table 2.5. **Burden of roads and public buildings by size of municipality**

	Square metres of roadway per capita	Square metres of public building space per capita	Future replacement costs/current expenditure (roads)	Future replacement costs/current expenditure (public buildings)
National average	31.99	3.22	194.5	243.6
Designated cities	21.56	3.44	73.8	201.1
Cities (pop. 50-100 000)	62.42	3.56	417.2	222.3
Towns (pop. < 10 000)	242.06	10.61	860.0	295.6

Note: Estimates are based on a Ministry of Internal Affairs and Communications survey of 111 SNGs.

Source: Ministry of Internal Affairs and Communications (2012), "Survey results for the comparative analysis of future updates cost of public facilities and infrastructure assets", Ministry of Internal Affairs and Communications, March, available (in Japanese) at: *http://www.soumu.go.jp/main_content/000153119.pdf*.

One of the legacies of the past tendency to use infrastructure investment to promote regional equality (OECD, 2008) is that public investment has long been negatively correlated with income levels, and per capita public investment was also in many instances negatively correlated with population. Indeed, prefectural-level data for 1990-2010 reveal that the change in the density of the road network relative to both area and population was negatively correlated with population change. In other words, road construction and population movements tended in opposite directions. Going forward, that means that many declining areas have even larger infrastructure burdens.

Managing infrastructure in shrinking places will be a particular challenge

As noted above, population decline creates significant problems with respect to the operation, maintenance and development of infrastructure. In the first place, declining population means that the fixed costs of the infrastructure must be shared among fewer people; cost calculations for infrastructure projects generally assume that it will be used at full capacity (Schiller, 2007). Secondly, some infrastructures degrade faster when not used at sufficient capacity: for example, some water lines and older pipes degrade faster without flowing water. Thirdly, decisions about where to upgrade, extend, maintain or decommission infrastructure assets can have huge impact on property values and settlement patterns. In any case, much grid-bound infrastructure can be very expensive to downsize, because the integrity of the grid must be maintained. Even where this is not the case, decommissioning can be costly and those costs need to be set against 1) the cost of maintaining excess capacity and 2) the probability that the infrastructure might be needed in future and the consequent cost of reinstallation if that is the case.

Hoornbeek and Schwarz (2009) provide perhaps the most extensive review of responses to different kinds of infrastructure challenge in shrinking US cities. A synthesis of their findings, based on case studies, interviews and the academic literature on the subject, points to a number of different responses that Japanese cities will need to consider:

- Shrinking cities need to adopt a "triage" approach to infrastructure management, particularly to roads and bridges. Transport is one area where decommissioning infrastructures may be easiest, even if it can be costly, because a good deal of intentional redundancy has been built into many road networks. There is usually more than one way to move from one place to another.
- Asset management is critical. Cities everywhere need to know their assets, but that need is even greater in shrinking cities because of the financial pressure on them. Cities need more detailed understanding of, e.g. sewer materials, power generation and transmission assets and transport infrastructure. Better and more granular data on infrastructure assets can serve to improve both operational efficiency and decision making about investment and maintenance. For example, older pipes may turn out to last longer than newer ones in conditions of low usage, depending on the materials involved. IT has a key role to play in this approach. Smart technologies employed to optimise the operation of infrastructure can also contribute to better asset management.
- Given the high cost of wholly or partially decommissioning many infrastructures, cities need to ask whether excess infrastructure capacities have alternative uses. For example, excess capacity in a sewer district might be used to treat wastewater from nearby communities via line extensions or interceptor sewers or to take septage from private haulers. Much depends on whether and to what extent water and wastewater services are, or could be, regionalised. The potential to export surplus electric power is likewise obvious, though much depends on the state of the grid and demand trends nearby.
- Where infrastructure is to be downsized, recycling of some materials may offer an opportunity to offset decommissioning costs. In the United States, for example, some cities have been exploring the potential for recycling pavement from decommissioned roads. The main challenge is local demand: since concrete is heavy and has a relatively low value-to-weight ratio, the investment is hard to justify if the inputs or outputs have far to travel. But this option could prove viable for small towns in relatively close proximity to larger cities.

- Uncertainty about the future settlement patterns and population levels/composition means that flexible solutions are likely to be preferred. Choices that involve a high degree of lock-in are even riskier than when cities are growing. So public transport policies, for example, may better favour buses over rail-based solutions, unless there is an explicit effort to use the fixed rail network to reshape the settlement pattern. Buses allow greater flexibility as population and commuting patterns change. When it comes to power generation, distributed solutions may come to look increasingly attractive for the same reason, while bringing an added benefit in terms of resilience.

The future of local public corporations

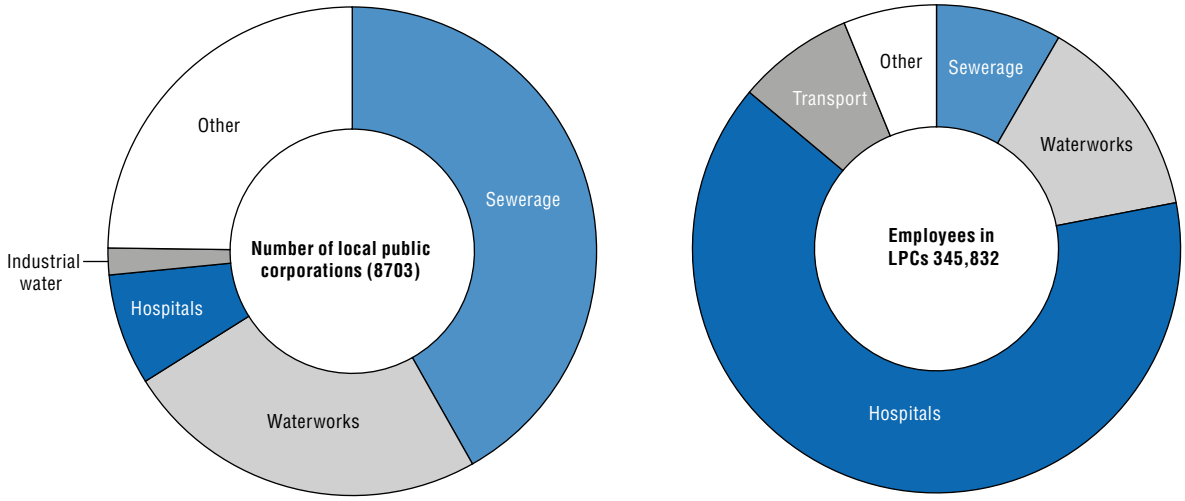
Much of the responsibility for managing Japan's infrastructure rests with local public corporations (LPCs) in such sectors as sewerage, water works, public transport and other areas of service delivery. In part, this has been because Japan has traditionally made little use of public-private partnerships (PPPs) or private finance initiative (PFI) mechanisms. Their overall scale as businesses is equivalent to roughly 20% of Japanese local governments' general budget spending. Japanese local governments have long used LPCs to provide such amenities as water. There were only 45 of them in 1953, but the number reached 3 000 in the wake of the high-growth 1960s (Samuels, 1983: 38) and peaked at 12 612 in 2002. Their roles and numbers increased in waves, as the need arose, swelling during the post-war high-growth period, which saw the rapid diffusion of such basic infrastructures as waterworks and sewerage in cities. Later on, in the late 1960s and early 1970s, their welfare-provision role grew, and later still, in the late eighties and early nineties, their role in industrial promotion (Sakamoto, 1996: 139). The years since that peak have seen significant downsizing and other reforms. By the late 2000s, the number of local public corporations had declined significantly, reaching 8 703 in 2013. These falling numbers reflected efforts to cull deficit-ridden local public enterprises and be able to cope with ageing infrastructure and other challenges.[35]

In 2013, 41.8% of local public corporations were in the sewerage businesses and 24.3% in water supply. The rest were divided among healthcare, industrial water businesses and other activities (Figure 2.10). These proportions remained fairly stable as the number of such corporations fell during 2009-13. The local public corporations also provide significant employment. Total employment in such enterprises in 2013 was 345 832, with hospitals accounting for 64.1% of this total. This underscores the contrast between capital-intensive infrastructure sectors and more labour-intensive service sectors: LPCs are active in both. In FY 2012, LPC hospitals accounted for 12.4% of all hospital beds nationwide, or 196 000 out of just under 1.58 million. In short, the local public corporations are significant local public service business operations that contribute to the economic activity of local areas as well as to the revenue base of local governments.

Local public corporations' turnover reached JPY 17.6 trillion in FY 2013 (3.7% of GDP), with their financial settlement calculated by subtracting total costs from depreciation and capital expenditures. Sewerage works represented 32.7% of their activity and waterworks 23.2%. While the number of hospitals totalled 642 (7.4% of all public corporations), their operations amounted to JPY 4.6 trillion (27.0% of the total), highlighting again the gap between capital-intensive enterprises, such as sewerage and water infrastructures, and hospitals, where capital costs can substantial but recurrent labour costs are far higher. The corporations are largely financed through fees and managed through special accounts

that are separate from Japan's local government general budgets. Local public corporations overall operate in surplus. In 2013, they earned local authorities a total of JPY 508 billion, with 88.3% of such corporations operating in the black.

Figure 2.10. **Local public corporations and LPC employment by sector of activity, 2013**



Source: Adapted from Uda, N. (2015), "Japan: Fiscal Discipline of Local Governments," paper given to IMF, ADB, PRI Conference on "Fiscal Policy for Long-Term Growth and Sustainability in Ageing Societies," 10-11 June 2015, Tokyo, *www.mof.go.jp/english/pri/research/conference/tff2015e.htm* (accessed 15 July 2015).

StatLink *http://dx.doi.org/10.1787/888933324713*

LPCs confront numerous challenges due to demographic change

As the population declines, fees to support local services decline as well. In tandem with that, the corporations themselves have ageing workforces and face increasing challenges due to the rising wave of retirements. The infrastructure that they manage is also ageing and the fiscal situation imposes further constraints on investment. Pressures for consolidation in the sector are likely to continue growing, particularly in areas experiencing population decline. This could create new opportunities to streamline service provision in many areas: further municipal mergers need not take place for there to be consolidation of LPCs, with multiple local governments owning stakes in them. This could allow some rationalisation of services and the achievement of scale economies without sacrificing local autonomy.

As part of local revitalisation, the national government has been studying how to revise the management of LPCs in the face of these challenges. The reforms currently being undertaken include shifting LPC accounting systems to corporate accounting. This reform is thought likely to add to pressures on smaller and more remote SNGs, because it would compel them to finance more of their operations from fees and other levies on customers. This would probably lead to significant differentiation of fees across local governments, with smaller ones experiencing greater increases because the unit cost of service was higher. One recent study of likely fee increases was undertaken by the Water Security Council of Japan in co-operation with Ernst & Young ShinNihon LLC (ShinNihon, 2015). The study concludes that 98% of the 1 242 water businesses studied would have to raise their water fees by 2040, nearly half of them by 30% or more. A large number of these firms were in areas experiencing rapid depopulation.

Capital intensive enterprises in sewerage, for example, manage a nationwide total of more than 470 000 km of pipes and related infrastructure. Much of this infrastructure is now ageing and requiring increasing investment in maintenance and replacement. Kazunari and Tatsuya (2015) estimate that the cost of maintaining this infrastructure will soon rise to JPY 3 trillion per year or more. Investments in maintenance will have to be recouped, in principle, from fees for service, particularly if the proposed accounting changes are adopted. They add that much of the JPY 120 trillion invested hitherto has been from national budgetary sources – sewerage long benefited from significant support through national subsidy programmes. Yet in the future, the national subsidies will be insufficient to cover these costs. While the government has made a priority of financing measures to address the ageing of national infrastructures, strengthening and maintaining transport infrastructures has been a bigger spending priority. In some places, prefectures and municipalities are therefore moving towards solutions based on public-private partnerships, such as Hiroshima's 2012 collaboration with the water-treatment firm Swing, which now operates prefectural water treatment plants as a concession. Even so, the scale of the infrastructure management and maintenance costs is such that fee increases will in many places be unavoidable.

Rationalising LPCs can bring better services and job opportunities, not just lower costs

On the basis of two years of research initiatives examining options for local public corporations, Kamio (2015) concludes that there are in fact two kinds of reform under way at present. One is essentially passive, allowing population decline to shape the number and scale of local public corporations. The more active approach seeks to use LPCs to enhance local employment prospects and thus to help stem the flow of young people from local areas to the big cities. This approach is already visible in some LPCs. For example, some transport-related businesses are using big-data initiatives to research customers' behavioural characteristics. In local communities with high levels of elderly residents, these firms are exploring methods of creating increased demand via a restructuring of transport services so as to encourage local residents to get out more. In addition, some firms in the water business are using the "insourcing" of expertise pertaining to the maintenance and management of assets.

Kamio argues that this approach fosters the development of human resources and employment in the local area and seeks to build networks across the larger region's water businesses. The regional approach is critical here and linked to the issue of streamlining and mergers mentioned above. That is because population decline will mean that a significant degree of rationalisation and downsizing will be required. Some local governments are already revising the specifications applied to the water business in order to cope with steep declines in demand for water. At the same time, active approaches to restructuring, such as those Kamio considers, offer an opportunity to make LPCs more efficient and financially viable, as well as to offer better services and create attractive employment opportunities. They also create opportunities for innovation: some LPCs in the water sector are using automated sensors and wearable gear to innovate new approaches in maintenance and operations. Low-cost approaches to maintenance and management of key infrastructures like water offer the possibility of developing technologies and methods that can be exported.

Kamio also notes that such pro-active approaches to restructuring LPC business models often require collaboration with other actors, such as private firms and specialists from other sectors; the LPCs are often ill-equipped to pursue them alone. This suggests that what is critical to reform is a focus on bringing together the most appropriate know-how to solve local challenges. This suggests that Japan's local utilities will move gradually towards a model involving greater diversity of agency, using not just the LPCs specified by the existing legal frameworks, but also limited corporations, firms developed through privatisation and PPPs, limited liability partnerships, and other legal forms. As will be seen in Chapter 4, such changes may help LPCs drive forward important changes in energy, an area where demographic change and environmental challenges could open up new and promising opportunities for them to strengthen resilience and improve environmental outcomes.

Notes

1. The Grand Design presents a comprehensive long-term vision to address six major challenges confronting Japan, including: i) low fertility and demographic decline; ii) rapid population ageing; iii) intensifying competition among major cities around the world in an age of globalisation; iv) ageing infrastructure and the risk of large-scale natural or technogenic disasters; v) environmental problems and threats to food, water and energy supplies; and vi) technological change.
2. The Grand Design did not go through such a process and was approved by MLIT but not the entire cabinet.
3. These include, among other things, the Regional Revitalisation Law, the National Land-Use Plan Law, the Wide Area Regional Revitalisation and Development Law, the Metropolitan Areas Development Law, the Kinki Areas Development Law, the Chubu Areas Development Law, the Urban Planning Law, the Housing and Living Basic Law, the Land Scape Law, the Rural Areas (Mountain and Villages) Promotion Law, the Agricultural-Promotion Areas Development Law, the Hamlet Region Development Law, the Peninsula Area Law, the Rural Area Industry Introduction Promotion Law, the Natural Disaster Measures Basic Law, the River Law, the Tourism Areas Development and Tourists Visiting Promoting Law, the Regional Core Urban Area Development and Industrial Functions Re-Allocation Promotion Law, the Logistic Urban Areas Development Law, the Industrial Agglomeration Forming and Revitalisation Law; the Law on the Cabinet Office and the Law on the Ministry of Internal Affairs and Communications.
4. These issues are addressed in detail in Chapter 3.
5. When the Great East Japan Earthquake struck in March 2011, relief supplies were transported mainly via roads, railways and ports on the Sea of Japan side of Honshū.
6. This is a substantial benefit, given that for a doubling of the population size within the urban agglomeration, productivity increases by 2-5%.
7. The explosion of suburbs around major cities in the last century was about cities spreading out as urban dwellers sought to consume more private space, not a reversal of urbanisation.
8. These are, from north to south: the Tōhoku area, a cluster of seven prefectures in northern Honshū; the Tokyo Metropolitan Area; the Hokuriku area on the Pacific side of central Honshū; the Chūbu area, around Nagoya; the Kinki area, around Osaka and Kyoto; the Chūgoku area of south-west Honshū; the Shikoku area, which combines the eponymous island and the south-east Honshū; and the Kyūshū area, which encompasses all of that island.
9. The importance of environmental priorities and encouraging endogenous local development has risen dramatically in Japan and elsewhere in recent decades, part of a broader shift away from top-down developmentalist approaches (Koresawa and Konvitz, 2001).
10. The 1987 plan, which covered the period from 1989, was somewhat different, in that it gave greater attention to the development of Greater Tokyo.
11. Though sometimes treated as synonyms, these are distinct concepts. "Effectiveness" is concerned with performance in respect of the objectives set, without regard to cost. Effectiveness reforms may be cost-increasing, cost-neutral or cost-decreasing. "Efficiency" refers to the relationship between cost and outcome. Efficiency reforms aim at better outcomes for any given level of expenditure.

12. The PDCA (plan–do–check–adjust) cycle is an iterative management method used by firms for the control and continuous improvement of processes and products.
13. The office should not be confused with the Headquarters, though the two are to work closely together and the office provides implementation support for some Headquarters initiatives. The office was in fact created in the early 2000s as part of an earlier revitalisation drive; at that time it supported the Headquarters for Regional Revitalisation.
14. Despite its name, the Cabinet Office is a substantial ministry in its own right, employing over 14 000 people in FY 2014. Its purview extends over, among other things, the Consumer Affairs Agency, the National Public Safety Commission, the Fair Trade Commission and the Financial Services Agency.
15. Both these projects are considered in detail in Chapter 2.
16. Hooghe, Marks and Schakel (2010) do find that Japan's prefectures have relatively limited autonomy compared to the regional tiers of government in other major democracies, but they do not address the local level.
17. In 2014, the country ranked fourth in the OECD area in terms of the average number of inhabitants per municipality, with almost 8 times the OECD average of 9 440.
18. Exclusive of social security accounts.
19. The fiscal year in Japan runs from 1 April through 31 March. The fiscal year designation is that of the calendar year in which it begins (e.g. FY 2015 began on 1 April 2015).
20. The Japanese constitution stipulates that all citizens will receive a basic minimum of public services.
21. Including expenses required for contributions or subsidies for the construction of public facilities for entities specified by Cabinet Order that are funded by public organisations or the national or local governments.
22. One of the first high-level warnings about specific subsidies came from the Deliberation Committee for the Rationalisation of Subsidies in 1962-63.
23. Some JPY 3.2 trillion was to be implemented over 2005-06 and the rest during 2007-09.
24. The term *hakomono* literally translates as "empty box" but often refers to facilities built in Japan's boom years that were under-used and considered a drain on public finances.
25. This is in fact the position expressed in Article 9 of the European Charter of Local Self-Government: "As far as possible, grants to local authorities shall not be earmarked for the financing of specific projects. The provision of grants shall not remove the basic freedom of local authorities to exercise policy discretion within their own jurisdiction."
26. Tompson (2009) highlights the difficulty of engineering policy change where the supporters of the *status quo* are organised and easy to identify, whereas the beneficiaries of change are not – often because it is the policy change itself that will create the opening for the emergence of new firms, sectors or other social interests.
27. A Pigouvian subsidy is a subsidy applied to an activity that generates positive externalities – i.e. where the social benefits of an activity exceed those reaped by the agent who incurs its cost. In the absence of some measure to address the externality, the activity is likely to be under-supplied. In the presence of negative externalities (i.e. where the social costs of an activity exceed those incurred by the agent), a Pigouvian tax may be needed to prevent over-provision of the activity.
28. In fact, the evidence suggests that such spillovers are likely to be modest in most cases; see Blöchliger and Petzold (2009), but in an environment of consolidation, central governments may still wish to use them to protect spending that they believe to be particularly important for growth.
29. See OECD (2011a and 2012b) for examples of the problem in Slovenia and Sweden. Small municipalities may thus be rightly afraid of losing, for example, their own secondary schools or healthcare facilities, even if the burden of maintaining them may be a problem.
30. This, indeed, has been a challenge in countries where a shift towards greater use of earmarking by line ministries has been poorly co-ordinated (see, e.g. OECD, 2013a).
31. The fiscal impact of this measure could be significant: in 2012, some JPY 403 billion was spent on hospital construction.
32. By contrast, the emphasis on attracting more people overall may not be appropriate in a country where the population as a whole is shrinking.

33. It does not cover telecommunications or the power sector, as these are private industries in Japan; though regulated, they do not fall under the purview of the infrastructure plan.
34. Germany's population stopped growing in 2003, but IASS-Berlin Institute (2013) reports that a decade later the country was still sealing 77 hectares of land per day for new roads and buildings.
35. Their numbers were also affected by the "Heisei mergers", which reduced the number of local governments from more than 3 000 at the end of the 1990s to around 1 700 today. However, the impact was not instantaneous or dramatic.

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