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Foreword

Urban issues have emerged as key features on national policy agendas. The importance of cities and their corresponding metropolitan areas to the national economy makes them critical players in the international marketplace. This in turn leads governments to renew their support to cities. At a time of increasing globalisation and international competition for investment, urban regions have become the focus of a wide range of public interventions. Throughout OECD member countries, these policies encompass plans to solve traditional urban problems – urban sprawl, abandoned districts and poverty – and newer issues such as competitiveness strategy, city marketing, environmental sustainability and innovation.

The series on Urban Policy Reviews responds to a demand from OECD member countries voiced at meetings of the Territorial Development Policy Committee and aims to analyse the role of urban areas in regional development and national performance. National reviews are a leading feature of the OECD's mandate to examine macroeconomic, educational, industrial, tax, environmental and regional development policies, in addition to other areas of interest to the Organisation. The OECD Urban Policy Reviews seek to provide a comparative synthesis of urban policies in OECD countries, focusing on the role of central governments.

An Urban Policy Review provides a comprehensive assessment of a country's urban policies as seen through multiple lenses, including economic, social and environmental. First, the reviews focus on the policies designed and introduced by the central government that directly address urban development and regional development policies with an urban development focus. Second, the reviews analyse how national spatial planning for urban regions, along with specific sectoral policies, impact urban development, directly and indirectly. Often, public policies are designed to target sectoral objectives with little or no regard for their profound impact on urban areas, and the means available to implement policies at the local level. Third, the reviews address issues of governance, including inter-governmental fiscal relationships and the various institutional, fiscal and policy tools aimed at fostering co-ordinated urban development among different levels of government and different administrations at the central level. For example, reducing the fragmentation among urban governance structures can help enhance effectiveness and outcomes in public service delivery and other policy areas. From country to country, the OECD Urban Policy Reviews follow a consistent methodology that features cross-national comparisons and recommendations on the integration of sectoral policies into urban development policy, planning and management.

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Acronyms and abbreviations

ADUP	*Áreas de Urbanización Prioritaria* Priority Urbanisation Areas
AP	*Acuerdos de Programación* Programming Agreements
CASEN	*Encuesta de Caracterización Socioeconómica Nacional* National Socioeconomic Characteristic Survey
CchC	*Cámara Chilena de la Construcción* Chilean Chamber of Construction
CEPAL	*Comisión Económica para América Latina y el Caribe* Economic Commission for Latin America and the Caribbean (ECLAC)
CICYT	*Comité Inter-ministerial de Infraestructura, Ciudad y Territorio* Inter-ministerial Committee on Infrastructure, City and Territory
CONAMA	*Comisión Nacional del Medio Ambiente* National Environment Commission
CONAMA RM	*Comisión Nacional del Medio Ambiente Región Metropolitana* National Environment Commission for the Metropolitan Region
CORE	*Consejo Regional* Regional Council
CORFO	*Corporación de Fomento de la Producción* Chilean Economic Development Agency
COSOC	*Consejo Comunal de Organizaciones de la Sociedad Civil* Municipal Council of Civil Society Organisations
CP	*Convenios de Programación* Programme Contracts
EAE	*Evaluación Ambiental Estratégica* Strategic Environmental Evaluation
EEA	European Environmental Agency
EISTU	*Estudio de Impacto al Sistema de Transporte Urbano* Urban Transport System Impact Study
ERD	*Estrategia Regional de Desarrollo* Regional Development Strategy
FCM	*Fondo Común Municipal* Municipal Common Fund
FIM	*Fondo de Inversión Metropolitana* Metropolitan Investment Fund
FMEP	*Fondo de Mejoramiento de Espacios Públicos* Public Spaces Improvement Fund

FNDR	*Fondo Nacional para Desarrollo Regional* National Fund for Regional Development
FUA	Functional urban areas
GORE	*Gobierno Regional* Regional Government
IN	Intermediate (Region)
INE	*Instituto Nacional de Estadística* National Institute for Statistics
MDS	*Ministerio de Desarrollo Social* Ministry of Social Development
MIDEPLAN	*Ministerio de Planificación y Cooperación* Ministry of Planning and Co-operation (now part of the Ministry of Social Development)
MINSAL	*Ministerio de Salud* Ministry of Health
MINVU	*Ministerio de Vivienda y Urbanismo* Ministry of Housing and Urbanism
MMA	*Ministerio de Medio Ambiente* Ministry for the Environment
MOP	*Ministerio de Obras Públicas* Ministry of Public Work
MTT	*Ministerio de Transportes y Telecomunicaciones* Ministry of Transport and Telecommunications
OECD	Organisation for Economic Co-operation and Development
PDUC	*Proyectos de Desarrollo Urbano Condicionado* Conditional Urban Development Projects
PISA	The OECD Programme for International Student Assessment
PLADECO	*Plan de Desarrollo Comunal* Municipal Development Plan
PNDU	*Política Nacional de Desarrollo Urbano* National Urban Development Policy
PPDA	*Plan de Prevención y Descontaminación de la Región Metropolitana* Plan for the Prevention and Cleanup of Pollution of the Metropolitan Region
PPRn	*Plan de Prévention des Risques Naturels* Natural Hazards Prevention Plans
PR	*Plan Regulador* Regulating Plan
PR	Predominantly rural
PRC	*Plan Regulador Comunal* Municipal Regulating Plan
PRDU	*Plan Regional de Desarrollo Urbano* Regional Plan for Urban Development
PRES	*Planes de Reconstrucción Sustentable* Sustainable Reconstruction Plans
PRI	*Plan Regulador Inter-comunal* Inter-municipal Regulating Plan

PRM	*Plan Regulador Metropolitano* Metropolitan Regulating Plan
PROT	*Plan Regional de Ordenamiento Territorial* Regional Plan for Land-Use Planning
PRU	*Planes de Regeneración Urbana* Urban Renewal Plans
PU	Predominantly urban
SECTRA	*Secretaría de Planificación de Transporte* Department of Transportation Planning
SEIA	*Sistema de Evaluación de Impacto Ambiental* Environmental Impact Assessment System
SEISTU	*Sistema de Evaluación de Impactos sobre los Sistemas de Transporte Urbano* Impact Assessment System for Urban Transportation Systems
SEREMI	*Secretaría Regional Ministerial* Ministerial Regional Secretariat, at regional level (deconcentrated) offices
SERPLAC	*Secretarías Regionales de Planificación* Regional Planning Secretariats
SERVIU	*Servicios de Vivienda y Urbanismo* Housing and Urban Development Agency
SINIM	*Sistema Nacional de Información Municipal* National System for Municipal Information
SISCLAR	*Sistema de Clasificiación de Riesgo* Risk Assessment System for Municipalities
SISS	*Superintendencia de Servicios Sanitarios* Superintendency of Sanitary Services
SNI	*Sistema Nacional de Inversiones* National Investment System
SUDERE	*Subsecretaría de Desarrollo Regional y Administrativo* Subsecretariat for Regional Development and Administration
UN	United Nations
UNDP	United Nations Development Program
WHO	World Health Organization
ZODUC	*Zonas de Urbanización Condicionada* Conditional Urbanisation Zones

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Assessment and recommendations

Overview

Chile is a highly urbanised country. Almost 77% of its population lives in a metropolitan or other functional urban area. At the same time, its cities are quite heterogeneous in size, composition and resource capacity. The country has grown successfully and urbanised rapidly, despite the lack of a unified urban policy. Today, Chile finds it has outgrown many of the mechanisms and instruments that have hitherto framed and guided urban development and management, and it is actively evaluating policy and governance options suitable for constructing a more dynamic and integrated approach to urbanism.

As its cities and metropolitan areas continue to grow, Chile will need to identify ways to ensure more coherent policy design and implementation in urbanism. The highly siloed nature of ministerial activity, a strong centrist approach to sub-national governance and municipal resource gaps have resulted in policy incoherence at the urban level. This, in turn, has compounded inter- and intra-urban disparities. No one policy sector is responsible for the urban challenges Chile faces in socio-spatial segregation, inequality or access to public services. These are not the result of a single policy approach or initiative; rather they stem from the inconsistencies that arise when policies with urban impact – e.g. land use, housing, public transport and environmental management – are designed and implemented independently of one another.

Overcoming these challenges will take time and greater capacity in institutional co-ordination and co-operation within and among all levels of government. It will also require institutionally based approaches to urban governance. Success will depend on the legitimacy, autonomy and resources of such institutions and their capacity to respond to local needs with the agility that is required by today's more complex policy challenges and societal demands.

As this *OECD Urban Policy Review* of Chile is being researched and written, Chile is also developing a National Urban Development Policy. This OECD report is not intended as a policy proposal for Chile's initiative, nor as a statement on the content of the policy, which is still being defined. The report's goal is to review Chile's urban development, and the challenges, successes and governance institutions that help or hinder successful policy outcomes in the urban space. It begins by presenting Chile's urban system and current challenges from an economic and socio-economic perspective. Chapter 2 focuses on the instruments that frame urban development at the local and regional levels. It then looks at four individual policy areas with significant urban impact – land use, housing, public transportation and the environment. Chapter 3 is dedicated to evaluating Chile's urban governance architecture – its institutions and frameworks – as a means of identifying options for reducing the impact of administrative and institutional fragmentation and of

building greater coherence in metropolitan and general urban management. The assessments and recommendations that follow highlight key findings in each of the report's three chapters, and provide recommendations for Chile as it moves forward in updating its approach to urbanism.

The Chilean urban system and its challenges

The quality of life in Chile has improved significantly in the past decades, and in general, Chileans report greater satisfaction with their lives than the OECD average – 77% in Chile compared to the OECD average of 72%. Nevertheless, Chile ranks lower than many other OECD members in a variety of quality-of-life indicators directly relevant to urbanism, including housing, income, jobs and environmental quality.

Key urban population and economic trends in Chile

A growing urban population

Chile's urbanisation rates (in terms of population) are comparable to other OECD countries, including Australia, France, Japan and Korea. However, the different population growth rates among Chile's functional urban areas (FUAs) – ranging from under 0.1% (Calama) to more than 3% (Puerto Montt) – may reflect different socio-economic conditions with implications for urban public policy. For example, the discrepancies are considered to be linked, at least in part, to the employment market: some cities are more attractive to businesses than others, or have home-based industries or employment, or industries with greater job possibilities, and thus offer greater or more diversified employment opportunities.

The size of an FUA in Chile appears to be an important factor in population growth. With the exception of the three metropolitan areas, which are experiencing below or just above-average growth, the larger the FUA, the faster it seems to grow. In other words, growth is concentrated in a second tier of dynamically developing cities. This means that attention will need to be paid to the infrastructure, development and governance frameworks in the rapidly growing medium-sized FUAs (e.g. Antofagasta, Coquimbo/La Serena and Puerto Montt). That said, it is the metropolitan areas that have attracted most of the population growth in terms of absolute numbers, Santiago, Valparaíso and Concepción, account, on aggregate, for 60% of the total urban population growth.

Economic growth and economic opportunities

In the period following the global financial and economic crisis, Chile's economy exhibited resilient growth, with an average annual growth rate of 5.7% in 2009-2011. The performance of different cities, however, was very uneven. While some grew quickly (e.g. Copiapó and Coquimbo/La Serena), others contracted (e.g. Iquique, Calama, Antofagasta).

Urban areas are the engines of Chile's economy. The 26 FUAs identified by the OECD represent over 84% of national GDP growth in 2003-2006. Santiago alone saw approximately 50% of national GDP growth for those same years. It is estimated that about 70% of national economic growth prior to the global financial and economic crisis occurred in six of Chile's cities: Santiago (50%), Concepción (5.7%), Valparaíso (5.4%), Antofagasta (4.7%), Puerto Montt (2.6%) and Temuco (2%). Chilean economic expansion depends on a handful of cities, and potential economic opportunities have not been exploited in the rest of the urban system, whose economic performance has not been as robust.

Despite the dominance of Santiago and the relative strength of the other two metropolitan areas, the activity of Chile's medium-sized and small cities suggests that the urban system could potentially realise even greater benefits if the focus of urban policy were not exclusively on the three metropolitan regions. Infrastructure investments, an active competitiveness policy and investments in education and human capital can improve the economic performance of all Chilean cities.

Identifying some of Chile's urban challenges

Growing urban inequality and poverty

Urban areas in Chile are growing rapidly, and contributing the largest share of national economic growth, but they also face major challenges associated with inequality. For example, the disparities that can be found in estimated GDP per capita across municipalities in the Santiago FUA are considerably higher than those in London, Budapest or Warsaw. Equally worrisome is the growing inequality among Chile's FUAs. While Santiago is the FUA with the largest inter-municipal disparities, these have been declining since 2003. Meanwhile, since 2003, inequality has increased within the other two metropolitan areas. The same is true in medium-sized cities such as Rancagua and Temuco.

Poverty, another expression of inequality, has been rising in most Chilean FUAs. While poverty levels are quite heterogeneous (ranging from 7.2% to more than 25%), it is disconcerting that poverty is growing in 20 out of the 26 FUAs, and in some cases at surprisingly high rates.

Poverty could be developing as an urban phenomenon in Chile. While national poverty levels have been dropping since the late 1980s, they continue to grow in certain urban areas. There appears to be an inverse relationship between initial poverty rates and poverty growth – i.e. poverty levels have risen in the areas that typically had relatively low poverty rates in the past, and declined in areas that were traditionally poor. This may be due to domestic migration patterns, since there appears to be an inverse relationship between initial poverty rates in 2006 and population growth during the 2006-2012 period. However, further research into this phenomenon is warranted.

Environmental sustainability

Chile's cities face high levels of air pollution. In the OECD's *Better Life* Index, Chile ranks last among OECD countries in terms of environmental indicators, which include air pollution, though it scores high in water quality. In general, Chilean cities with a high concentration of population (Santiago, Valparaíso and Concepción) and heavily industrialised cities such as Calama and Antofagasta have low air quality. In terms of waste management, however, Chile performs quite well, having a low rate of municipal waste generation per capita compared to other OECD countries. Wastewater management and wastewater treatment quality is also satisfactory both on a national scale and by comparison with other OECD countries.

Key recommendations for addressing challenging urban trends in Chile

- **Develop a single and clear definition of urban versus metropolitan areas** to more effectively guide policy and decision makers.
- **Ensure that growth-oriented initiatives and policies** (e.g. infrastructure investment, active competitiveness policies, education policy and jobs and skills policy), **are targeted as much to medium-sized and small cities** as to metropolitan areas.
- **Identify whether policy-based responses are needed to slow poverty growth,** for example though further research into the underlying causes of poverty and by determining possible links with domestic migration.

Frameworks and sectoral policies for urban development in Chile

Urban planning and management frameworks have a strong impact on how cities grow physically, economically and socially. Chile has a combination of statutory and non-statutory land-planning instruments and management instruments, which, for various reasons, can be difficult to co-ordinate. In addition, several policy areas play a significant role in shaping the urban landscape, particularly in land use, housing, public transport and environmental sustainability. Traditionally in Chile, as elsewhere, these have been treated as discrete policy matters, and little attention has been paid to the linkages between them and the effects (both positive and negative) that adjusting one may have on the others. Urban planning and management frameworks, together with public policy interventions, should be designed respecting and reflecting this dynamic relationship. Those responsible for urban development in Chile are not unaware of this issue, but need more effective mechanisms to enhance the urban process.

Chile's urban planning and management frameworks

A more flexible planning and co-ordination process is needed

Chile's regional and local land-planning instruments – the Regional Plan for Urban Development (*Plan Regional de Desarrollo Urbano*/PRDU) – and three types of Regulating Plans (*Plan Regulador Comunal, Inter-comunal and Metropolitano*/PRC/PRI/PRM) were designed in the 1960s, and at least in the case of Regulating Plans, are based on legislation dating from the 1930s. They remain static and are not adapted to the current dynamic urban reality. The complex administrative procedures for approving or amending Regulating Plans, and the number of documents that are required when submitting them, result in lengthy and involved administrative and political processes. This often renders the new, renewed, or amended plans obsolete upon approval. However, when faced with urgent reconstruction due to an earthquake or other natural disaster, for example, PRC approval processes are significantly streamlined and can be completed within two and a half years rather than the average of seven associated with the regular process.

In addition to greater planning flexibility, further co-ordination and policy coherence in the urban space is necessary. It may be unrealistic to expect this from the PRC/PRI/PRM, as these plans were designed to regulate land use, construction and the physical development of urban areas. Instead, a management instrument that can promote more integrated urban development, programming or service delivery – one from which the land-use plans cascade down – becomes essential for ensuring overall coherence. The

Municipal Development Plans (*Plan de Desarrollo Comunal*/PLADECO) may provide such an instrument. Given their comprehensive approach, PLADECO represent an interesting management tool for promoting coherence between urban development, land-use planning and general economic development.

Institutional co-ordination can enhance policy coherence

Chile has embarked on the significant undertaking of establishing a National Regional Development Policy, a National Urban Development Policy and a National Rural Development Policy. This emphasis on overall territorial development will significantly enhance urban development and management in Chile. Yet the success of these policies may hinge on Chile's capacity to address a lack of strategic and institutional co-ordination in territorial matters. From a strategic programming perspective, this can be partially achieved by establishing a territorial vision and strategic objectives (i.e. how Chile would like its territory to develop physically, economically, socially and culturally in the next 10, 15 and 25 years) and supporting these goals through national urban and rural policy. From an institutional angle, mechanisms and incentives to ensure that urban development is coherent with regional ambitions are called for. One of the factors inhibiting greater coherence and co-ordination may be the fragmentation of territorial responsibility between the Secretariat for Regional Development and Administration within the Ministry of Interior (SUDERE), which supervises regional and rural development, and the Ministry of Housing and Urbanism (MINVU), which supervises urban development. If Chile's regional development objective is to provide a framework for an integrated approach to its territorial development, it may need to consider placing the responsibility for such development – including urban development issues – under a single roof.

Land-use policies

The current land-use planning system could better support urban development if the zoning system were made more flexible; if infill development were more strongly incentivised; and if there were a national framework for designating and developing natural-hazard risk zones in urban areas. The existing zoning system may present an obstacle for new development. The established zones tend to be static and become obsolete more quickly than PRs are renewed or updated, and they tend to limit opportunities for redeveloping under-utilised areas within urban boundaries for new uses, such as multi-family housing. Another key criticism of land-use policies in Chile is that the urban boundaries allow for development outside the established urban perimeter, particularly of social housing, without adequately ensuring services to those developments. Policy instruments that could address these challenges, such as flexible or mixed-use zoning and infill development, are already provided for in Chilean national regulations, but they could be more effective and more widely used. For example, mixed-use designations are allowed by Chilean national law, but the problem of unnecessarily segregated land use persists and contributes to congestion and air pollution by increasing the travel distances between home, work, and commercial and leisure activities.

The Chilean national government recognises the need to address the risk of natural hazards through the land-use planning system more systematically. Depending on their location, Chile's cities face risks from flooding, landslides, tsunamis, forest fires and earthquakes. The General Law of Urban Development and Construction provides a definition for risk areas (*areas de riesgo*), and a related ordinance permits PRs to include risk

studies and designate risk zones (*zonas de riesgo*) and no-construction zones (*zonas no edificables*) as defined by the ordinance. This is complemented by rigorous construction standards that are considered international models for earthquake safety. However, the national government does not define what constitutes "risk zones" or provide parameters for designating them, and each PR can establish its own identification of risk zones. Further, national planning norms do not prohibit construction in natural hazard risk zones, but allow each municipality to decide the allowable land uses and conditions for development in those zones. This results in a fragmented approach to natural hazard risk planning. The designation of natural hazard risk zones should be determined at the national level, so that municipalities can apply norms set by the government, particularly in light of the February 2010 earthquake and tsunami.

Housing policies

Thanks to an ambitious housing policy, Chile has sharply reduced its housing deficit and has helped ensure that adequate housing is available for all segments of society. Urban areas have directly benefited from the growth in housing. Every FUA in Chile saw an increase in its housing stock between 2002 and 2012, and price growth has been relatively contained. These policies, however, are excessively focused on volume, neglecting important aspects critical for their long-term effectiveness, including quality, location and co-ordination with other urban development policies (e.g. public transportation and urban land use). The result is a concentration of social housing on the periphery of select municipalities – areas that are normally far from job and service centres, lack transport services and infrastructure and face a high incidence of social problems (i.e. poverty, unemployment and criminality).

Chile may need to consider some of the unintended consequences of its housing policy. Public support for housing markets and the policy emphasis on home ownership may be hurting labour markets in more dynamic urban areas. Chile has one of the smallest rental markets and one of the lowest rates of residential mobility in the OECD. Government support for home ownership has fostered a market that leads housing developers to build in peripheral locations, often far from jobs, public services and other urban amenities. Unintentionally, such support may hinder social mobility and contribute to poverty and inequality. Also unintentionally, policies in favour of home ownership may provide perverse incentives for residential mobility. As new, better-quality housing units and complexes are built, with better urban amenities, older housing becomes less attractive. Owners of older units may be discouraged from seeking or taking new job opportunities elsewhere, rendering local labour markets less flexible. This may hold back dynamic areas. Another unintended consequence of Chile's housing policy has been a contribution to socio-spatial segregation.

Finally, the social targeting of Chile's extensive subsidy system needs re-evaluation. Evidence suggests that Chile's means proxy test (*Ficha de Protección Social*), which is used to determine eligibility for a subsidy, is an imprecise and unreliable measure of income and household situation. To maximise the limited resources and improve outcomes for lower-income families in urban areas, the government should consider focusing more on the most vulnerable segments of society. This could also discourage better-off families from demanding housing subsidies, freeing resources for those in need. Such efforts should be structured as a means to better target existing resources rather than as reducing public investment in housing.

Further limiting tax exemptions for housing would complement stronger inclusionary policies. The government should consider modifications to property tax exemptions, which generate a heavy burden for low-income municipalities that lack the resources to invest in local economic development. Social housing is developed according to central-level, top-down planning processes; municipal authorities are not fully consulted over social housing, its placement and the service costs it generates. This puts municipalities with social or low-cost housing in a difficult position: their tax capacity is lower, given the property tax exemptions associated with such housing, yet they must provide local investment in infrastructure and services for the new settlements (e.g. paving, lighting, drainage, basic health care and primary and secondary education). Among the ways to address this imbalance are phasing out certain property-tax exemptions (e.g. for DFL2 houses); applying the tax exemption only to low-income properties belonging to households under the poverty level; and further compensating municipalities for lost tax revenues.

Public transport policies

Public transport and transport infrastructure are crucial for improving the quality of life, mobility and business opportunities of urban residents. The transport sector in Chile has progressed greatly in recent decades: public transport is more widely available within and between cities and the quality and extent of transport infrastructure has improved. However, transport provision could still be expanded and diversified and transport policy could be better integrated within an overall urban planning system.

The socio-spatial segregation patterns of Chilean urban areas and the challenge of developing a co-ordinated public transport system will need to be considered when designing and implementing public transport initiatives. Lengthy travel times are typical, and many areas have insufficient coverage or lack intermodal co-ordination (i.e. transfer points between buses and suburban trains or the metro). There is also a need to redirect attention and resources to non-metropolitan urban areas that face sprawl, congestion, pollution and social segregation. While significant emphasis has been placed on resolving transport challenges in Santiago, many other cities (e.g. Antofagasta, Coquimbo, Temuco) face insufficient coverage, low running frequencies, lack of intermodal co-ordination and a lack of basic urban transport infrastructure. Given their growing economic importance, such urban areas should not be overlooked.

Finally, public transport is a vital means of managing congestion and pollution. While public transport is well patronised in Chile's cities, more widespread use may be deterred by real or perceived impressions that it is inefficient, unclean or unsafe. Passengers must have an incentive for using public transport services, e.g. a faster commute time, reduced costs, greater comfort and/or safety. Transport infrastructure could be further diversified in terms of mode (e.g. bus, tramway, subway) and connectivity improved, but attention will also need to be paid to enhancing performance, attractiveness and efficiency.

Environmental policies

The environmental performance of Chilean cities has improved in recent decades, but a range of challenges remain. Air quality is the primary concern, followed by maintaining water quality which is currently good, managing the impact of urban areas on surrounding ecosystems and ensuring access to open space. National standards exist, but a mismatch between incentives and targets at the municipal level and a lack of inter-municipal

co-ordination has led to striking environmental disparities within functional urban areas. Two mechanisms exist in Chile for assessing the environmental impacts of urban development. The Environmental Impact Assessment System (*Sistema de Evaluación de Impacto Ambiental*/SEIA) is widely applied to urban developments, but is limited to case-by-case treatment of environmental externalities. This prevents the SEIA from considering how a project's mitigation, compensation or repair of environmental impacts may influence an urban area's overall environmental quality. The Strategic Environmental Evaluation (*Evaluación Ambiental Estratégica*/EAE) has the potential to strategically assess the sustainability of urban development, as it evaluates the risks and effects of PRs and other territorial plans, but it was recently introduced and has not yet realised its potential for establishing long-term objectives for an urban area's environmental impact or integrating those objectives in an over-arching master plan.

Key recommendations for urban frameworks and sector policies in Chile

The OECD recommends that Chile strengthen its urban frameworks, as well as its sectoral policies and their integration in such areas as urban development and management, land-use planning, housing, public transport and the environment. Detailed recommendations for these areas include:

Urban planning and management frameworks

- **Streamline the PRC/PRI/PRM approval process.** This might include a mechanism limiting the approval process to a specified period of time, and establishing that no plan may be delayed at any one stage of the approval process beyond a given amount of time. Any new process will require resources and incentive mechanisms to ensure that the current causes of delays are not repeated in another stage of the process. It can also mean more clearly defining the roles and responsibilities of the different actors in the process.
- **Build greater coherence in territorial policy at the central government level by placing responsibility for territorial development – regional, urban and rural – under one ministry.** This can help overcome difficulties in institutional and strategic co-ordination for territorial development and management. It could also create the institutional framework necessary to align long-term territorial development strategy and territorial policies (whether regional, urban or rural) and enhance co-ordination at the central level among ministries with urban responsibilities.
- **Build coherence among urban planning and management documents,** for example by better defining their role and interaction, and by re-evaluating them for overlap.
- **Give sub-national governments (regional and local) a greater role in shaping their development process.**
  - Better incorporate local and regional government participation in the development of urban planning documents, particularly PRI/PRM and regional plans, as well as the nationally defined sectoral programmes for urban development.
  - Reinforce regional and municipal/urban development strategies (ERD, PLADECO), building capacity and developing incentives to ensure appropriate linkages among them, and addressing resource gaps.
  - Set a regionally based strategic planning agenda as a guiding framework for sectoral initiatives in each region.

Key recommendations for urban frameworks and sector policies in Chile *(cont.)*

Land-use planning

- **Prioritise infill development, and/or the development of vacant and underutilised lands within urban boundaries.** While infill development is allowed in Chilean cities, private-sector developers, which account for 80% of urban investment, tend to find greater returns on investments in undeveloped land outside urban cores. A national target for infill development could help motivate private-sector investment. Such a target could be strengthened by national technical assistance to help cities catalogue underdeveloped urban land and to make this information available to potential developers. The goal would not be to privilege infill development at all costs, but rather to balance the market forces that provide incentives for greenfield development to the detriment of infill development.
- **Establish national guidance on principles of urban form** to guide cities in shaping the decisions made by the private sector. A vision for urban form and conditions for development should be established by the central government in consultation with local governments, private-sector developers and civil society organisations. This would need to include targets for mixes of land use, density and access to services including transport and education. A national land-use framework that encourages municipalities to increase their share of flexible, mixed-use zones would also facilitate this. In areas of conditional planning that lack zoning, an alternative set of standards would need to ensure a minimum level of services and manage negative externalities. By ensuring that these standards are consistent throughout each functional urban area, the likelihood of disparities among municipalities could be reduced. Conditions governing new developments should be simple enough to reduce approval delays and comprehensive enough to meet functional city-wide development objectives.
- **Internalise externalities of the development of greenfield land at the urban fringe.** For example, developer fees and value-capture taxes can act as a disincentive for greenfield development while raising revenue for urban services, such as public transport to reduce congestion and green spaces to mitigate higher densities. Development fees would need to be greater for greenfield development than for infill development, as the actual cost of providing services to newer developments tends to be higher. Value-capture taxes can also help recover the value created by urban investments by taxing the increases in property value that result from increased access to urban amenities, such as public transport.
- **Create a national-level definition of natural hazard zones and specify the conditions for development and types of land uses applicable to these zones.** This should be accompanied by a national standard for mapping natural hazard zones and provide national technical assistance to municipalities carrying out the mapping. Land use in zones identified as at highest risk by these maps should be restricted, for example by prohibiting all uses but recreation and agriculture. For lower-risk zones, building codes rather than land-use restrictions could reasonably be applied, but the restrictiveness of building codes should be linked to the degree of risk of natural hazards expected in those zones.

Housing policies

- **Improve the targeting of housing policies to those most in need.**
  - Consider restricting subsidies to middle-income groups to housing that is located in "social integration projects". This could further promote mixed-income housing areas, and discourage better-off families from demanding housing subsidies.

Key recommendations for urban frameworks and sector policies in Chile *(cont.)*

- **Provide social housing in centrally located areas to enhance connectivity and reduce the risk of socio-spatial segregation.** While centrally located land can be more expensive in the short term, its existing infrastructure saves building costs, and better accessibility reduces commuting time and its associated costs, including pollution.
  - Further improve the effectiveness of the current location subsidy.
  - Continue efforts to recuperate and upgrade deteriorated areas of city centres; encourage the development of under-used land and the rehabilitation of degraded houses and buildings in city centres.
  - Counteract potential city centre gentrification: public authorities can require developers who demolish existing affordable units in central areas to build new ones in their place or to pay a special fee to be used for building new affordable housing; institute a monitoring system of the current housing stock by price, standard, tenure and occupancy.
  - Further promote incentives and regulation-based inclusionary policies, including those requiring developers to set aside a specified proportion of affordable housing units in large developments, and/or to build mixed-income houses in well-located areas.
  - Limit housing VAT tax exemptions to the development of affordable housing (e.g. vulnerable and emerging groups), for example, giving special tax treatment to affordable housing built in well-located areas in city centres as a way to boost supply and promote interest from developers.
  - Create a pool of social housing units to be leased out to eligible vulnerable households through a below-market use contract by leveraging the perpetual use of social housing for rent in central areas.
- **Build stronger co-ordination between housing and other urban development policies** (e.g. infrastructure, public transport and social development) to help improve social housing conditions and the quality and social outcomes of future housing policies.

Public transport policies

- **Enhance public transport service** by improving co-ordination between the different collective transport modes; physically extending services; and giving public transport traffic priority over other traffic at intersections and on roads.
- **Introduce parallel measures to make automobile use more efficient** and/or to reduce the use of cars by individuals, including restricting vehicle access to certain zones (e.g. historic centres), developing incentives for ride-sharing, or promoting the use of bicycles and pedestrian travel.
- **Promote public transport and infrastructure facilities in cities outside Santiago** to encourage the economic development of other urban areas and to counterbalance the concentration of economic activities, population, congestion and pollution in metropolitan areas.
- **Introduce frequent-traveller reduction fees** to encourage the use of public transport and curb prices.
- **Improve public transport access and accessibility in low-income municipalities** to facilitate access to job opportunities and services, reduce traffic congestion and pollution, and enhance overall quality of life. Developing and enforcing a comprehensive urban planning system that promotes policy coherence and synergies between transport and related development policies is essential.

Key recommendations for urban frameworks and sector policies in Chile *(cont.)*

- **Actively involve local institutions early on and throughout the design and development of transport-related initiatives** as a means to match transport initiatives with specific local needs and overall urban dynamics.

Environmental policies

- **Broaden the mandate of the Strategic Environmental Evaluations (EAEs)** to evaluate the overall impact of urban growth on environmental performance and quality of life; consider integrating into the EAEs mechanisms to offset biodiversity losses caused by urban expansion by improving the health of ecosystems elsewhere.
- **Address air pollution** by disincentivising car ownership, which also means redesigning municipal revenue streams that depend on vehicle taxes. This could be complemented by incentives for alternatively powered vehicles (e.g. electric, hybrid), particularly those associated with public transport, but also private cars.
- **Establish pollution reduction plans across administrative boundaries,** taking "air-sheds" into account.
- **Ensure a more integrated approach to watershed management** to maintain the already good overall water provision and quality in Chilean cities and to reduce variations among different municipalities. Future efforts at watershed-based management could include establishing river basin organisations and co-ordinating watershed management.
- **Better manage the impact of urban expansion on flooding,** in part through a more comprehensive approach to managing storm water drainage and also through increasing the permeability of road surfaces.
- **Ensure sufficient access to green space per capita,** in particular in lower-income urban areas. One mechanism for smoothing out green space disparities between communities may be to create inter-municipal or regional park agencies that can pool resources and issue bonds for green space development and maintenance.

Revitalising Chile's urban governance architecture

Improving Chile's ability to enhance its urban outcomes depends on moving towards a strategically driven, integrated approach to urban development and policy formulation. The urban governance architecture will need to address its current severe administrative and institutional fragmentation. Success will depend on bringing central and sub-national, public and private actors together and building a "whole-of-city" approach to urban initiatives. It will also entail enhancing capacity for cross-sectoral policy making and ensuring that policy initiatives cascade down from broader strategic objectives and are aligned and coherent with each other. Finally, greater autonomy in urban administration and management for sub-national actors will be critical. Adjustments in the governance architecture – institutions and frameworks – should target overcoming or at least mitigating the impact of fragmentation, adding flexibility to sub-national finance and competence allocation, and building broad-based commitment to urban solutions, thereby introducing a much needed degree of local-level ownership in urban activity and outcomes.

Building coherence among governance institutions

Urban development and management is divided among central, regional and local actors. At the national level, the Ministry of Housing and Urbanism (*Ministerio de Vivienda y Urbanismo*/MINVU) has overall responsibility for urban policy and planning. In addition, the Ministries of Public Works (*Ministerio de Obras Publicas*/MOP) and Transport and Telecommunications (*Ministerio de Transporte y Telecomunicaciones*/MTT) also play a strong role in the urban space, particularly with respect to infrastructure (MOP) and transport policies (MTT). The Ministry of Interior's Subsecretariat for Regional Development (SUBDERE) co-ordinates regional affairs and regional development across Chile, including rural development and rural policy, but it has no direct involvement in urban development matters. The result is a strict separation of urban management from that of the rest of the territory, which risks creating a "Swiss cheese" effect in territorial development, co-ordination and management. This institutional structure limits the capacity to take an integrated approach to regional or local concerns with urban implications. At the regional level, the various institutional actors – the executive (*Intendente*), regional governments (GORE), the representatives of line ministries (SEREMI) and the Regional Councils – all intervene in regional development and local development. The responsibilities and lines of accountability of these institutions can be unclear. At the local level, municipalities are legally autonomous, public corporations, but their practical autonomy in fiscal, financial and urban management is limited.

The confluence of all of these actors in the urban process makes it critical to develop institutional and planning frameworks that promote a coherent approach. Co-ordination and collaboration in policy programming are infrequent at present, however, and approaches to urban development and management remain siloed and with limited cross-sectoral dialogue and/or consultation.

Addressing sub-national finance and competence allocation

Finance and budgeting practices could better support sub-national development objectives and the policies and programmes designed to achieve them. At present, urban programming is not linked to budget lines and there is little sub-national autonomy in fund allocation. This reinforces a system that functions on short-term plans and projects, unable to undertake long-term development planning. Multi-annual budgeting and planning frameworks could be one mechanism to help address this issue, while also strengthening the finance and planning capacity of sub-national authorities. The present sub-national funding mechanisms are also a source of inefficiency between regional and local levels in service delivery, and do not effectively offer incentives to horizontal co-operation or build municipal capacity. Finally, the financing structure is not aligned with competence allocation and demonstrates insufficient flexibility to account for the generally higher service demand and cost per capita associated with a metropolitan area as compared with a small urban one, for example.

Competence allocation among Chile's municipalities is homogeneous, i.e. all municipalities, regardless of size, are responsible for delivering the same set of public services. In fact, a high degree of variation in municipal capacity throughout the territory makes uniform service delivery unrealistic and often impossible. The mismatch between the resources available and the competences ascribed in a homogeneous fashion across the territory creates horizontal inequalities in the types, level and quality of services provided, further entrenching spatial segregation among and within urban areas.

Managing administrative and institutional fragmentation

Administrative fragmentation is creating fissures in the administration of functional urban areas, particularly metropolitan ones. Each municipality within a metropolitan area is administered independently, without a mechanism to take into account the over-arching economic and productive unit. Policy and service integration in a functional area is hampered by differences in objectives, capacity and constraints, and precludes the efficiencies and synergies obtained through co-operation and the building of scale. This accentuates the discrepancies in the administrative and financial capacity of municipal authorities, contributing to intra-urban disparities, including social segregation, pockets of higher crime rates and lower educational outcomes. Urban development and management becomes even more of a challenge, especially in a metropolitan context, since administrative fragmentation affects the overall co-ordination and management of urban public services. In addition, it can lead to policy outcomes focused in a specific geographic area with little spill-over effect that can benefit the broader urban community. The impact of administrative fragmentation on public service delivery can be mitigated by promoting horizontal co-operation among local governments. However, Chilean municipalities, like those in many countries, are unaccustomed and/or reluctant to co-operate as a means to build capacity in administration and service delivery, and there are few systemic incentives to do so.

Institutional fragmentation in Chile is typical, and ministries tend to act within their area of expertise without co-ordinating urban policy initiatives or interventions, potentially without adequate consultation on sub-national needs. Co-ordinating urban development efforts among ministries, within a ministry or between a ministry and its regional representative, can be a challenge. The impact of institutional fragmentation at the central level is often played out at the sub-national level, bringing with it responsibility overlap and the risk of a lack of accountability. Chile's institutional fragmentation is compounded by the lack of an overall urban programming system able to guide and to generate complementarities between the different actors in urban development. While administrative fragmentation affects those urban areas comprised of more than one municipality, institutional fragmentation impacts all Chile's sub-national authorities.

Managing a system of this nature requires a high degree of co-ordination. Achieving the integrated approach to urbanism called for by Chile's urbanism actors will require an urban governance architecture that is flexible and adaptable to its heterogeneous urban areas.

Strengthening institutional urban and metropolitan governance models

Meeting Chile's metropolitan and urban challenges in light of administrative and institutional fragmentation calls for a stronger institutional structure at the regional and urban functional level as current "soft" governance mechanisms (e.g. coordinating bodies) alone are insufficient. Chile could pursue a homogenous approach to urban governance, where the same framework is applied throughout the territory, or it could boldly experiment with a heterogeneous approach that may be more appropriate to the diversity of its urban areas and their capacity to realise urban development and management goals. At least three possible types of institutionally based urban governance models are applicable to Chile's urban areas: *i)* supra-municipal arrangements; *ii*) inter-municipal arrangements; *iii)* a reinforced regional framework. These models are not mutually exclusive, and in Chile consideration should be given to an approach that combines these options, e.g. establishing a two-tier model in which the regional governments (*Gobierno Regional*/GORE) are more directly responsible for urban management and development.

This would provide an anchor for the various categories of urban arrangements, including supra-municipal models at the metropolitan level, to help mitigate the impact of fragmentation and joint-inter-municipal bodies in other urban areas as appropriate.

A supra-municipal arrangement could provide an institutional, "whole-of-city" framework for urban development and encourage administrative co-ordination. Recent legislative reforms have introduced an administrative framework and potential financing mechanisms for a metropolitan authority. Such an institution could be the locus of horizontal and vertical co-ordination efforts and reduce the impact of administrative fragmentation. Provided with sufficient autonomy, it would also have a strong chance of mitigating the impact of institutional fragmentation by setting metropolitan area development strategies, prioritising plans and promoting coherence in the implementation of urban initiatives, including service delivery and sectoral policy. Such an arrangement could take the form of a metropolitan authority led by a metropolitan co-ordinating council, for example, or of a metropolitan regional government.

The challenge Chile faces is the application of this framework. It could take a top-down approach to the structure, composition, competences and resource attributions associated with such an institution, or it could take an approach that combines the requirements of legislation with a need for greater flexibility and reflection of local specificity. For example, metropolitan regional councils could be mandated, but their composition, form of election, term limits for council members and competences could be defined in co-operation with the affected municipalities. This would make it easier to ensure that the council and its composition were appropriate to the reality of the specific metropolitan area. In addition, it would probably enjoy greater political legitimacy with local and regional authorities. Greater control or autonomy in financial, fiscal and administrative management will be important for the model's success. There is evidence that metropolitan institutional structures that can generate own-source revenue and have control over their finances tend to flourish, while those that do not have such capacity do not.

For non-metropolitan areas, a form of inter-municipal joint authority may also be appropriate, particularly in those cities that exhibit metropolitan characteristics and challenges (e.g. Coquimbo/La Serena and Temuco). Joint authorities could help overcome administrative fragmentation where it exists, help manage the impact of institutional fragmentation, and provide a structure for the delivery of public services. Chile's experience with joint-municipal authorities has not been highly successful to date. Nevertheless, the model should not be discarded. The government may wish to consider re-evaluating the current mechanism of voluntary co-operation for a specific purpose in favour of promoting city-wide, multi-purpose joint authorities.

In addition to building new urban governance structures, reinforcing regional governments would complement action and arrangements at the local level. This could provide an additional mechanism to manage the impact of institutional fragmentation. It could also recalibrate the alignment between FUAs resources and competences and low administrative, financial and infrastructure capacity, including those composed of a single municipality. It could also provide a complementary governance framework for those municipalities that are not yet metropolitan by definition but face the challenges typical of a metropolitan area, regardless of whether they are composite or single authorities. Such a move would require strengthening the institutions, resources and capacity of regional governments and regional authorities.

Overall success will depend on the will and ability of key urban ministries and municipalities to relinquish competences to organising bodies (e.g. a supra-municipal institution or a joint authority or GORE). This will require striking an equilibrium between the urban governance institution's authority and activities, with the authority and activities of central government entities and member municipalities. Ministries will need to adapt their role, transforming it from one that directs and controls to one that guides and co-ordinates. Ensuring municipal support for adjustments to urban governance structures is also critical. Not only should local authorities be consulted on the urban governance framework, but once the framework is established, mechanisms will be necessary to ensure that no municipality is marginalised in the governance process. This is particularly important in functional urban areas where there are wide variations in municipal capacity. Consideration will also need to be given to the constitutional, statutory and regulatory structures to make any change possible, and reflection on current levels of centralisation will be necessary.

Reinforcing strategic planning frameworks and capacity

Urbanism in Chile must be viewed comprehensively, as part of how the country wishes its territory to develop as a whole and the role urban centres play in their regions. Without a coherent strategic framework that can guide the action of the public and private, national and sub-national actors, it will be difficult for any urban governance model to attain even the modest level of integration necessary to support more effective urban policy outcomes. For this reason, urban development and its supporting policy should not be separated from the issue of regional development. These territorial dynamics ought to be considered together in order to develop a coherent vision of Chile's overall territorial development and a long-term strategy to realise such a vision.

Comprehensive strategic planning is currently missing from Chile's approach to urbanism, leaving urban development and planning detached from a broader strategic perspective. At a programming level, because urban activity is project-based rather than strategically driven, it is difficult to determine if national objectives in urbanism are being met. The lack of coherence and solid linkages between the urban development measures taken at different levels of government has left urban priorities siloed. Funding mechanisms are also preventing a more comprehensive and strategic approach. The investment process in Chile follows a sectoral logic, and the various projects comprising an integrated initiative risk being evaluated independently of a master plan. This reinforces a fragmented and staggered approach to project implementation. Finally, low participation by the sub-national level in Chile's urbanism instruments is also an obstacle to a more co-ordinated and comprehensive approach. Taken together, the lack of a territorial and urban vision and national strategy, low financial and fiscal autonomy at the sub-national level, and low participation in sub-national development planning by the relevant actors has held back strategic planning.

Chile is well positioned to revitalise its urban governance architecture. It has the foundations in place to establish a much-needed metropolitan governance framework, as well as mechanisms that can help medium and small urban areas grow in a more integrated and sustained fashion. Ensuring success can take time, may require experimentation and will rest on the central government's capacity to build a partnership with sub-national levels of government. Institutions at the central level, after a history of directing and controlling urbanism, will need to play a new role: guiding and co-ordinating urbanism and urban-oriented policy as a means to ensure an integrated approach to urban development

and management. Success will also depend on the capacity of the sub-national level to meet the challenge of greater autonomy in financial and policy management. Finally, all parties must sharpen their strategic focus, and identify ways to combine successful project-based sectoral initiatives with long-term, cross-sectoral strategic programming. A "whole-of-city" vision for analysing and solving urban challenges could enhance urban development and quality of life outcomes for Chile's urban residents.

Key recommendations for revitalising Chile's urban governance architecture

The OECD recommends that Chile reconsider its urban governance architecture with an eye toward an institutionally based, heterogeneous approach appropriate to city size and capacity. Change in this area should mitigate the impact of administrative and institutional fragmentation, build sub-national capacity, and be developed around a strategic vision for urban territorial development and urban form. Detailed recommendations include:

Establish institutionally based metropolitan and other urban governance models

- **Consider a supra-municipal institutional approach for metropolitan areas.** This can take the form of a metropolitan authority, for example, based on existing legislation, or a metropolitan regional government.
  - Ensure that management bodies (e.g. metropolitan councils) are appropriately representative of the various municipalities forming the metropolitan area and that management responsibilities and competence allocation reflect local specificity.
  - Ensure that the institution enjoys appropriate levels of financial/fiscal autonomy or control, and that mechanisms are in place to fund long-term development needs. This includes capacity to generate and manage own-source revenue; equitable disbursement of central-level funds; and a financial logic that supports comprehensive programming rather than project-based activities.
- **Consider "city-wide" multi-purpose joint authorities** for metropolitan areas where a supra-municipal approach is not appropriate or desired, and for medium and small urban areas, particularly those facing administrative fragmentation and/or other challenges typical of metropolitan areas.
  - Reconsider the institutional dimension of municipal associative capacity. Complement existing legislation facilitating voluntary municipal co-operation through associations established for specific purposes with an institutionally driven approach that defines and develops administrative and operational structures, competence allocation (e.g. economic development, land-use planning, culture, social housing and waste management) and financing for multi-purpose joint authorities.
- **Boost the role of regional governments (GORE),** to anchor municipal-level urban governance models and to support the resource constraints of urban areas, especially medium-sized and small ones.
  - Increase GORE responsibility for urban development and management in their territories, focusing on providing region-wide services that benefit the whole territory, are associated with positive externalities and some redistribution, and that demonstrate economies of cale.
  - Establish regional-level urban agencies or councils that can help guide urban policy design and implementation, and support urban authorities in managing and meeting their urban competences.

Key recommendations for revitalising Chile's urban governance architecture *(cont.)*

- **Build institutional legitimacy by complementing a top-down approach with a bottom-up consultative process** in order to build legitimacy with the relevant sub-national authorities (i.e. municipal and regional), civil society organisations, the private sector and citizens.
- **Establish appropriate and mutually agreed-upon mechanisms of inclusiveness** in administrative and financing structures, so that smaller or less well-endowed municipalities are not marginalised. This can include developing mechanisms that prevent wealthy municipalities from blocking or withdrawing from the arrangements.
- **Complement institutional governance structures with "soft-governance" tools** to improve and strengthen horizontal and vertical co-operation among and within levels of government.
  - Strengthen and/or re-introduce inter-ministerial committees, for example the Inter-ministerial Committee on City and Territory, in order to facilitate cross-sectoral co-operation and promote policy coherence.
  - Establish city contracts as a complement to existing contract mechanisms: assign clear roles and responsibilities to the different institutions participating in urban development within a precise territory as a means to help improve co-ordination, accountability and measurable results for sector- or cross-sector based policy initiatives.

Build sub-national capacity

- **Build financial/fiscal management and autonomy:**
  - Enhance own-source revenue-raising capacity at the regional and local levels. Evidence suggesting that metropolitan areas with greater control over their finances tend to be more successful than those areas with less control is likely to hold true for regional and non-metropolitan local authorities as well.
  - Link sub-national development programming (strategies and plans) to the central-level budget, to facilitate strategic planning and long-term programming capacity.
  - Establish mechanisms that can facilitate sub-national investment funding, for example through multi-annual budgeting practices; this can also help balance the present project-based approach.
  - Reform the sub-national tax regime, including property taxes and other taxes, in order to solve the present shortfalls; eliminate unnecessary exemptions and allow flexibility in determining tax rates, update tax bases and impose temporary surcharges for value capture and financing of special projects.
  - Re-evaluate the allocation mechanisms associated with the National Fund for Regional Development (FNDR), identifying means to ensure that funds for regional development are reaching their intended purpose. This can mean splitting the FNDR into two segments, with one fund strictly dedicated to meeting regional development objectives and the other to assisting municipalities when they face shortfalls. Significantly, however, the system should be reformed so these shortfalls are better managed.
  - Address horizontal imbalances through formula-based block grants or transfers from the central government that are effectively part of the municipalities' own resources rather than the present earmarked grants.
  - Improve access of capable municipalities to long-term financing for major urban development programmes and offer incentives for their use. An incremental approach to such mechanisms can be built on the basis of the current credit programme available through SUBDERE, allowing a gradual move to debt acquisition in local markets through banks and bond issues regulated by effective risk- assessment procedures and ratings.

Key recommendations for revitalising Chile's urban governance architecture *(cont.)*

- **Align resource capacity with competence allocation:**
  - Introduce mechanisms to address the misalignment between resources and ascribed competences at the local level. These can include creating incentives for horizontal co-operation in service delivery; transferring select competences to a higher level of government; creating different categories or "tiers" of municipalities and ascribing competences based on the municipality's "level", with smaller authorities having fewer high-budget responsibilities than larger ones.

Build a strategic vision for territorial development that encompasses urban form

- **Develop a long-term strategic vision for urban form.** This should help inform and guide national, sector, regional and local policies and programmes to grow over the next 10, 15 or 25 years.
- **Ensure comprehensive strategic plans for urban matters at all levels of government** to help build urban programming that is strategically directed rather than project-driven by sector.
- **Build capacity through the central level for sub-national strategic planning** by using national-level objectives and criteria as a guide to support regional and local authorities in meeting urban policy objectives and managing challenges such as population growth, housing and pollution.
- **Inform urban policy and programming with broad evidence bases.** Identify consultation mechanisms, possibly on an ongoing basis, to help policy and decision makers identify trends and shifts in urban preferences.

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Chapter 1

The Chilean urban system and its challenges

The quality of life in Chile has improved significantly over the past decades, and in general, Chileans report greater satisfaction with their lives than the OECD average. However, Chile ranks lower than many other OECD members on a variety of urban-related topics including income, housing, jobs and the environment. In 2010, approximately 15.2 million people lived in Chile's urban areas, representing about 89% of the population; and it is estimated that by 2025, the urban population will constitute over 90% of the total. This chapter examines economic and socio-economic trends in Chile's urban areas, and raises the key issues and challenges facing its cities and metropolitan regions using the OECD methodology establishing functional urban areas (FUAs). Among the main challenges identified are population growth, mounting inequality, low levels of housing stock despite major improvements in access to housing, and environmental concerns, particularly with respect to air quality and access to green space.

Introduction: Chile and its urban areas

Context

In the last 25 years, Chile has returned to democracy, tripled its GDP per capita, experienced a 50% increase in population and become highly urbanised. In 2010, approximately 15.2 million people lived in urban areas, representing around 89% of its population. The urban population grew at an annual rate of 1.38% between 2000 and 2010, above the national population growth rate of 1.04% over the same period. The urban population continues to grow more rapidly than the total population, and is projected to constitute more than 90% of the population by 2025 (United Nations, 2012).

Progress has not necessarily addressed income inequality in Chile, however. This remains high even by Latin American standards, and can result in spatial segregation. Larrañaga (2009) notes that at the beginning of the 2000s, Chile had the third-highest Gini coefficient in Latin America, Chile also registers high inter-regional disparities: it is the country with the second-highest Gini coefficient for OECD-defined TL2 regions (corresponding to Chile's 15 regions), just behind Mexico.[1] Chile also displays the widest range in GDP per worker at the TL3 level (corresponding to Chile's *provincias*), the lowest territorial scale at which such comparisons are possible across countries.

Such economic, demographic and spatial trends have a significant impact on cities. Economic growth leads to greater consumption of urban goods and services, notably housing, which in turn demands growing amounts of serviced residential land, as well as roads and motorways, placing greater pressure on infrastructure and service delivery. Food, goods and energy consumption increase, generating higher volumes of waste and emissions. A longer-living population[2] and an increased elderly population[3] contribute to more complex demands on housing, as well as on public services, from health services and transport to recreational facilities. Finally, income inequalities in urban areas can result in strong socio-spatial segregation and potential social tensions. The impact of these trends may be magnified in metropolitan areas, given their population density and congestion, capacity for wealth creation, and more diversified economies.

Defining the geographical extension of Chile's urban areas

Defining the geographical extension of urban areas has always been problematic, and there is no commonly agreed-upon approach (OECD/China Development Research Foundation, 2010). Each country has its own methodology for determining which areas are considered urban – the designation can refer to cities, towns, villages, conurbations or localities – and different approaches rely on different criteria. An economic approach is generally based on administrative units and defines urban areas using a threshold for economically active population rates (United Nations, 1974). A geographic approach would consider density as the main urban indicator. The OECD recently constructed a new methodology defining functional urban areas (FUAs), offering an improvement on

definitions based on administrative boundaries or physical indicators, as well as on its own previous definition of predominantly urban (PU) areas (OECD, 2012c).

Defining urban areas: From administrative to functional areas

Defining the geographical extension of an urban area has always been problematic, and each country has its own methodology for determining which areas are considered urban. Generally, three different criteria can be used to define cities: administrative competence, physical indicators and functional definitions (see Box 1.1).

Box 1.1. **Different criteria for defining the geographical extent of cities**

Three different criteria can be used to define cities:

- **Administrative competence.** This approach considers the geographic area classified as a single city for administrative purposes, using the national definition of which areas are urban and their geographical limits.
- **Physical indicators.** This approach considers the density of buildings, of people, or of other indicators, such as the proportion of any unit of area covered by hard surfaces (e.g. concrete or asphalt)[1] or the intensity of night light emissions. This is also often referred to as the morphological approach, and in many cases takes into account the built-up area.
- **Functional definitions.** This approach maps the behaviour of households and commercial activity to establish the boundaries of urban territory. Such a definition takes into account relationships between firms and workers that extend beyond the administrative unit and into adjacent areas. For example, many workers cross administrative borders when commuting to work. Firms often establish value-chain linkages for intermediate inputs and services with adjacent urban areas. The intensity and frequency of these relationships determine the functionality of an urban area. For these relationships to work properly, local governments often co-ordinate policy in the provision of infrastructure, public goods and services, making the functional concept all the more relevant.

Each of these methods for defining what is urban has its strengths and weaknesses. The most obvious advantage of using administrative definitions is the ease of gathering statistics, since at the political level, policies are designed based on administrative units, and public policies and the funding for data gathering are ultimately dependent on governments. The most obvious disadvantage of using administrative and political boundaries is that they are often arbitrary and reflect outmoded patterns of social and economic life. The criteria for defining administrative units and the frequency with which they are redefined vary widely, from country to country, and also internally. Most urban residents in the OECD live in areas adjacent to older central cities that act as residential suburbs, or suburban neighbourhoods, of much larger metropolitan regions.[2]

1. See for example Burchfield et al. (2006) measurement of urban surface in the United States.
2. For instance, the core of Barcelona is divided into 28 municipalities, while the municipality of Zaragoza, also in Spain, includes the whole physical and functional metropolitan area, as well as large areas of near-desert. As a political unit, the City of London still has more autonomy than any other local or regional authority in England, but its boundaries are determined by mediaeval settlement patterns and do not extend far beyond its Roman walls. The City of Paris reflects an 18th-century settlement pattern, and most US central cities have not incorporated any of their suburban developments for a century.

Source: OECD/China Development Research Foundation (2010), *Trends in Urbanisation and Urban Policies in OECD Countries: What Lessons for China?*, OECD Publishing, Paris, doi: *10.1787/9789264092259-en*.

In Chile, the advantage of using administrative units lies in the simplicity of gathering data and the wide recognition of these areas as being urban. The drawback is that many urban policies impact a number of adjacent urban municipalities that in reality make up a single functional area. Roads run across boundaries, and collaboration is needed between Chilean municipalities to connect them; public services such as waste management could be more efficiently provided within the metropolitan or functional area; housing projects in one municipality could create congestion in a neighbouring municipality or influence the results of urban planning. In many cases, it makes sense to analyse and refer to a functional area for policy purposes.

The OECD, in co-operation with the European Commission, has developed a relatively simple and harmonised definition of functional urban areas to enable a meaningful comparison of the socio-economic and environmental performance of urban areas across OECD countries (OECD, 2012c). According to this definition, an urban area is a functional economic unit characterised by densely inhabited "urban cores" and "hinterlands" whose labour market is highly integrated with the cores. The OECD methodology is based on population grid data at 1 km² to define urban cores in a way that is robust to cross-country differences in administrative borders. The source of the population grid data for European countries is the population density disaggregated with the Corine Land Cover dataset, produced by the Joint Research Centre for the European Environmental Agency (EEA). For all the other countries, harmonised gridded population data from the Landscan project are used (see Box 1.2).

The OECD methodology makes it possible to compare functional urban areas of similar size across countries, proposing four types of functional urban areas according to population size:

- small urban areas, with a population below 200 000 people;
- medium-sized urban areas, with a population between 200 000 and 500 000;
- metropolitan areas, with a population between 500 000 and 1.5 million; and
- large metropolitan areas, with a population of 1.5 million or more.

Prior to introducing the FUA methodology, the OECD used a regional typology to make meaningful international comparisons between regions of the same type and level. This method classified TL3 regions as predominantly urban (PU), predominantly rural (PR) and intermediate (IN), and is based on the percentage of regional population living in rural or urban communities. For the purpose of analysis, results based on both methodologies for urban definitions – FUA and PUR – will be used in this report, as each offers interesting insights. According to the TL3-based definition (the provincial level in Chile), Chile's urban population – the share of people living in PU areas – amounts to nearly 50% of the total, above the OECD average and similar to that in Spain, Turkey and Portugal (OECD, 2011b). It is important to note that this figure only captures sub-regions whose overall density is high enough to qualify the area as urban, which excludes many FUAs located in intermediate or rural sub-regions. It is not – and is not intended to be – a measure of the urban population share.

Identifying Chile's functional urban and metropolitan areas

The territorial institutional framework in Chile is comprised of three sub-national levels (see Table 1.1): 15 regions, 54 provinces (*provincias*) and 346 *comunas*. Together, the 306 urban municipalities and the 597 towns in urban-rural municipalities account for 61% of the population. In Chile, the definition of urban focuses on the urban limits[4] (*area de*

Box 1.2. **Methodology for defining OECD functional urban areas**

The methodology consists of three main steps:

Step 1. Identification of core municipalities through gridded population data:

1. The geographic building blocks to define functional urban areas are the municipalities (LAU2 in Eurostat terminology and the smaller administrative units for which national commuting data are available in non-European countries).
2. An urban core consists of a high-density cluster of contiguous[1] grid cells of 1 km^2 with a density of at least 1 500 inhabitants per km^2 and the filled gaps.[2] A lower threshold of 1 000 people per km^2 is applied to Canada and United States, where several metropolitan areas are developed in a less compact manner.
3. Small clusters (with fewer than 50 000 people in Europe, the United States, Chile and Canada, and fewer than 100 000 people in Japan, Korea and in Mexico) are dropped.
4. A municipality is defined as being part of an urban core if at least 50% of the population of the municipality lives within the urban cluster.

Step 2. Connecting non-contiguous cores belonging to the same functional urban area:

1. If more than 15% of employed persons living in one urban core work in another urban core, these two cores are combined into a single destination (to take into account polycentricity).

Step 3. The identification of the urban hinterlands:

1. All municipalities with at least 15% of their employed residents working in a certain urban core are assigned to that functional urban area.
2. Municipalities surrounded by a single functional area are included and non-contiguous municipalities are dropped.

1. Contiguity for high-density clusters does not include the diagonal (i.e. cells with only the corners touching).
2. Gaps in the high-density cluster are filled using the majority rule iteratively. The majority rule means that if at least five out of the eight cells surrounding a cell belong to the same high-density cluster, it will be added. This is repeated until no more cells are added.

Source: OECD (2012), *Redefining "Urban": A New Way to Measure Metropolitan Areas*, OECD Publishing, Paris, doi: *10.1787/9789264174108-en*.

Table 1.1. **Statistical and administrative units in Chile**

Administrative units in Chile	Number of administrative units in Chile	Corresponding political division	OECD typology	EU typology
Region	15	State/province	TL2	NUTS-2
Province	54	Sub-region	TL3	NUTS-3
-		County	TL4	LAU-1
Municipality	345	Municipality	TL5	LAU2

Note: Chile has 346 *comunas* and 345 municipalities. The *comuna* is the territorial unit administered by a municipality, and its spatial dimension can extend to both urban and rural land. The discrepancy in figures arises with the *comuna* in Antarctica, which does not have an associated municipality. For the purpose of this review, the term municipality is used and the figure of 345 municipalities.

Source: Subsecretaría de Desarrollo Regional y Administrativo (SUBDERE) (2011), "National Urban Policy Review of Chile: Background Report", prepared for the OECD, unpublished, Santiago, Chile; OECD (2011), *OECD Urban Policy Reviews, Poland 2011*, OECD Publishing, Paris, doi: *10.1787/9789264097834-en*.

extensión urbana), and within these, the urban area[5] (Government of Chile, 2011). Recently, however, legal provisions have been made to recognise metropolitan areas as unique territorial entities (see Box 1.3).

Box 1.3. **Definition of urban areas in Chile**

Every Census in Chile since 1982 has attempted to create a typology of urban areas and set criteria to determine which municipalities can be considered as cities. In 2002, the Census set the criteria that determined urban areas and articulated an urban system viewed as a collection of urban areas determined by agglomeration in terms of population. The 2002 Census then provided a typology of urban areas:

Metropolitan Area. These are the largest urban agglomerations in the country, concentrating more than 1 million inhabitants and a large share of national population. Metropolitan areas comprise a set of municipalities linked by urban territorial expansion and the process of suburbanisation. This level includes Santiago's metropolitan area.

Large Urban Areas. These are understood as macro-urban areas made up of a collection of different municipalities linked by suburbanisation into a large built-up area. Large urban areas are considered to house between 250 000 and 1 million inhabitants.

The Ministry of Housing and Urbanism identifies three categories of cities: *i)* metropolitan cities with more than 800 000 inhabitants; *ii)* intermediate cities subdivided into large intermediate cities with populations between 100 000 and 300 000, and small intermediate cities with populations between 20 000 and 70 000; *iii)* small cities of urbanised space with a population of between 5 000 and 20 000.

These definitions can create some confusion with the 2009 amendment to Article 109 of Chile's Organic Law for Regional Government and Administration (*Ley 19.175*), which defines a metropolitan area as an agglomeration of two or more municipalities.

In practice, Chile continues to use the parameter of 500 000 inhabitants as the defining characteristic of a metropolitan area.

Source: Universidad Católica de Chile and SUBDERE (2002), "Proyecto: Definición de un Modelo de Gobierno, Administración y Financiamiento para las Áreas Metropolitanas", *http://pdf-esmanual.com/books/11505/definici%C3%93n_de_un_modelo_de_gobierno_administraci%C3%93n_y_.html*, accessed 20 September 2012; Ministerio de Vivienda y Urbanismo (2009), *Deficit Urbano-Habitacional: Una mirada integral a la calidad de vida y el hábitat residencial en Chile*, Ministerio de Vivienda y Urbanismo, Santiago; Government of Chile (2005), *Ley 19.175: Ley Orgánica Constitucional sobre Gobierno y Administración Regional*, Ministry of Interior, Subsecretariat of Regional Development and Administration, Santiago Chile, updated January 2011.

Applying the new OECD methodology to define functional urban areas (FUAs) in Chile by using GIS techniques, and census and commuting data at a municipal level, it is possible to identify 26 FUAs that contained 72% of the total population of Chile in 2002, a figure that had grown to 77% by 2012 (see Table 1.2 and Figure 1.1). This review makes a distinction between urban municipalities and functional urban areas (FUAs). Using the FUA definition, the metropolitan area of Santiago accounts for 39% of Chile's total population and 51% of its urban population. According to the definition stemming from Chile's 2002 Census, there is only one metropolitan area – the Metropolitan Region of Santiago. The Organic Law for Regional Government and Administration establishes a general parameter for metropolitan areas not specifically identified, and the working definition of an agglomeration of over 500 000 inhabitants applies to three areas: the metropolitan regions of Santiago, Valparaíso and Concepción. Using the OECD methodology, these three areas account for 8.4 million people and 50.7% of Chile's total. Taking all 26 FUAs listed in Table 1.1 into consideration, these account for almost 77% of total population; that is, more than three out of four Chileans live in one of the FUAs. Two out of every three Chileans living in these FUAs reside in the three largest: Santiago, Valparaíso and Concepción. Moreover, three-quarters of the

FUA-based population live in the six largest urban areas, which also include Coquimbo-La Serena, Temuco and Antofagasta. However, most of Chile's FUAs are rather small by OECD standards. Out of the 26 FUAs, 15 can be classified as *small urban areas* and contain 15% of the total FUA population. There are also eight *medium-sized urban areas*, where 19% of the total FUA population resides. Valparaíso and Concepción are considered *metropolitan areas* according to the FUA definition and have 15% of the total FUA population, while Santiago, which is the only *large metropolitan area*, has 51% of the FUA population.

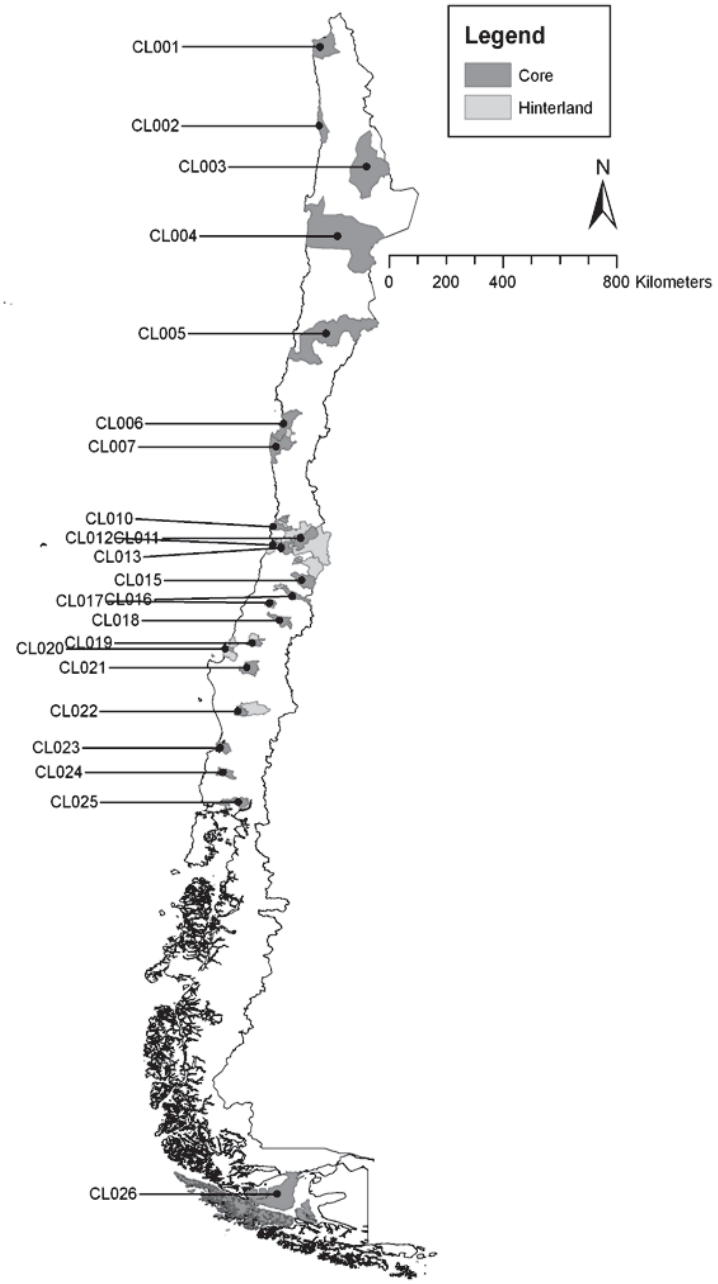
Table 1.2. **Chile's functional urban areas by size**

Name of functional urban area	Class type		Population	
	(Reference year 2012)	ID on the map	2002	2012
Santiago	Large metropolitan areas	CL011	5 914 360	6 530 935
Valparaíso	Metropolitan areas	CL010	855 199	975 378
Concepción	Metropolitan areas	CL020	840 758	896 834
Coquimbo-La Serena	Medium-size urban areas	CL006	335 211	423 702
Temuco	Medium-size urban areas	CL022	359 105	400 306
Antofagasta	Medium-size urban areas	CL004	289 477	346 126
Rancagua	Medium-size urban areas	CL014	297 214	340 972
Talca	Medium-size urban areas	CL017	218 491	238 664
Puerto Montt	Medium-size urban areas	CL025	174 038	228 118
Chillán	Medium-size urban areas	CL019	193 386	214 808
Arica	Medium-size urban areas	CL001	184 914	210 920
Los Angeles	Small urban areas	CL021	166 332	187 017
Iquique	Small urban areas	CL002	168 397	183 997
Copiapó	Small urban areas	CL005	129 279	158 438
Valdivia	Small urban areas	CL023	140 520	154 097
Osorno	Small urban areas	CL024	145 302	153 797
Curicó	Small urban areas	CL016	128 000	150 154
Calama	Small urban areas	CL003	137 144	138 109
Punta Arenas	Small urban areas	CL026	118 241	131 067
San Antonio	Small urban areas	CL012	110 567	114 330
Melipilla	Small urban areas	CL013	93 850	110 132
Ovalle	Small urban areas	CL007	98 368	104 855
Quillota	Small urban areas	CL009	88 330	104 538
Linares	Small urban areas	CL018	83 396	87 371
San Fernando	Small urban areas	CL015	63 665	73 598
Calera	Small urban areas	CL008	49 358	50 110
	Total functional urban areas	11 382 902	12 708 373	
	Share of national population in functional urban areas (%)	75.6%	76.7%	
	Number of functional urban areas	26	26	

Source: OECD, based on the *Metropolitan Areas Database*, *OECD.Stat*, OECD (2012).

Like many metropolitan regions in the OECD, Chile's three functional metropolitan areas are comprised of different independent municipalities. While administrative fragmentation – i.e. the lack of correspondence between existing administrative borders with the spatial and functional organisation of social-economic relations – of this sort is not uncommon, even among Chile's urban areas (see Table 1.3), the variation in the number of individual municipalities comprising the metropolitan areas is significant: 47 in the case of Santiago, 9 in Concepción and 6 in Valparaíso. Approximately half of all urban areas are comprised of one municipality, and thus do not face the same administrative

Figure 1.1. **Location of functional urban areas in Chile**



Note: This map is for illustrative purposes and is without prejudice to the status of or sovereignty over any territory covered by this map.
Source: OECD, based on the *Metropolitan Areas Database, OECD.Stat*, OECD (2012).

fragmentation problems (or not to the same degree) as the metropolitan areas. In addition, each metropolitan region is composed of individual municipalities that themselves vary in territorial size and classification (core versus hinterland), and resource capacity, creating disparities within the metropolitan area that can often require "close to home", nuanced management.

Table 1.3. **Functional urban areas in Chile by municipality**

Functional urban area code	Functional urban area name	Municipality	Core/hinterland
CL001	Arica	Arica	Core
CL002	Iquique	Iquique	Core
CL003	Calama	Calama	Core
CL004	Antofagasta	Antofagasta	Core
CL005	Copiapó	Copiapó	Core
CL006	Coquimbo-La Serena	Coquimbo	Core
CL006	Coquimbo-La Serena	La Serena	Core
CL006	Coquimbo-La Serena	Andacollo	Hinterland
CL007	Ovalle	Ovalle	Core
CL008	Calera	Calera	Core
CL009	Quillota	Quillota	Core
CL009	Quillota	La Cruz	Hinterland
CL010	Valparaíso	Viña del Mar	Core
CL010	Valparaíso	Valparaíso	Core
CL010	Valparaíso	Quilpué	Core
CL010	Valparaíso	Villa Alemana	Core
CL010	Valparaíso	Concón	Hinterland
CL010	Valparaíso	Limache	Hinterland
CL011	Santiago	Maipú	Core
CL011	Santiago	Puente Alto	Core
CL011	Santiago	La Florida	Core
CL011	Santiago	San Bernardo	Core
CL011	Santiago	Las Condes	Core
CL011	Santiago	Pudahuel	Core
CL011	Santiago	Peñalolén	Core
CL011	Santiago	La Pintana	Core
CL011	Santiago	Quilicura	Core
CL011	Santiago	Santiago	Core
CL011	Santiago	El Bosque	Core
CL011	Santiago	Ñuñoa	Core
CL011	Santiago	Cerro Navia	Core
CL011	Santiago	Recoleta	Core
CL011	Santiago	Renca	Core
CL011	Santiago	La Granja	Core
CL011	Santiago	Providencia	Core
CL011	Santiago	Estación Central	Core
CL011	Santiago	Conchalí	Core
CL011	Santiago	Lo Espejo	Core
CL011	Santiago	Macul	Core
CL011	Santiago	Pedro Aguirre Cerda	Core
CL011	Santiago	Colina	Hinterland
CL011	Santiago	Lo Prado	Core
CL011	Santiago	La Reina	Core
CL011	Santiago	Lo Barnechea	Core
CL011	Santiago	Quinta Normal	Core
CL011	Santiago	San Ramón	Core
CL011	Santiago	San Joaquín	Core
CL011	Santiago	Huechuraba	Core
CL011	Santiago	Vitacura	Core
CL011	Santiago	Peñaflor	Core

Table 1.3. **Functional urban areas in Chile by municipality** *(cont.)*

Functional urban area code	Functional urban area name	Municipality	Core/hinterland
CL011	Santiago	La Cisterna	Core
CL011	Santiago	San Miguel	Core
CL011	Santiago	Talagante	Core
CL011	Santiago	Buin	Core
CL011	Santiago	Cerrillos	Core
CL011	Santiago	Paine	Hinterland
CL011	Santiago	Independencia	Core
CL011	Santiago	Lampa	Hinterland
CL011	Santiago	Padre Hurtado	Core
CL011	Santiago	Isla de Maipo	Hinterland
CL011	Santiago	El Monte	Hinterland
CL011	Santiago	Curacaví	Hinterland
CL011	Santiago	Calera de Tango	Core
CL011	Santiago	Pirque	Hinterland
CL011	Santiago	San José de Maipo	Hinterland
CL012	San Antonio	San Antonio	Core
CL012	San Antonio	Cartagena	Hinterland
CL012	San Antonio	Santo Domingo	Hinterland
CL013	Melipilla	Melipilla	Core
CL014	Rancagua	Rancagua	Core
CL014	Rancagua	Machalí	Hinterland
CL014	Rancagua	Graneros	Hinterland
CL014	Rancagua	Doñigue	Hinterland
CL014	Rancagua	Olivar	Hinterland
CL015	San Fernando	San Fernando	Core
CL016	Curicó	Curicó	Core
CL016	Curicó	Rauco	Hinterland
CL017	Talca	Talca	Core
CL017	Talca	Maule	Hinterland
CL018	Linares	Linares	Core
CL019	Chillán	Chillán	Core
CL019	Chillán	Chillán Viejo	Core
CL019	Chillán	San Nicolás	Hinterland
CL020	Concepción	Concepción	Core
CL020	Concepción	Talcahuano	Core
CL020	Concepción	Chiguayante	Hinterland
CL020	Concepción	Coronel	Hinterland
CL020	Concepción	San Pedro de la Paz	Hinterland
CL020	Concepción	Tomé	Hinterland
CL020	Concepción	Hualpén	Core
CL020	Concepción	Penco	Hinterland
CL020	Concepción	Hualqui	Hinterland
CL021	Los Angeles	Los Angeles	Core
CL022	Temuco	Temuco	Core
CL022	Temuco	Padre las Casas	Core
CL022	Temuco	Lautaro	Hinterland
CL022	Temuco	Vilcún	Hinterland
CL023	Valdivia	Valdivia	Core
CL024	Osorno	Osorno	Core
CL025	Puerto Montt	Puerto Montt	Core
CL026	Punta Arenas	Punta Arenas	Core

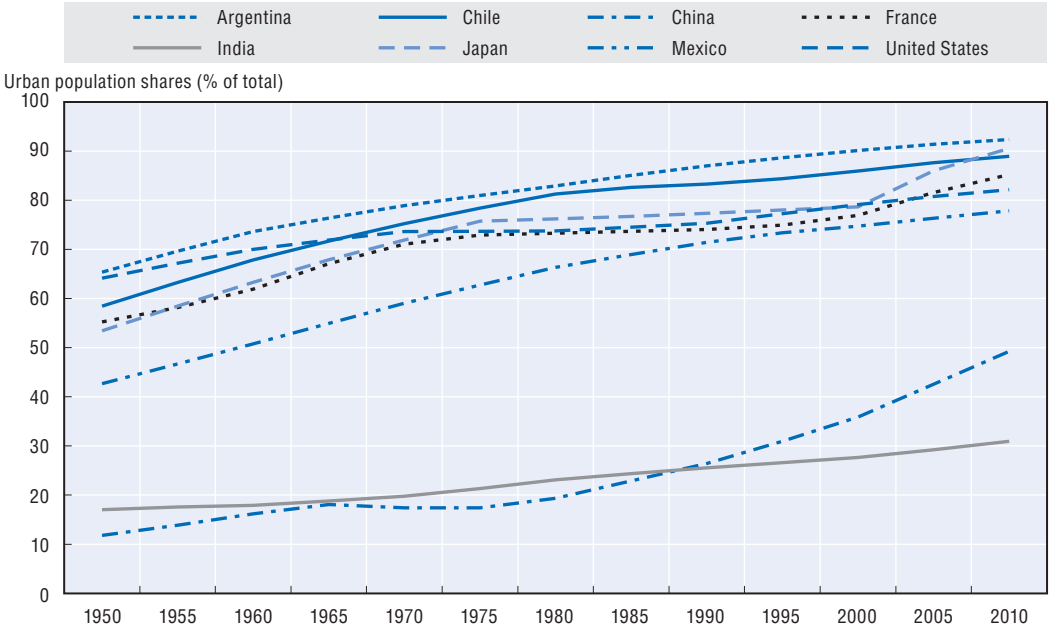
Source: OECD, based on the *Metropolitan Areas Database*, *OECD.Stat*, OECD (2012).

Urban trends in Chile

Although the level of urbanisation is higher in OECD countries, emerging economies have been urbanising at faster rates. OECD countries such as Japan, France and the United States are among the most urbanised, and some emerging economies, such as Argentina, Chile and Mexico, also have similar levels of urbanisation (see Figure 1.2).

Figure 1.2. **Urbanisation in OECD and non-OECD countries**

Urban population shares (1950-2010)



Source: United Nations (2012), "World Urbanization Prospects: The 2011 Revision", *http://esa.un.org/unup/CD-ROM/Urban-Rural-Population.htm*, accessed January 2013.

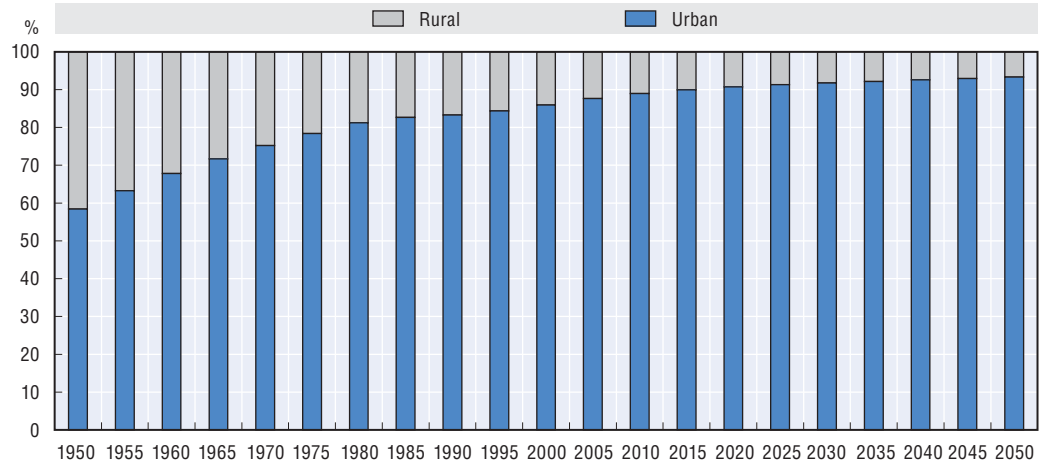
Chile has historically been an urban nation. In 1950, 58% of the total Chilean population (approximately 3.5 million people) was living in urban areas (see Figure 1.3). In the first 25 years since 1950, the share of the population living in urban areas increased by 20%, to 78%. In the following 30 years, that share increased by only 10%. Today, nearly 90% of the total population lives in cities, and the share will approach 95% by 2050.

Since 1950, the urban population has increased more than fourfold, from 3.6 million to 15.2 million people. However, the rate of growth has fallen: from 4% in the 1950s to 2% in the 1990s. In recent years, the growth rate has been 1.3%, and it is predicted to fall further and almost stagnate by 2050, with levels at approximately 0.1%. Meanwhile, the rural population contracted in the first few decades after 1950, with rates around 0.5%. This stabilised and even showed slight positive growth from 1980-1995, before falling into negative territory, at rates around -1.3%, in recent years. Since urban growth has been higher than the depopulation of the rural areas, overall population has increased, although more slowly, at a rate of 1% in 2010 compared with a rate of 2.5% in the 1950s. The rate of growth is predicted to come to a near-halt by 2050 (see Figure 1.4).

In OECD countries, people are increasingly drawn to large cities, a trend that is likely to persist. Over 70% of those in predominantly urban (PU) areas live in PUs of more than 1.5 million people (see Figure 1.5). Furthermore, such cities have recorded the highest

Figure 1.3. **Share of population by type of area in Chile**

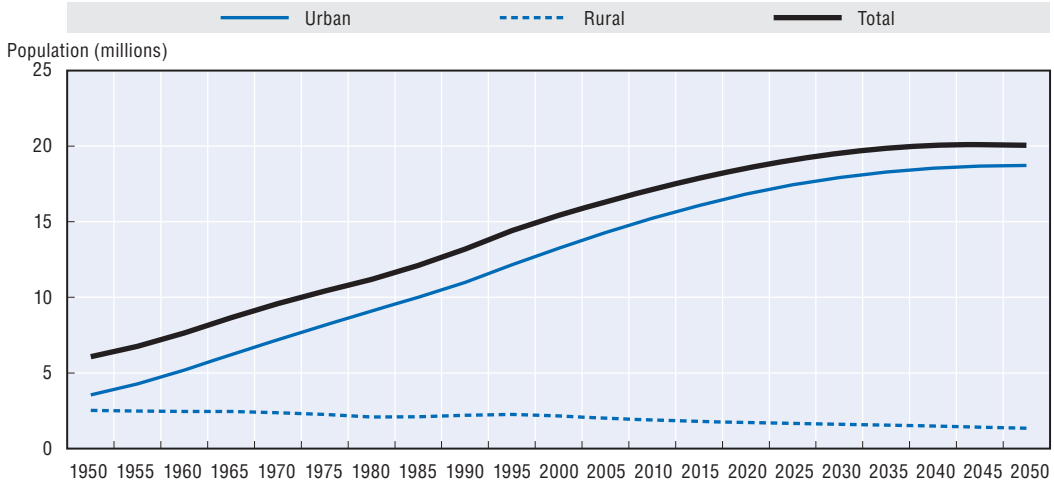
1950-2050



Source: United Nations (2012), "World Urbanization Prospects: The 2011 Revision", *http://esa.un.org/unup/CD-ROM/Urban-Rural-Population.htm*, accessed January 2013.

Figure 1.4. **Urban and rural population in Chile**

1950-2050



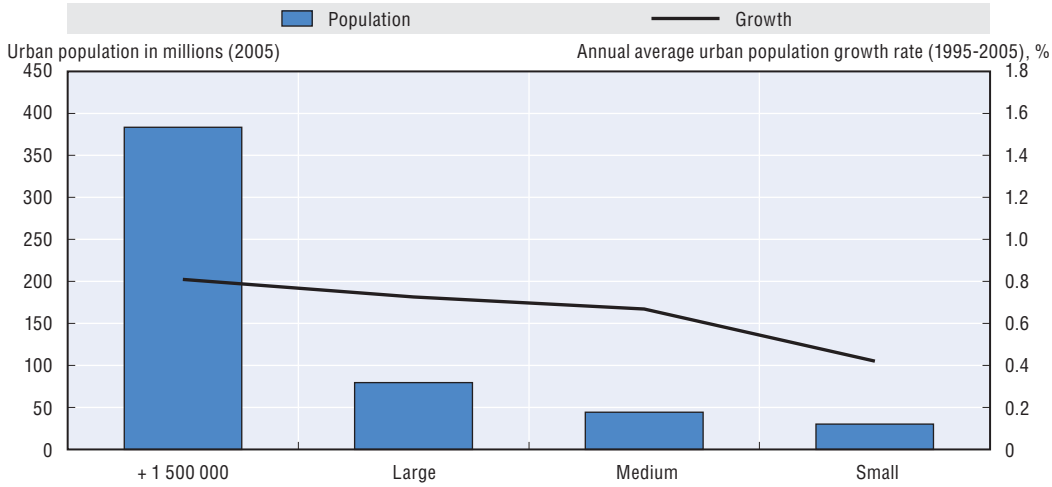
Source: United Nations (2012) "World Urbanization Prospects: The 2011 Revision", *http://esa.un.org/unup/CD-ROM/Urban-Rural-Population.htm*, accessed January 2013.

population growth rates (0.8% annually on average) in the OECD. Smaller cities (of between 100 000 and 500 000 people) host in total less population than any other type of city and also grow more slowly (0.4% annually on average). Medium-sized cities grow faster than smaller cities but more slowly than larger ones, and in the aggregate, have a lower population than cities with more than 1 million people. Cities of 1 million to 1.5 million people approach but do not reach the population growth rates seen in cities of over 1.5 million inhabitants and account for less than 15% of all urban population in the OECD. The remaining 15% of the urban population live in small and medium-sized PUs (Kamal-Chaoui and Sánchez-Reaza, 2012).

Trends among metropolitan regions in the OECD show similar results. In some cases, a single metropolitan region accounts for nearly half of the national population. Seoul,

Figure 1.5. **Urbanisation and city size in OECD countries**

Urban population and growth (1995-2005) according to population size of PUs



Note: This analysis was carried out using only predominantly urban (PU) areas. Small cities are PUs with population between 100 000 and 500 000 people. Medium-sized cities are PUs with population between 500 000 and 1 million people. Large cities are PUs with population between 1 million and 1.5 million people.

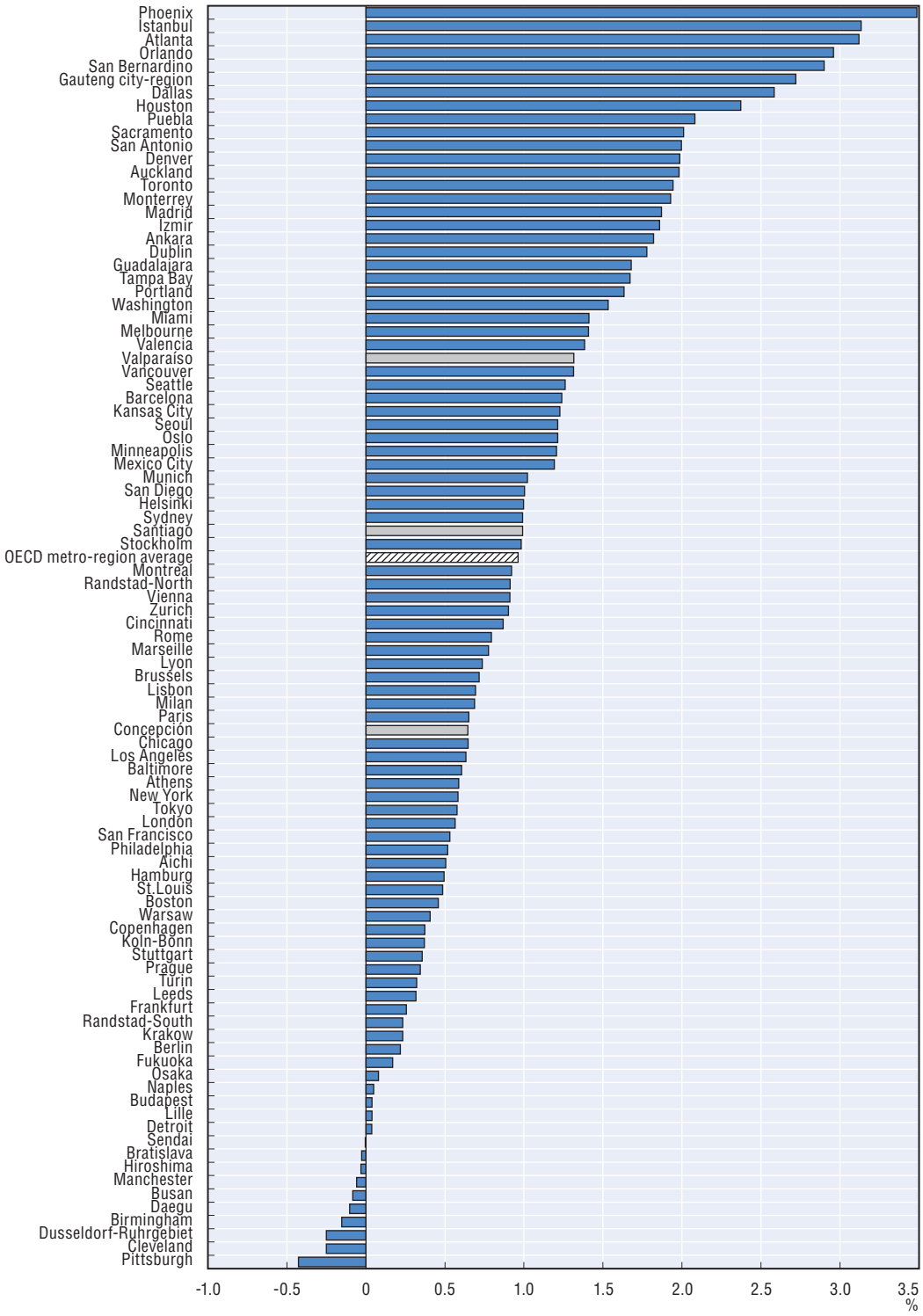
Source: Kamal-Chaoui, L. and J. Sanchez-Reaza (eds.) (2012), "Urban Trends and Policies in OECD Countries", *OECD Regional Development Working Papers 2012/01*, OECD Publishing, Paris, doi: *10.1787/5k9fhn1ctjr8-en*, based on the *OECD Regional Database*.

Randstad and Copenhagen represent between 44% and 48% of their respective national populations. With a few exceptions, such as Birmingham, Cleveland, Hiroshima and Pittsburgh, metropolitan areas in the OECD experienced an increase in population between 1997 and 2007 (see Figure 1.6). On average, OECD metropolitan areas have been growing at an annual pace of almost 1% since 1997, but cities such as Atlanta, Istanbul and Phoenix have experienced growth rates several times the average. In many others, including Houston, Puebla and Toronto, metropolitan population expansion has grown at least twice as fast as the average (Kamal-Chaoui and Sánchez-Reaza, 2012). Valparaíso, with a growth rate of 1.3%, together with cities like Barcelona and Miami, have also seen above-average population increases. Meanwhile, Santiago had an annual population growth of around 1% during this period – similar to the OECD average – and Chile's third metropolitan area, Concepción, had lower but still positive growth of around 0.6%.

Population growth trends over the 1995-2005 period show that urbanisation is on the rise in almost all OECD countries. Taking into account predominantly urban (PU) areas in the OECD as defined by the OECD regional typology, more than 53% of the total population was living in urban areas in 2005; this number approaches 83% if intermediate regions (IN) are included, i.e. less densely populated areas characterised by systems of medium-sized cities. From 1995-2005, population growth in OECD countries was more dynamic in urban (PU) areas and intermediate (IN) areas than in rural areas. Only two countries (Belgium and Ireland) show stronger demographic expansion in rural areas. What is more, with a few exceptions in Eastern European countries, all member countries have positive urbanisation growth rates during that period. Chile's population growth in all three categories (urban, intermediate and rural) is robust, at a rate of around 1.2% and thus ranks in the top quintile of OECD countries in the relevant leagues (see Figure 1.7). If PU areas are taken into account, all countries with urbanisation shares higher than the OECD average are becoming increasingly urbanised (see Figure 1.8). As a result, population in OECD countries

Figure 1.6. **Population growth in OECD metropolitan regions**

Average annual population growth rates (1997-2007)

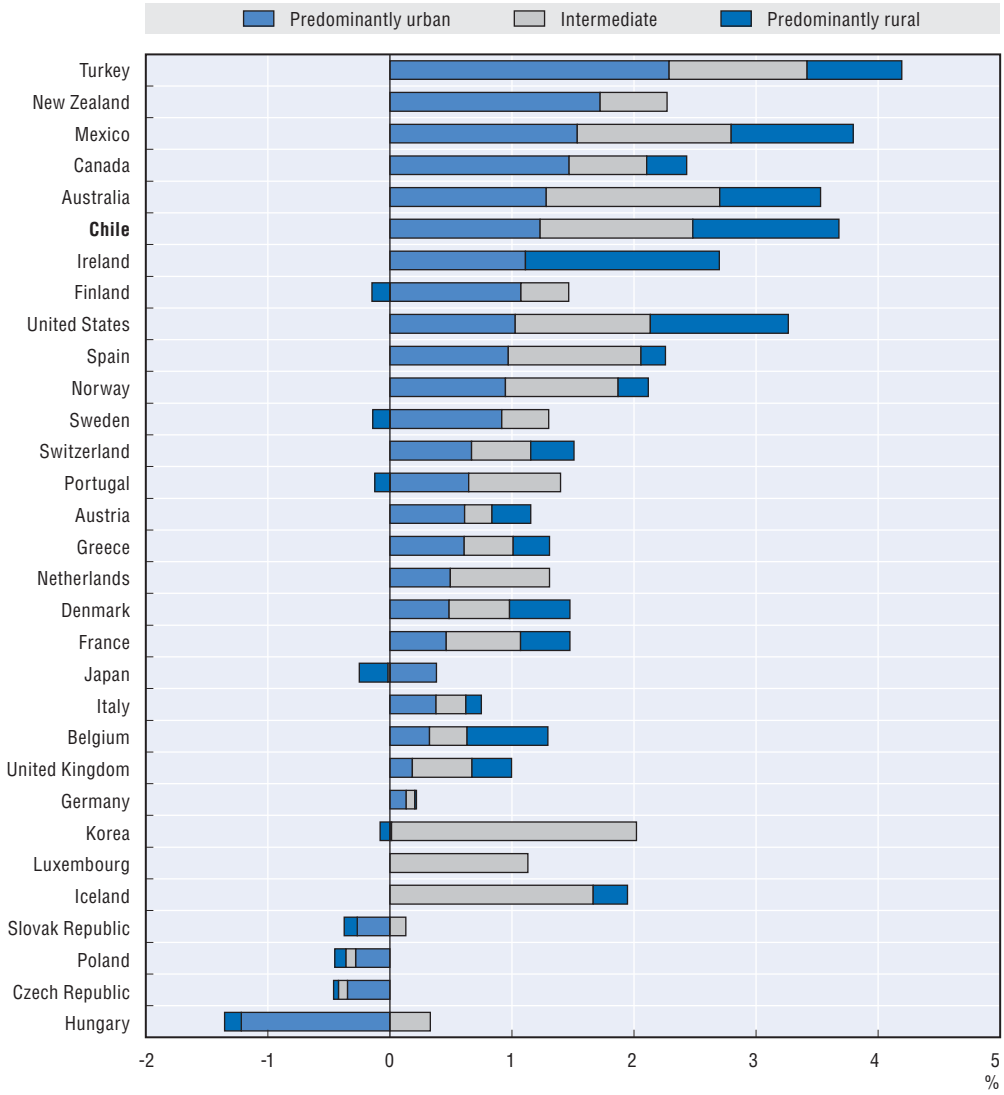


Note: All metropolitan region average annual growth rates refer to the 1997-2007 period. In the case of Chile, census data allowed only for average annual growth rates for the 2002-12 period.

Source: OECD, based on the *OECD Metropolitan Areas Database*, *OECD.Stat*, OECD (2012).

Figure 1.7. **Population growth in OECD regions**

Annual population growth rates by types of region (1995-2005) according to PU, IN, PR



Notes: In some cases, like that of Korea, the growth of intermediate regions can be accounted for by growth in cities of a smaller size in wider areas that are considered to be intermediate. For instance, Gyeonggi-do is an intermediate region that almost entirely surrounds the Seoul area; given that there has been considerable business growth outside the administrative area of Seoul after the de-concentration policy, it is possible that part of that growth has been in Seoul's suburbs located in Gyeonggi-do.

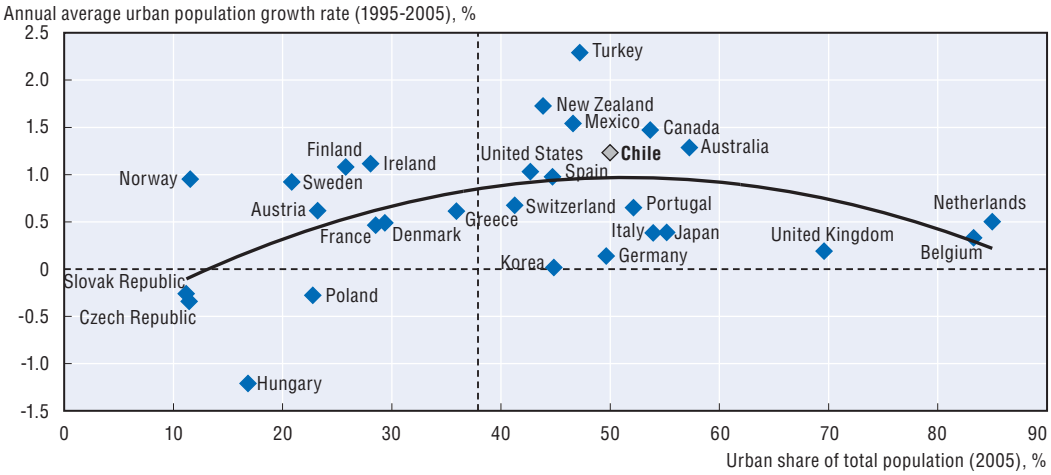
Source: Kamal-Chaoui, L. and J. Sanchez-Reaza (eds.) (2012), "Urban Trends and Policies in OECD Countries", *OECD Regional Development Working Papers 2012/01*, OECD Publishing, Paris, doi: *10.1787/5k9fhn1ctjr8-en*, based on data from the *OECD Regional Database*.

is becoming increasingly concentrated in a few places (Kamal-Chaoui and Sánchez-Reaza, 2012). Chile is no exception, with around 50% of its population living in PU areas and increasing at a rate of around 1.2% annually.

Chilean urban areas have been growing at very different speeds. Puerto Montt, Coquimbo/La Serena and Copiapó are the only FUAs with average annual growth rates exceeding 2% (see Figure 1.9). Between 2002 and 2012, mainly medium-sized cities (e.g. Antofagasta and Rancagua) as well as small cities (e.g. Quillota and Melipilla) have grown at rates above the 1.2% average annually. At the other end of the spectrum, San

Figure 1.8. **Urbanisation in OECD countries**

Urbanisation levels and growth according to PU areas (1995-2005)

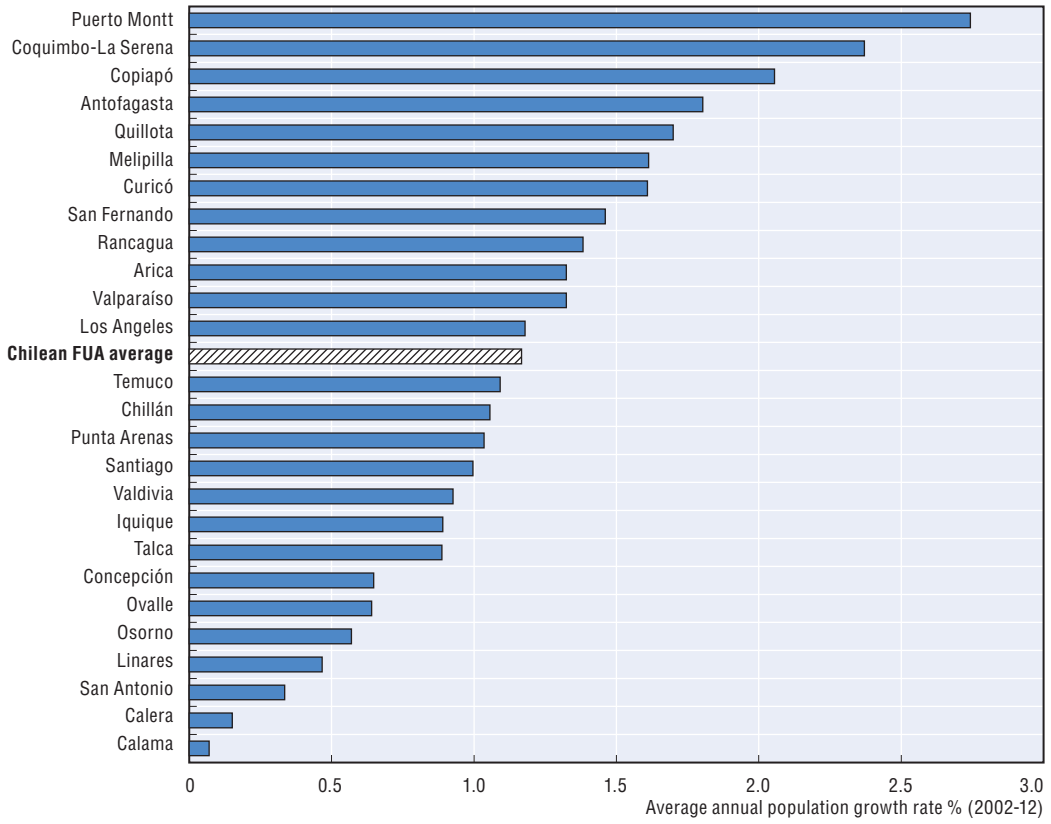


Notes: Urban share of total population by country refers to population in urban regions as a proportion of total population. Iceland and Luxembourg were not included in the sample, because the *OECD Regional Database* identifies no predominantly urban (PU) regions in those countries.

Source: Kamal-Chaoui, L. and J. Sanchez-Reaza (eds.) (2012), "Urban Trends and Policies in OECD Countries", *OECD Regional Development Working Papers 2012/01*, OECD Publishing, Paris, doi: *10.1787/5k9fhn1ctjr8-en*, based on data from the *OECD Regional Database*.

Figure 1.9. **Population growth by functional urban area**

Average annual population growth rates (2002-12)



Source: OECD, based on INE (2012), *Censo 2012: Resultados Preliminares*, Instituto Nacional de Estadística de Chile, Santiago.

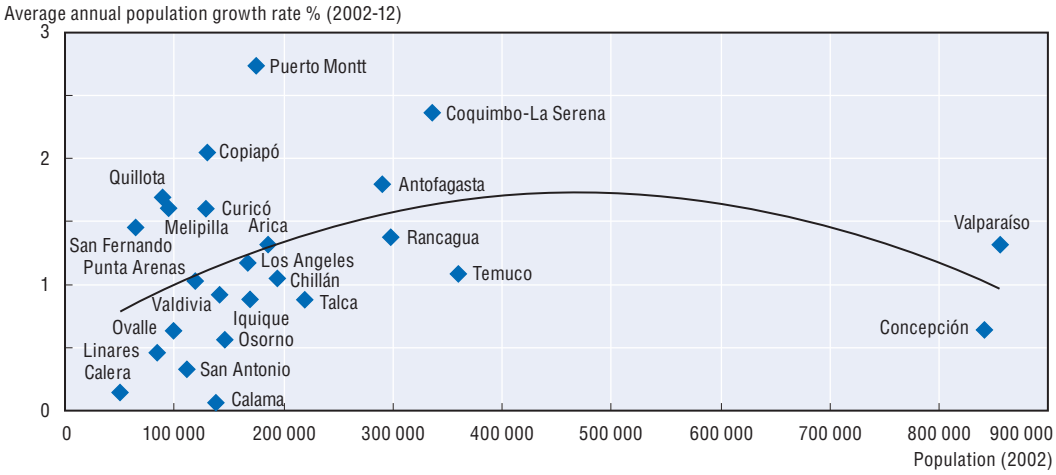
Antonio, Calera and Calama are among the cities that have shown very low growth rates. The varying population growth rates among FUAs may reflect different socio-economic conditions, and an analysis of this can help inform policy making. It is speculated that the economic success of cities across Chile may be based on their appeal to businesses and capacity to attract migrant workers. Most likely, these cities face different challenges that should be taken into account in setting urban policy goals.

In Chile, size matters for population growth: the rule tends to be that the larger cities grow faster. However, the biggest metropolitan areas are an exception: Santiago (1%) and Concepción (0.7%) grew relatively slowly; Valparaíso (1.3%) grew somewhat faster but was still outpaced by many smaller FUAs (see Figure 1.10).

Between 2002 and 2012, the fastest urban population growth rates have been observed in medium and to a lesser extent small urban areas (see Figure 1.11). Despite medium and small FUAs growing faster, urban population in terms of absolute numbers has increased for the most part in the largest metropolitan areas. The three largest metropolitan areas (FUAs), namely Santiago, Valparaíso and Concepción, account for 60% of the total urban population growth, with the other 23 FUAs accounting for the remaining 40%. More than 50% of Chile's total population growth has occurred in the three largest metropolitan areas.

Figure 1.10. **Demographic dynamics in Chile's functional urban areas**

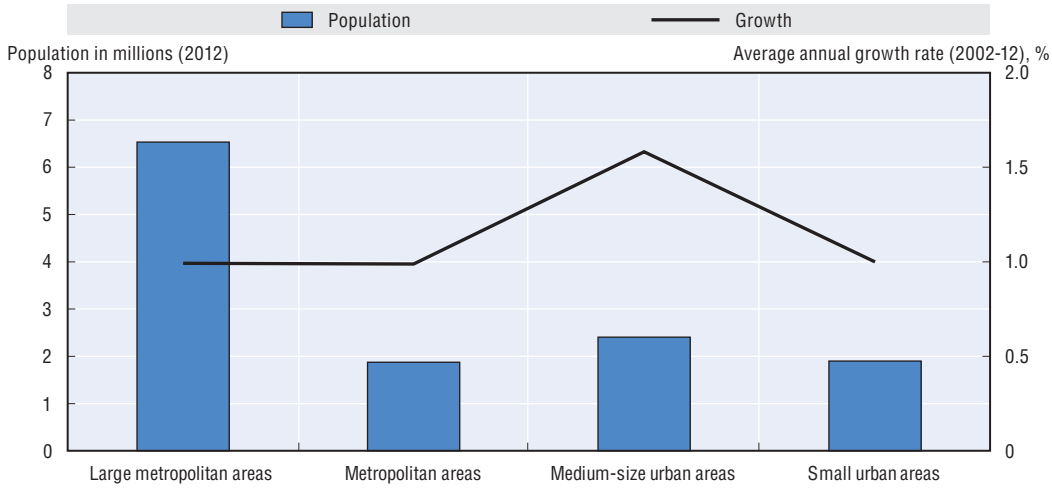
Population and average annual population growth rate (%) by functional urban area



Note: Santiago was excluded from the figure so that the scale of the graph could better illustrate trends, since Santiago's population size would appear too far to the right.
Source: INE (2012), *Censo 2012: Resultados Preliminares*, Instituto Nacional de Estadística de Chile, Santiago.

Chile's urban growth can be described as a mix of population growth in small urban areas, suburbanisation in medium and large urban areas, and urban sprawl and gentrification in Santiago. In northern Chile, cities such as Arica, Calama and Antofagasta are growing within their administrative boundaries, but an emerging hinterland and suburbanisation is now visible (see Figure 1.12). The metropolitan area of Santiago has mainly being growing through urban sprawl in its outer belt and in some municipalities to the south and southeast. Nevertheless, strong growth rates are observed at the core, signalling a potential gentrification process. Density levels in the capital have been highest

Figure 1.11. **Population and population growth by type of functional urban area**



Notes: Small urban areas are those with a population of below 200 000; medium-sized urban areas are those with population between 200 000 and 500 000; metropolitan areas are those with population between 500 000 and 1.5 million; and large metropolitan areas are those with population over 1.5 million.
Source: OECD, based on INE (2012), *Censo 2012: Resultados Preliminares*, Instituto Nacional de Estadística de Chile, Santiago.

at the core, with multiple agglomerations located in one big monocentric core (see Figure 1.13). Despite Santiago's relatively high density levels, Calera and Valparaíso are even denser (see Figure 1.14). Chile's central-southern and southern FUAs seem to be growing within their boundaries.

Economic performance

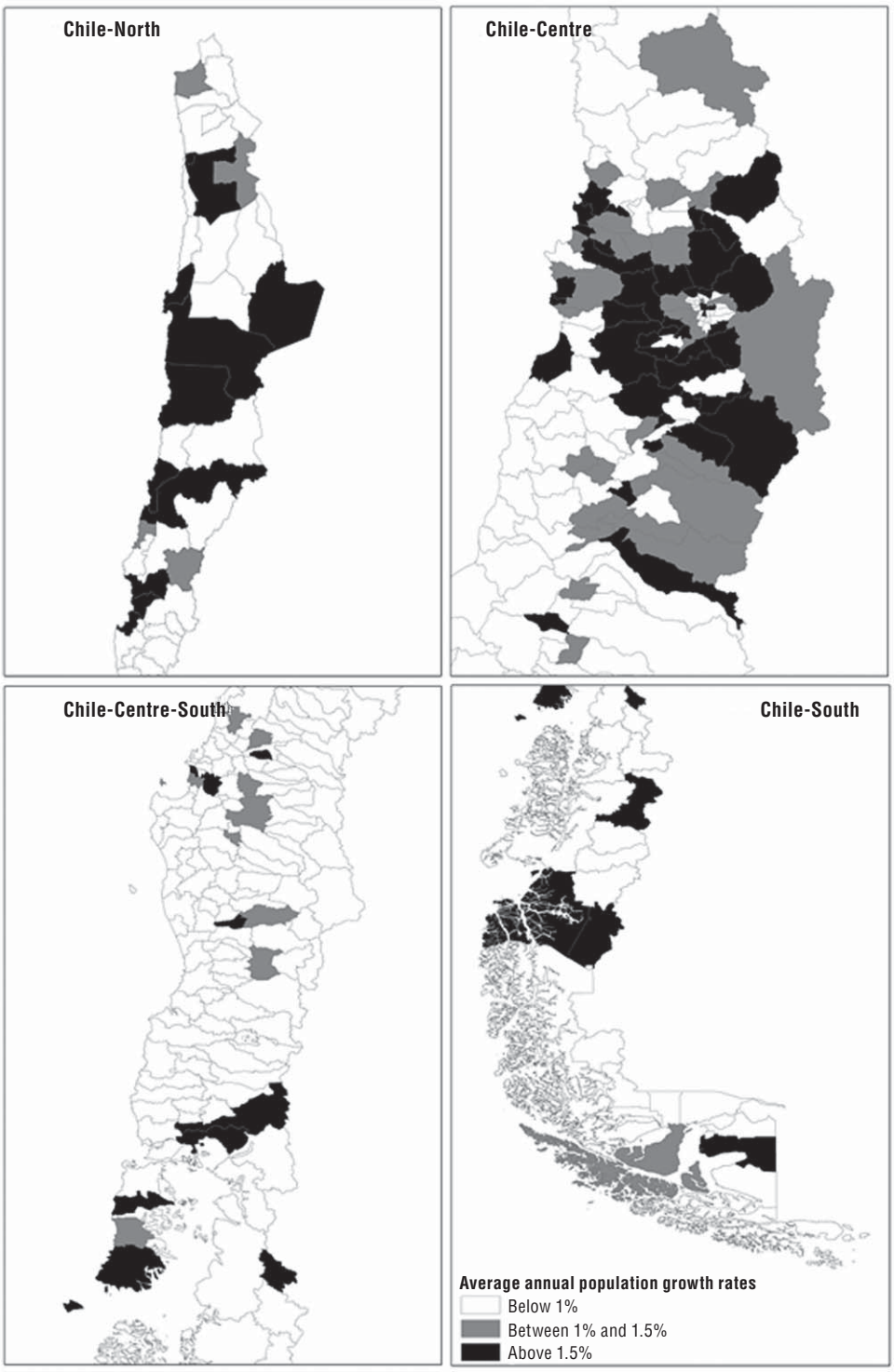
In the period after the global financial and economic crisis, the Chilean economy exhibited resilient growth, with an average annual growth rate of 5.7% for the years 2009-2011. However, the performance of its different cities varied widely. While some grew rapidly (e.g. Coquimbo/La Serena and Copiapó), others contracted, for instance Iquique, Calama and Antofagasta (see Figure 1.14). The latter poorly performing cities were heavily affected by the performance of the copper-mining industry. Falling ore grades, labour disputes and unfavourable weather slowed production in the major mines during 2010-2011 (Central Bank of Chile, 2011) and caused a decline in mining output of 3.2%. However, according to officials from Chile's Ministry of Mining (*Ministerio de Minería),* production is expected to rise to more than 6% in 2012 and the prospects of the cities with a large mining sector appear promising.

Recovering from the crisis, FUA cities experienced growth rates much higher than in the previous decade. In the period 2003-2006, the FUA cities grew 5.3% on average, compared to the 6.3% in the recent period. With the exception of Calama, all other cities experienced positive economic growth with quite diverse growth rates. As in 2009-11, Santiago's growth rate was approximately comparable to the average, with Concepción and Valparaíso ahead by a few decimal points. The highest growth rates were exhibited by medium-size cities such as Puerto Montt and Temuco, and small size ones like San Fernando and Calera (see Figure 1.15).

Chilean economic expansion depends on a handful of cities. Urban areas are the motor of the Chilean economy, with Santiago and a handful of FUAs accounting for the

Figure 1.12. **Population growth by municipality in Chile**

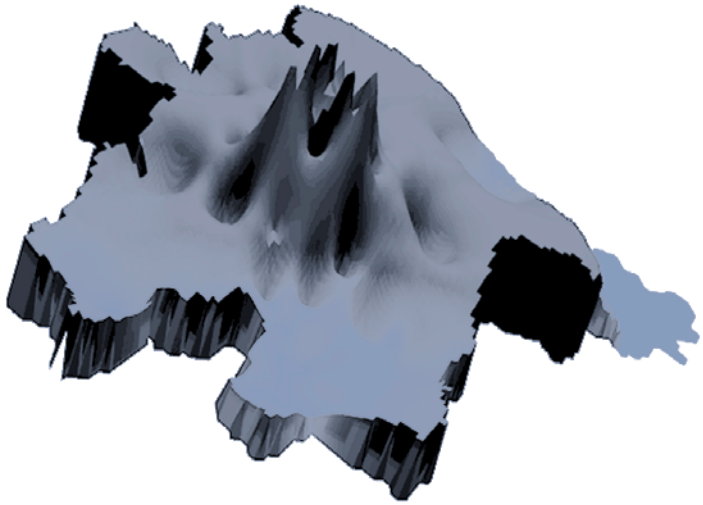
2002-12



Source: OECD, based on INE (2012), *Censo 2012: Resultados Preliminares*, Instituto Nacional de Estadística de Chile, Santiago.

Figure 1.13. **Density in the Santiago functional urban area**

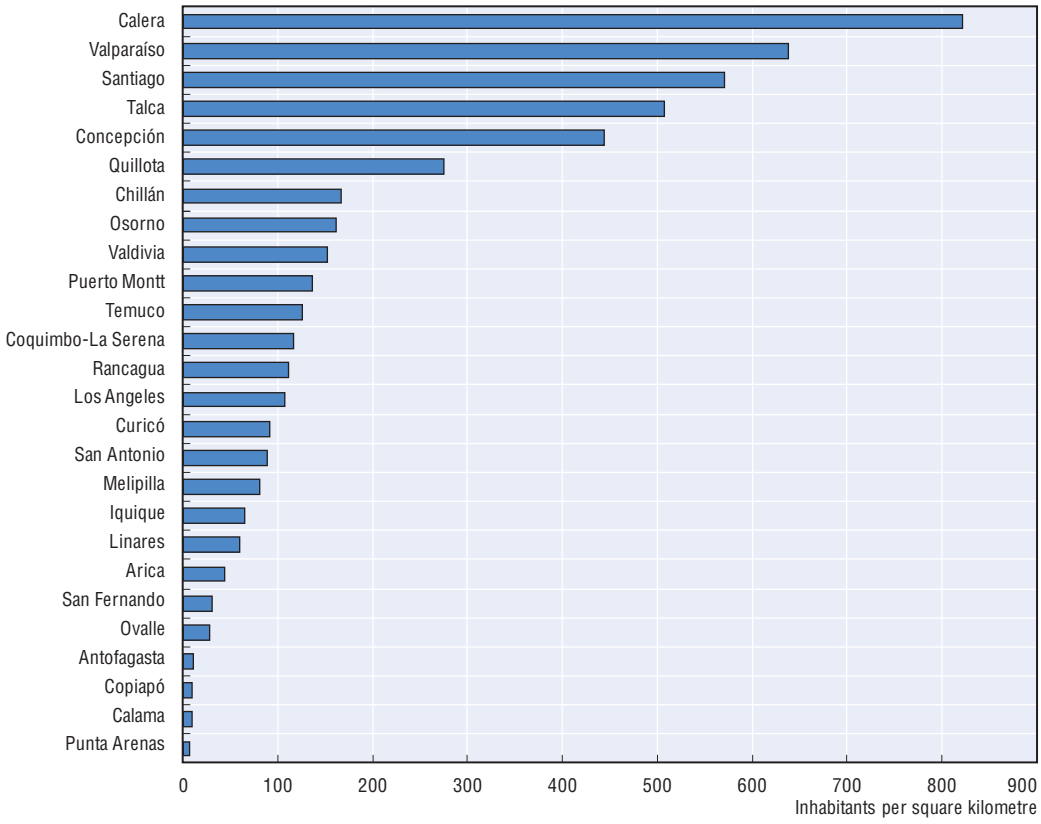
Number of inhabitants per square kilometre



Source: OECD, based on INE (2012), *Censo 2012: Resultados Preliminares*, Instituto Nacional de Estadística de Chile, Santiago.

Figure 1.14. **Density by functional urban area**

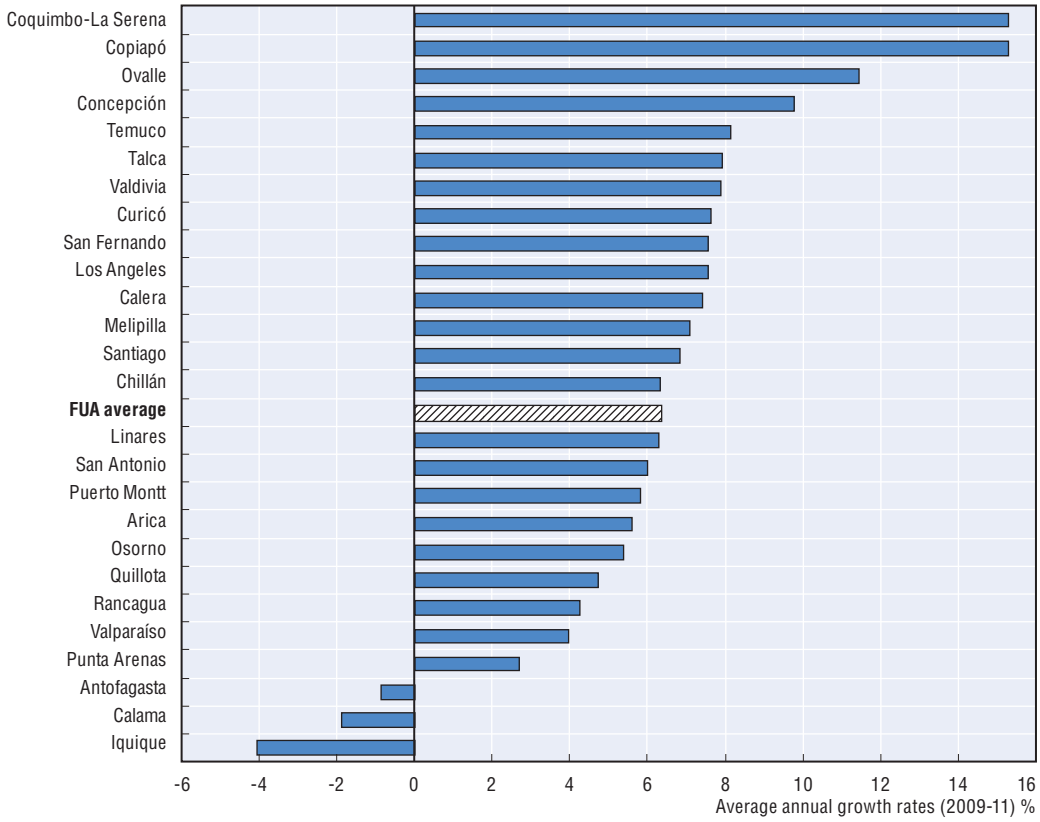
Inhabitants per square kilometre by FUA



Source: OECD, based on INE (2012), *Censo 2012: Resultados Preliminares*, Instituto Nacional de Estadística de Chile, Santiago.

Figure 1.15. **Economic growth in Chilean functional urban areas (2009-11)**

Average annual growth rates



Notes: GDP for each FUA was constructed using the share of regional GDP that the FUA represented on the basis of its share of total hours worked in the region.

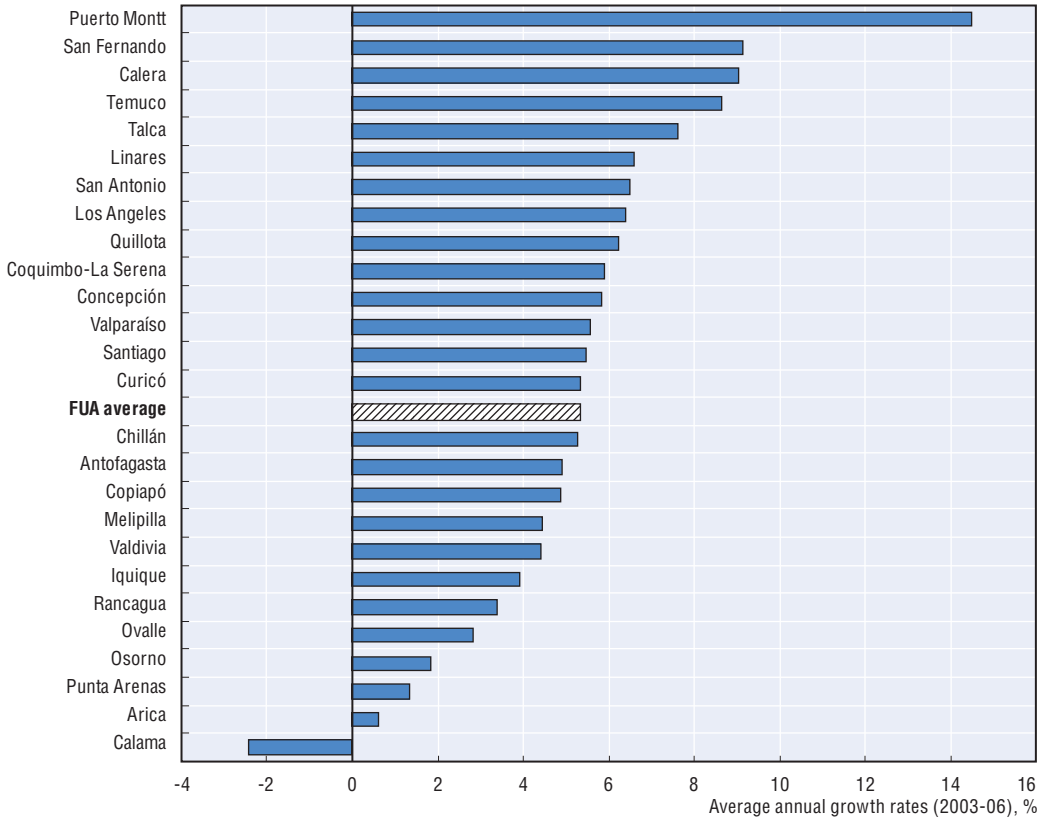
Source: OECD, based on microdata from the Ministerio de Desarrollo Social (2009), *Encuesta de Caracterización Socioeconómica Nacional CASEN-2009*, Ministerio de Desarrollo Social, Santiago, and Ministerio de Desarrollo Social (2011), *Encuesta de Caracterización Socioeconómica Nacional CASEN-2011*, Ministerio de Desarrollo Social, Santiago.

largest share of national growth in the period before the global financial crisis. Chile's 26 FUAs accounted for 84% of national GDP growth in the 2003-06 period. The Santiago FUA alone contributed approximately 50% of national GDP growth in that period, while an additional 20% can be attributed to activities in Concepción (5.7%), Valparaíso (5.4%), Antofagasta (4.7%), Puerto Montt (2.6%) and Temuco (2%) (see Figure 1.17). Approximately 70% of national economic growth took place in these six cities. By contrast, the remaining 20 FUAs represented just over 14% of Chile's economic expansion during the same period.

It is interesting to examine differences in economic performance by city type. Among all OECD predominantly urban (PU) areas, medium-sized cities are growing faster than others (see Figure 1.18). Looking strictly at Chile with the FUA methodology reveals that these urban areas performed slightly differently in the post-crisis period, with the three metropolitan areas exhibiting the highest growth rates, and medium- and small-size urban areas following (see Figure 1.19). This pattern is the reverse of the one observed in the 2000s, when medium-size cities were growing at an average rate of 6.4%, faster than the one for the metropolitan areas at 5.6% (see Figure 1.20).[6] However, the differential performance between the 2000s and the post-crisis recovery period is largely due to the lagging performance of the mining cities. If Antofagasta, Calama and Iquique are excluded, then the medium-size cities grew at 7.6%, the small ones at 7.5% and the metropolitan

Figure 1.16. **Economic growth in Chilean functional urban areas (2003-06)**

Average annual growth rates



Notes: GDP for each FUA was constructed using the share of regional GDP that the FUA represented on the basis of its share of total employment in the region.

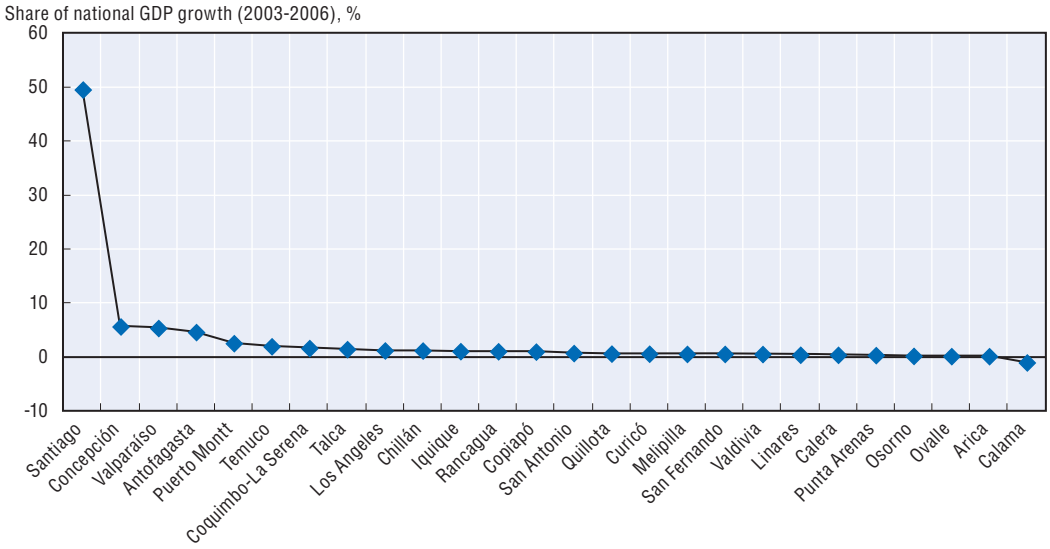
Source: OECD, based on microdata from Ministerio de Desarrollo Social (2009), *Encuesta de Caracterización Socioeconómica Nacional CASEN-2009*, Ministerio de Desarrollo Social, Santiago, and Ministerio de Desarrollo Social (2011) *Encuesta de Caracterización Socioeconómica Nacional CASEN-2011*, Ministerio de Desarrollo Social, Santiago.

areas (including Santiago) at 6.8%. Although the three metropolitan areas contribute most to total growth, the dynamism of the medium cities, both in terms of population and economic growth, should not be overlooked. Furthermore, despite the mining sector's importance for some cities, other sources of growth can complement their economic performance and secure them from volatility in the international copper markets.

Growth determinants such as physical capital, including infrastructure, human capital and innovation, can enhance economic performance in all cities (see Box 1.4). The dynamism of the medium and small cities suggests that the urban system could perhaps realise greater benefits if urban policy initiatives were not to focus so heavily on Santiago and the other two metropolitan areas. Infrastructure investments and an active competitiveness policy can also improve economic performance. Investing in the educational system and human capital can also help cities realise their full growth potential. Chile's educational system is one of the world's most decentralised, with 46% of schools financed by the municipal governments and 45% from private education (Marcel and Raczynski, 2009). Although a 2009 review of tertiary education in Chile acknowledges the positive role of Chile's institutional diversity, it notes that the differential performance of private and public secondary schools might be an obstacle to equal access to higher

Figure 1.17. **Functional urban area contributions to national growth (2003-06)**

FUA's growth as a proportion of national growth

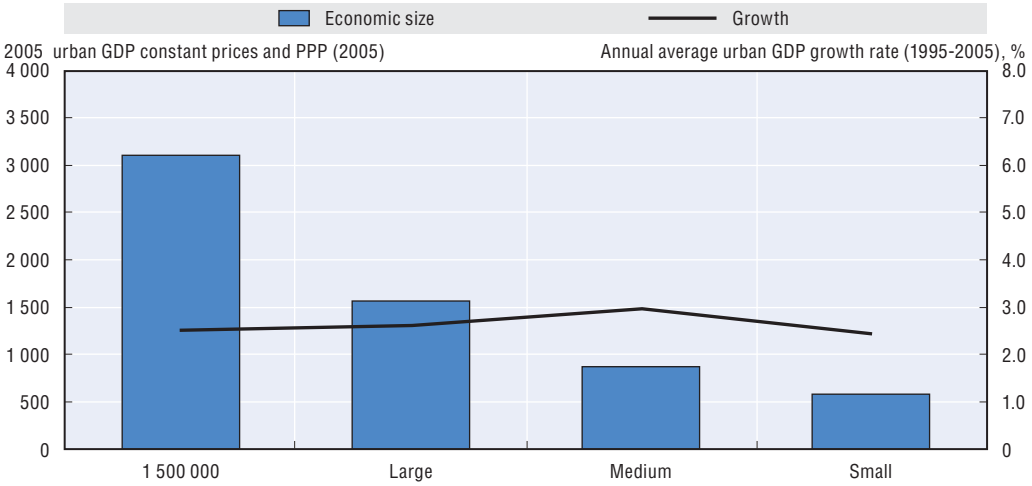


Notes: GDP for each FUA was constructed using the share of regional GDP that the FUA represented on the basis of its share of total employment in the region.

Source: OECD, based on microdata from the Ministerio de Desarrollo Social (2009), *Encuesta de Caracterización Socioeconómica Nacional CASEN-2009*, Ministerio de Desarrollo Social, Santiago, and Ministerio de Desarrollo Social (2011), *Encuesta de Caracterización Socioeconómica Nacional CASEN-2011*, Ministerio de Desarrollo Social, Santiago.

Figure 1.18. **Size and dynamism in OECD predominantly urban areas**

GDP and growth (1995-2005) by type of urban area

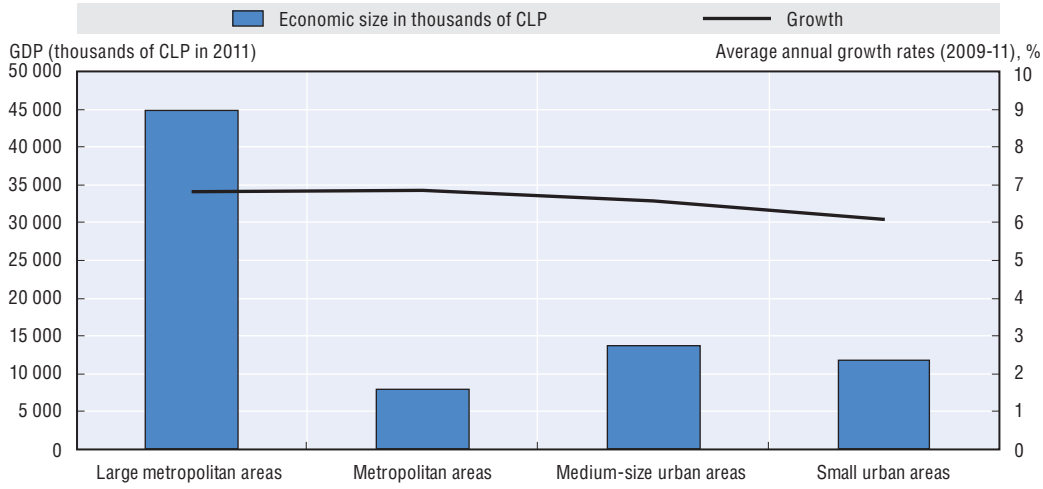


Source: Kamal-Chaoui, L. and J. Sanchez-Reaza (eds.) (2012), "Urban Trends and Policies in OECD Countries", *OECD Regional Development Working Papers 2012/01*, OECD Publishing, Paris, doi: *10.1787/5k9fhn1ctjr8-en*, based on data from the *OECD Regional Database*.

education. Public spending for higher education is relatively low by OECD standards, while the students' families mainly bear the high cost of education (OECD and World Bank, 2009). The recommendations of the Review stressed the key role that tertiary education could play in reducing territorial disparities. Provision of a quality education and increased levels of human capital can have social benefits at the city-wide level, as academic research on human capital externalities in cities has shown (Moretti, 2004a, 2004b).

Figure 1.19. **Chilean functional urban area size and economic growth (2009-11)**

GDP (2011) and average annual GDP growth rates

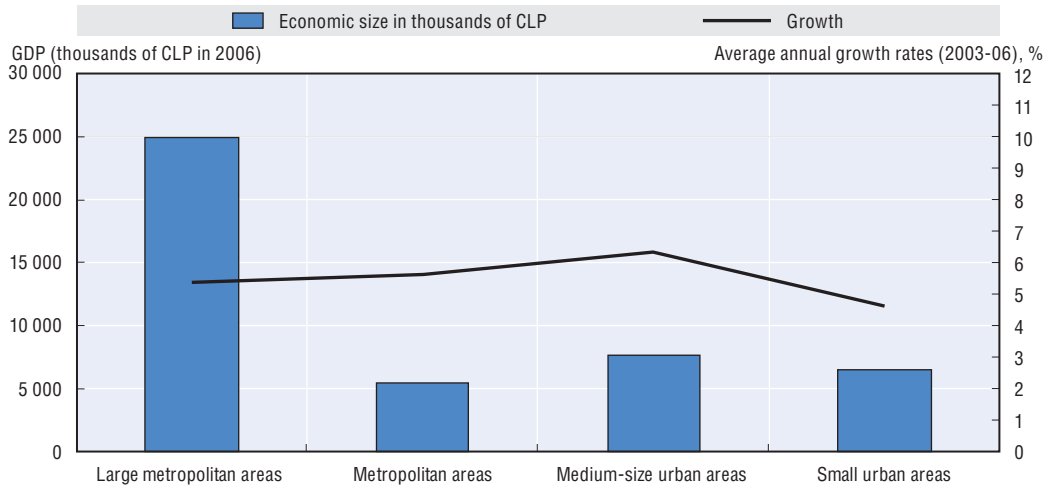


Notes: Small urban areas are those with population below 200 000; medium-sized urban areas are those with population between 200 000 and 500 000; metropolitan areas are those with population between 500 000 and 1.5 million; and large metropolitan areas are those with population over 1.5 million. GDP for each FUA was constructed using the share of regional GDP that the FUA represented on the basis of its share of total hours worked in the region.

Source: OECD, based on microdata from the Ministerio de Desarrollo Social (2009), *Encuesta de Caracterización Socioeconómica Nacional CASEN-2009*, Ministerio de Desarrollo Social, Santiago; Ministerio de Desarrollo Social (2011), *Encuesta de Caracterización Socioeconómica Nacional CASEN-2011*, Ministerio de Desarrollo Social, Santiago and Central Bank of Chile (2012), *Base de Datos Estadísticos*, *www.bcentral.cl*, accessed 12 September 2012.

Figure 1.20. **Chilean functional urban area size and economic growth (2003-06)**

GDP (2006) and average annual GDP growth rates



Notes: Small urban areas are those with population below 200 000; medium-sized urban areas are those with population between 200 000 and 500 000; metropolitan areas are those with population between 500 000 and 1.5 million; and large metropolitan areas are those with population over 1.5 million. GDP for each FUA was constructed using the share of regional GDP that the FUA represented on the basis of its share of total employment in the region.

Source: OECD, based on microdata from the Ministerio de Desarrollo Social (2009), *Encuesta de Caracterización Socioeconómica Nacional CASEN-2009*, Ministerio de Desarrollo Social, Santiago; Ministerio de Desarrollo Social (2011), *Encuesta de Caracterización Socioeconómica Nacional CASEN-2011*, Ministerio de Desarrollo Social, Santiago; Central Bank of Chile (2012), *Base de Datos Estadísticos*, *www.bcentral.cl*, accessed 12 September 2012.

Box 1.4. **What makes regions grow?**

Economic growth in urban areas is driven by endogenous factors such as human capital, physical capital, including infrastructure, and innovation, but also by spatial factors such as agglomeration economies and proximity to markets. Using a number of econometric techniques, the OECD has developed a regional economic growth model that takes into account endogenous factors and new economic geography elements. Among the results are:

1. Human capital is the most robust factor – taking into account both the presence of workers with tertiary educational attainments and the absence of workers with only modest education – and takes about three years to have an impact.
1. Infrastructure has an impact if other factors, such as human capital and innovation, are also in place.
2. Innovation has an impact on growth, but involves a longer-term process of between 5 to 10 years.
3. Agglomerations in services (measured by a region's specialisation index times its size in financial intermediation) has a positive impact on growth. This result can have particular implications for urban regions, since financial intermediation (or knowledge-intensive services) is confined principally to metropolitan areas.
4. Accessibility to markets has a positive impact on growth, but this result is not very robust, since it is only statistically significant in one model.
5. Urban regions with low employment rates can generate growth if they can manage to mobilise their labour force.

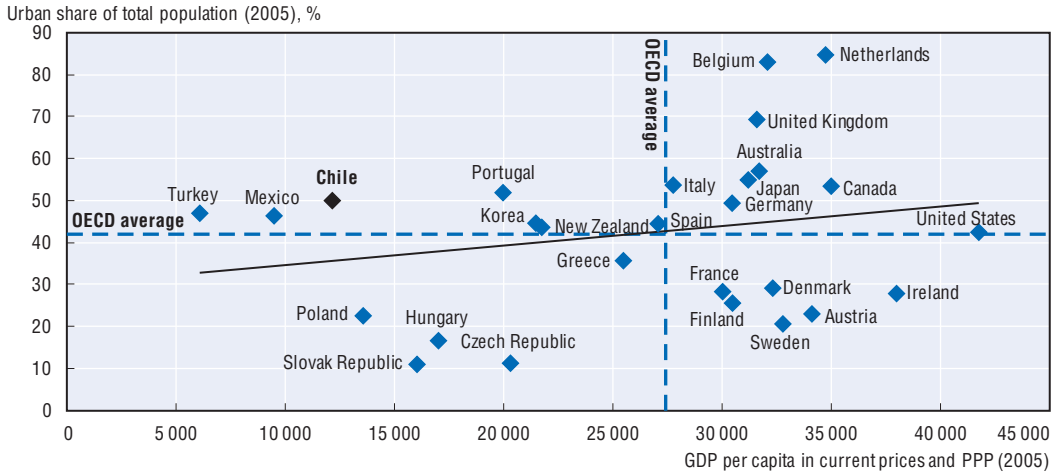
Source: OECD (2009), *How Regions Grow: Trends and Analysis*, OECD Publishing, Paris, doi: *10.1787/9789264039469-en*.

As in other OECD countries, urban areas in Chile tend to have higher GDP per capita than their rural counterparts. In OECD countries, higher urban population shares co-exist, in most cases, with higher GDP per capita. However, in the case of Chile, the relationship is less clear (see Figure 1.21). Linearised values of population and GDP per capita seem to have a rather slight but positive relationship (see Figure 1.22). As the population of Chilean FUAs increases, GDP per capita tends to increase only modestly. There are exceptions, as in the cases of Antofagasta and Calama, whose high GDP per capita is in sharp contrast with their population size due to the wealth that the mining sector produces and which is partly accounted for at the city level.

Recent estimates suggest that doubling city size in terms of economic mass or employment density is associated with an increase of approximately 3% to 8% in total factor productivity (Rosenthal and Strange, 2004; Rice, Venables and Patacchini, 2006; Graham, 2007; Graham and Kim, 2008). Similarly, people living in US metropolitan regions have been found to earn 10% more than those living in smaller functional areas and over one-third more than those living outside (Glaeser and Mare, 2001). Although size matters, it is not the only factor affecting economic performance. A recent EU report found that metropolitan areas that also function as national capitals tend to have the highest GDP per capita (Dijkstra, 2009). Similar findings were highlighted by the OECD (2006). Furthermore, part of the explanation for the weak economic performance of some large urban areas is that city-size only matters if human capital is also agglomerating (Glaeser and Resseger, 2009).

Figure 1.21. **Urban population and income in OECD countries**

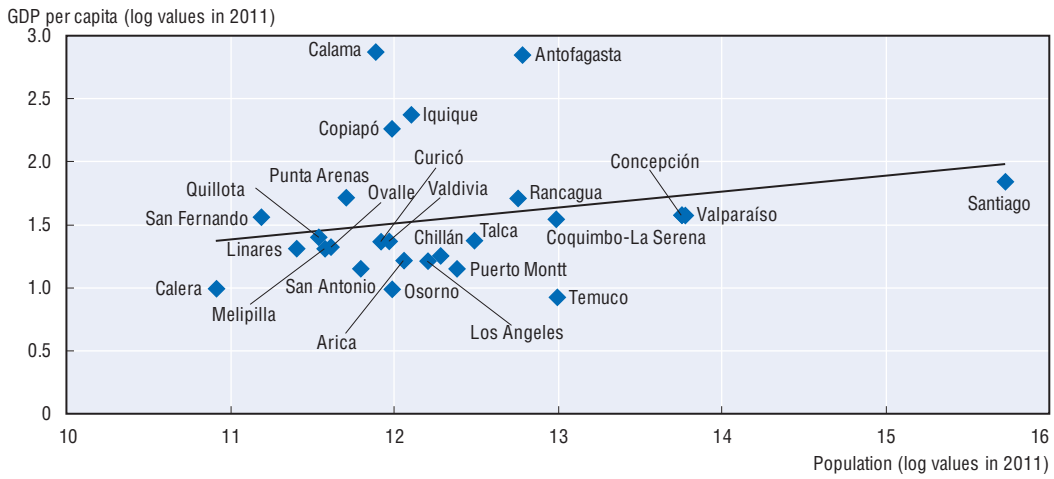
Correlation between urban share of total population and GDP per capita



Source: Kamal-Chaoui, L. and J. Sanchez-Reaza (eds.) (2012), "Urban Trends and Policies in OECD Countries", *OECD Regional Development Working Papers 2012/01*, OECD Publishing, Paris, doi: *10.1787/5k9fhn1ctjr8-en*, based on data from the *OECD Regional Database*.

Figure 1.22. **City size and income in Chile**

FUA's population size and GDP per capita (2011)



Note: GDP per capita for each FUA was constructed using the share of regional GDP that the FUA represented on the basis of its share of total hours worked in the region.

Source: OECD, based on microdata from the Ministerio de Desarrollo Social, Santiago, and Ministerio de Desarrollo Social (2011), *Encuesta de Caracterización Socioeconómica Nacional CASEN-2011*, Ministerio de Desarrollo Social, Santiago, and INE (2012), *Censo 2012: Resultados Preliminares*, Instituto Nacional de Estadística de Chile, Santiago.

The mixed outcomes in the economic growth of Chile's urban areas could be associated with negative externalities linked directly to some of the most pressing urban challenges, such as housing. Agglomeration processes are shaped by the interaction of two countervailing forces. On the one hand, centripetal forces can be related to a pooled labour market and backward and forward linkages among firms and agglomeration economies, such as knowledge spill-overs. On the other hand, centrifugal forces leading to de-concentration can be related to increased land prices, property factors and congestion costs. As some of the benefits of agglomeration can be captured by private agents and some of the

costs affect the whole urban system, urban areas often result in the privatisation of benefits and socialisation of costs (OECD, 2009a). Chile's success in providing housing has entailed some negative consequences. The varying quality of housing units in Chile's different periods of housing construction may end up constraining labour mobility. Older housing tends to be of a lower quality and can be more difficult to market for a worker planning to move to a job opportunity elsewhere. Given the underdeveloped rental market and the supply of new housing with better amenities, home owners may be reluctant to absorb a drop in the equity of their property. As a consequence, residential mobility and in turn, urban labour markets may be paying the price. Any successful urban policy would ensure that urban expansion maximises the benefits of agglomeration but at the same time, minimises the impact of congestion and other negative externalities (OECD, 2009b).

Chile's urban challenges

Further analysis reveals some urban challenges with an economic dimension, including rising inequality, increasing poverty, the potential impact of housing policy on labour market mobility, and environmental concerns linked primarily to congestion. These complex policy challenges will need to be considered as Chile's urban areas continue to grow.

Rising inequality

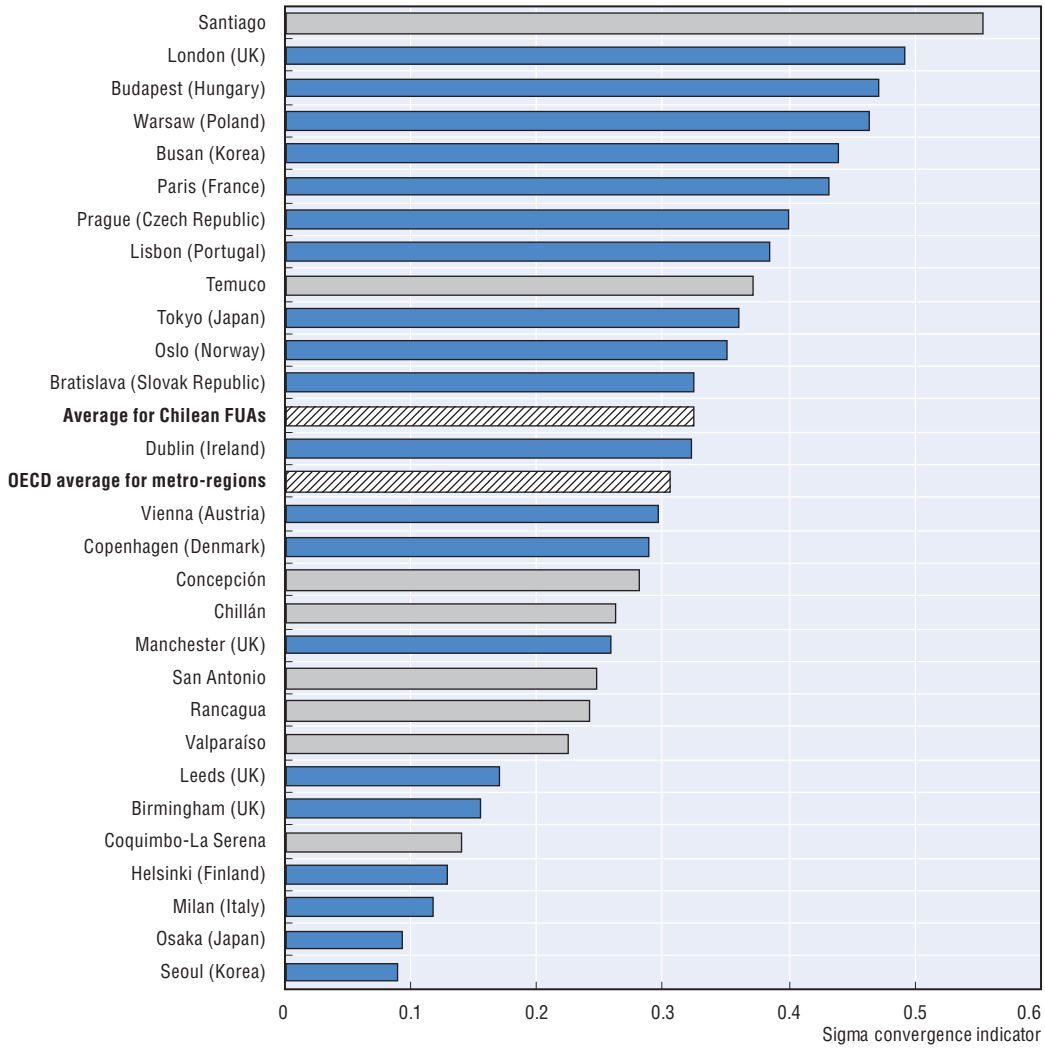
Urban areas in Chile are growing rapidly and contributing the largest share of national economic growth, but they also face rising inequality. On average, Chilean FUAs display slightly higher inequality levels (measured through the sigma convergence indicator)[7] than the average for urban areas in the OECD. The Santiago FUA displays the highest inequality across municipalities in estimated GDP per capita when compared to other metropolitan regions for which the *OECD Metropolitan Database* keeps records (see Figure 1.23). The disparities within the Santiago FUA are considerably higher than those in London, Budapest or Warsaw. Disparities in Temuco, the Chilean FUA with the second-highest inequality levels across municipalities, are above the OECD average for metropolitan regions and are comparable to the inequality found in Lisbon or Tokyo. Concepción and Chillán display intra-regional inequality levels similar to those of Copenhagen and Manchester, but lower than the average for Chilean FUAs and the OECD metropolitan regional average. Although sigma convergence indicators could not be calculated for most Chilean FUAs, due to the limited number of municipalities that they are composed of, Coquimbo-La Serena seems to be the FUA with the least inter-municipal disparities.

Equally worrisome is the growth of inequality among Chile's FUAs. While the Santiago FUA has the largest inter-municipal disparities, these have actually been declining since 2003 (see Figure 1.24). Meanwhile, in other metropolitan areas such as Concepción and Valparaíso, inequality across municipalities has risen since 2003. Inequality has also increased in medium-sized cities such as Rancagua and Temuco. While some local policies in Santiago, San Antonio and perhaps, to a lesser extent, Chillán, may have helped reduce inequalities, there are other areas where inequality is on the rise.

Poverty is another expression of inequality that has been rising in almost every FUA in the country, and in some cases very rapidly. Chilean FUAs appear to have extremely uneven poverty rates, some including more than 25% of the population, as in Linares and Ovalle, as compared to 7.2% in Antofagasta (see Figure 1.25). From 2006-2011, poverty rates rose in 20 out of the 26 FUAs, with some experiencing very high growth rates (see Figure 1.26). Moreover, the growth rates of such poverty levels are surprisingly high. In Curicó, the

Figure 1.23. **Urban inequality in Chilean functional urban areas and the OECD**

Sigma convergence indicator



Note: The Sigma-convergence indicator is calculated using the standard deviation of logged values of GDP per capita for the municipalities within an FUA. The graph show estimates for Chilean FUAs for 2009 and for other OECD metro-regions for 2007.

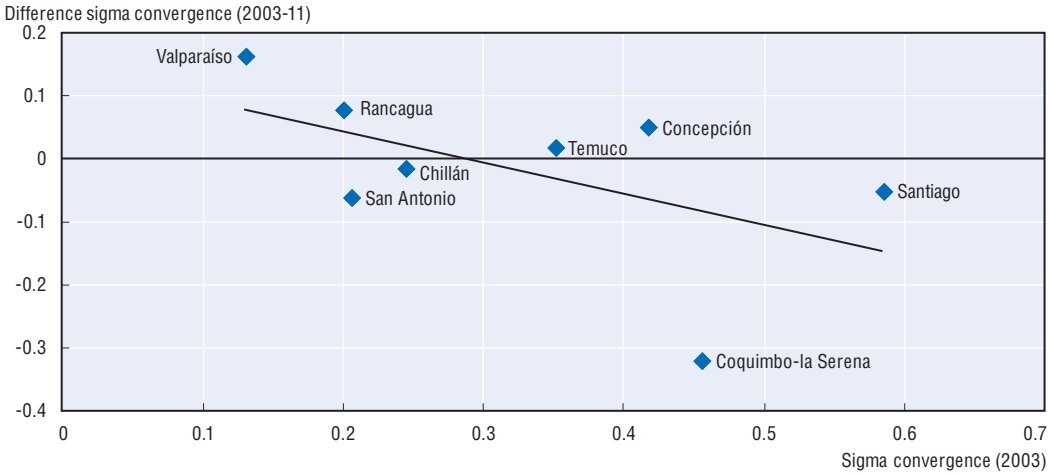
Source: OECD, based on microdata from Ministerio de Desarrollo Social (2009), *Encuesta de Caracterización Socioeconómica Nacional CASEN-2009*, Ministerio de Desarrollo Social, Santiago; Central Bank of Chile (2012), *Base de Datos Estadísticos*, *www.bcentral.cl*, accessed 12 September 2012, and OECD (2011), *OECD Urban Policy Reviews, Poland 2011*, OECD Publishing, Paris, doi: *10.1787/9789264097834-en*.

poverty rate doubled in the five-year period under analysis (see Figure 1.26). Similarly, in San Fernando and Iquique, poverty rates increased by nearly 90% during the same period.

Poverty could be turning into an urban phenomenon in Chile. While national poverty levels have been dropping since the late 1980s, they continue to grow in certain urban areas. There appears to be an inverse relationship between initial poverty rates and growth of poverty in the period 2006-2011: with an overall increase in poverty levels for those areas where the poverty rates were relatively low and a decline in poverty levels for those with high initial rates (see Figure 1.27). This convergence of poverty rates can hardly be a good sign, especially since it is to a higher level (2.5 percentage points above the level in 2006 on average). Further analysis suggests that this might be due to domestic migration patterns,

Figure 1.24. **Growing urban inequality among Chilean functional urban areas**

Change in sigma convergence indicator between 2003 and 2011

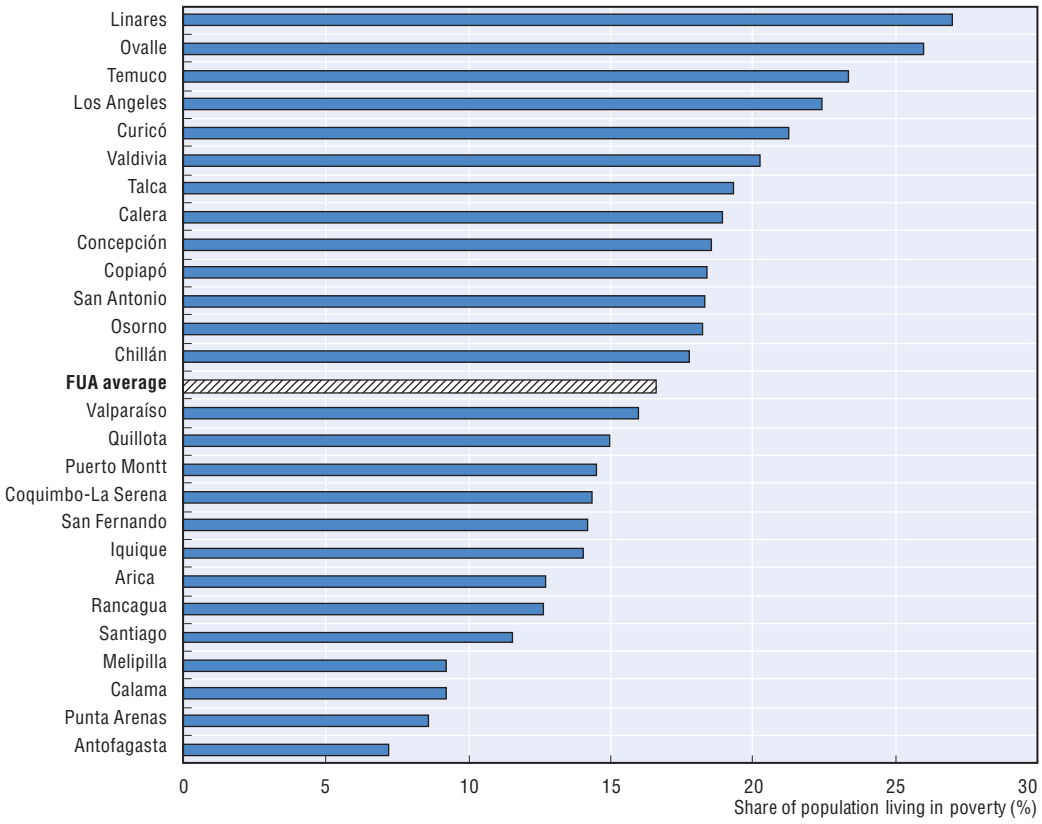


Note: The Sigma-convergence indicator is calculated using the standard deviation of logged values of GDP per capita for the municipalities within an FUA. Estimates have been calculated only for the FUAs that consist of three or more municipalities.

Source: OECD, based on microdata from the Ministerio de Desarrollo Social (2003), *Encuesta de Caracterización Socioeconómica Nacional CASEN-2003*, Ministerio de Desarrollo Social, Santiago; Ministerio de Desarrollo Social (2011), *Encuesta de Caracterización Socioeconómica Nacional CASEN-2011*, Ministerio de Desarrollo Social, Santiago; Central Bank of Chile (2012), *Base de Datos Estadísticos*, *www.bcentral.cl*, accessed 12 September 2012.

Figure 1.25. **Urban poverty in Chile**

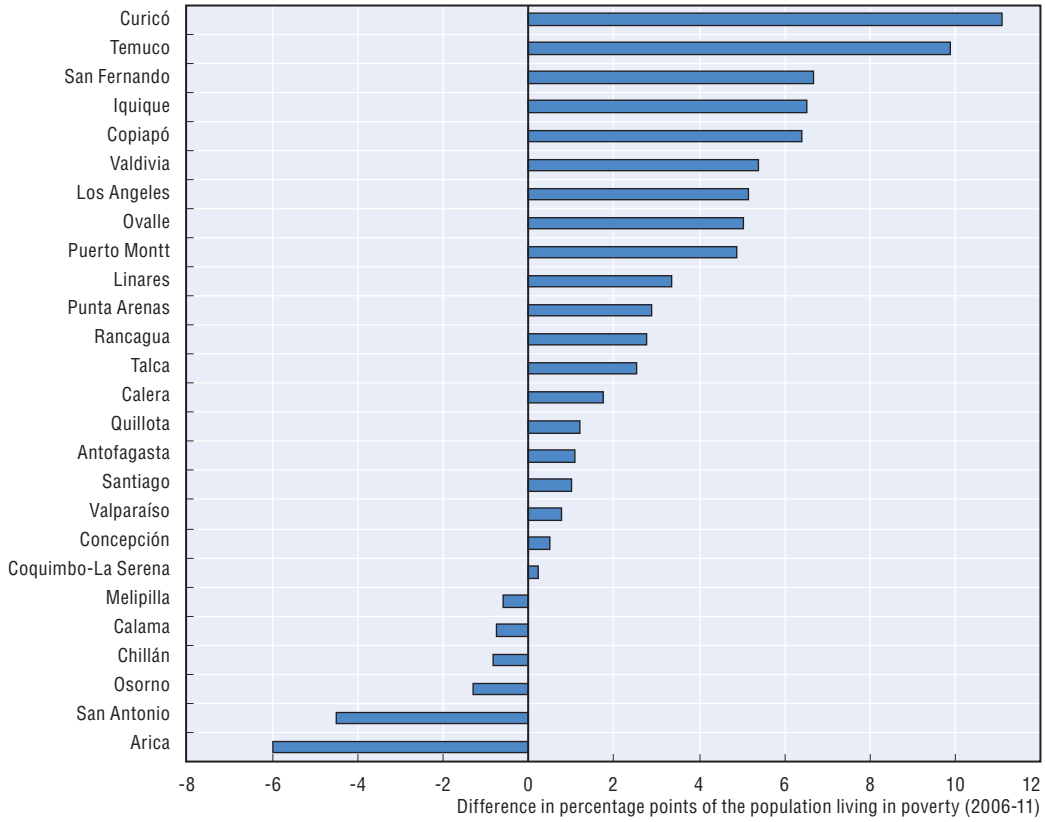
Share of population living in poverty (2011)



Source: OECD, based on SUBDERE (2012), *Sistema Nacional de Información Municipal*, *www.sinim.cl*, accessed September 2012.

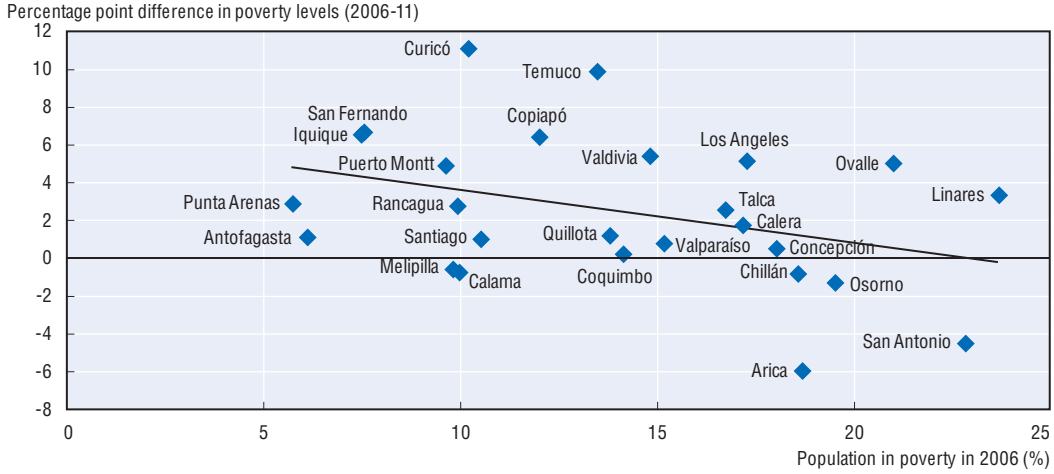
Figure 1.26. **Growth in urban poverty**

Percentage points increase in the share of FUA population living in poverty (2006-11)



Source: OECD, based on SUBDERE (2012), *Sistema Nacional de Información Municipal*, *www.sinim.cl*, accessed September 2012.

Figure 1.27. **Initial poverty levels and poverty growth in Chilean functional urban areas**



Source: OECD, based on SUBDERE (2012), *Sistema Nacional de Información Municipal*, *www.sinim.cl*, accessed September 2012.

as a negative relationship is found between initial poverty rates in 2006 and population growth during 2006-12. If this is the case, then it might simply be that migration of poor people to the slightly more affluent FUAs generates the observed regression. Of course, further research on the specific migration patterns of different income groups would be needed to substantiate this hypothesis.

Housing market challenges

Chile has made great strides in improving access to housing in the past two decades. Twenty years ago, approximately 20% of the population was living in substandard housing, in deteriorated units, overcrowded houses or informal settlements without access to essential services such as electricity, sewage or drinking water (Ozler, 2012). Ambitious housing subsidy programmes, coupled with investments in infrastructure and broader social policies, have helped improve living conditions. A key contributing factor has also been sustained macroeconomic stability, which has resulted in household income and savings growth and at the same time provided the means to reduce the cost of access to finance. Most Chileans now live in adequate housing, and the number of people living in informal settlements has fallen sharply. Despite this, however, one in every 10 Chileans lives in poor housing conditions (OECD, 2012b).

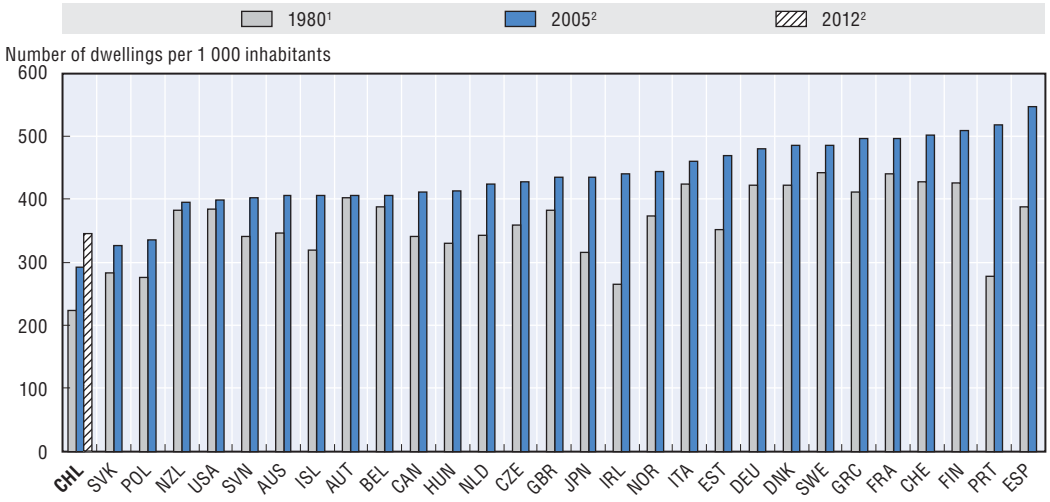
Chile's effort to provide every family with a home has paid off. In 1980, there were 222 dwellings per 1 000 inhabitants, whereas the figure in 2012 is 345, an increase of 44%. In the 25-year period following 1980, Chile's added more than 27% of the initial housing stock; outpaced only by Portugal (62%), Ireland (51%), Spain (34%) and Estonia (29%). Given the recent experience of inflated housing markets in some of these countries, this could be a reason for concern. However, since Chile's housing levels are still below OECD standards, the increase in supply is reassuring. In 2005, Chile's housing stock, measured by the number of dwellings per 1 000 inhabitants, was the lowest among OECD countries for which there are records (see Figure 1.28). Even if the latest estimated figure for 2012 is taken into account, Chile ranks higher only than the 2005 figures for Poland and the Slovak Republic.

Urban areas in Chile have been direct beneficiaries of the increase in housing. Every FUA in Chile has seen an increase in its housing stock between 2002 and 2012 (see Figure 1.29). Surprisingly, the housing stock is not concentrated in the largest metropolitan areas. The number of dwellings per 1 000 inhabitants in Santiago for instance, is the fifth-lowest among Chilean FUAs, showing the need for further housing investment. With a similar housing stock, Concepción ranks 19th out of the 26 FUAs. In contrast, Valparaíso represents the second-largest housing stock per head of population. It is also worth noting that Chile's mining powerhouses have some of the lowest housing stock in the country; this is particularly acute in the case of Antofagasta. The number of dwellings per 1 000 inhabitants has been growing the fastest in small and medium-sized cities such as Melipilla, Puerto Montt, Valdivia, Temuco and Iquique (see Figure 1.30).

Growth in housing prices has been contained, keeping housing affordable for most Chileans; in fact, unlike many other OECD countries, Chile's real house prices have been contracting slightly in the past decade. For poorer households, however, housing remains expensive. Chile's housing subsidies have helped the less well-off gain access to housing, chiefly through ownership, but government support does not always reach those in most need, since a substantial part of subsidies go to upper-middle income groups (OECD, 2012b). Improving access to housing for the poor will be important if Chile wants to reduce inequalities and poverty (see Figure 1.31).

Figure 1.28. **Housing stock in OECD countries**

Number of dwellings per 1 000 inhabitants

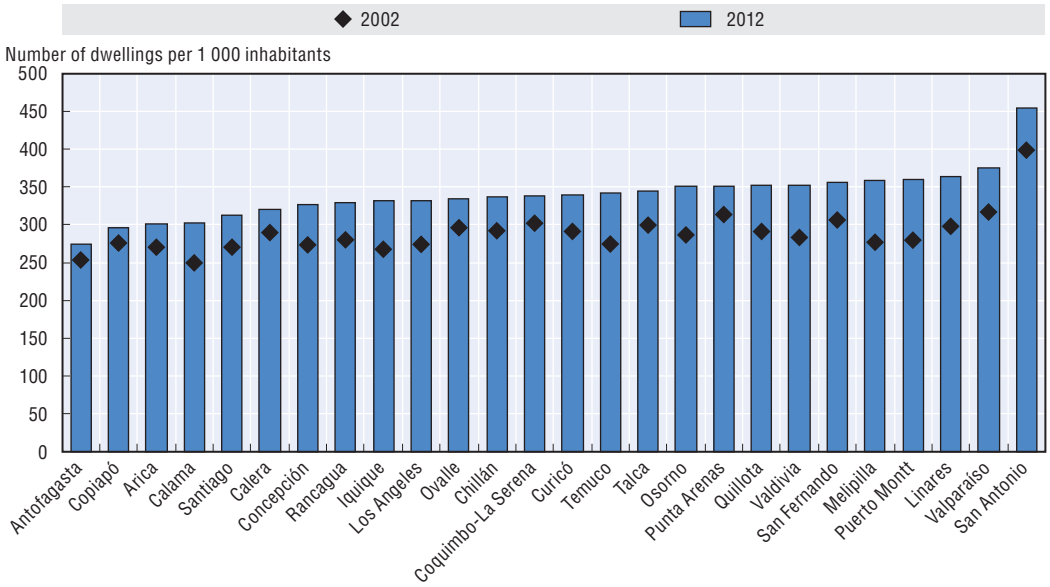


1. 1981 for Australia and Greece; 1982 for France; 1986 for Germany; 1988 for Finland; 1989 for Portugal and 1990 for Italy; 1982 for Chile.
2. 2001 for Belgium, the Czech Republic and Greece; 2002 for the Russian Federation; 2003 for Australia and Italy; 2004 for France and Switzerland; 2002 and 2012 for Chile.

Source: INE (2012), *Censo 2012: Resultados Preliminares*, Instituto Nacional de Estadística de Chile, Santiago; Andrews, D., A. Caldera Sánchez and Å. Johansson (2011), "Housing Markets and Structural Policies in OECD Countries", *OECD Economics Department Working Papers*, No. 836, OECD Publishing, Paris, doi: *10.1787/5kgk8t2k9vf3-en*.

Figure 1.29. **Housing stock in Chilean functional urban areas**

Number of dwellings per 1 000 inhabitants

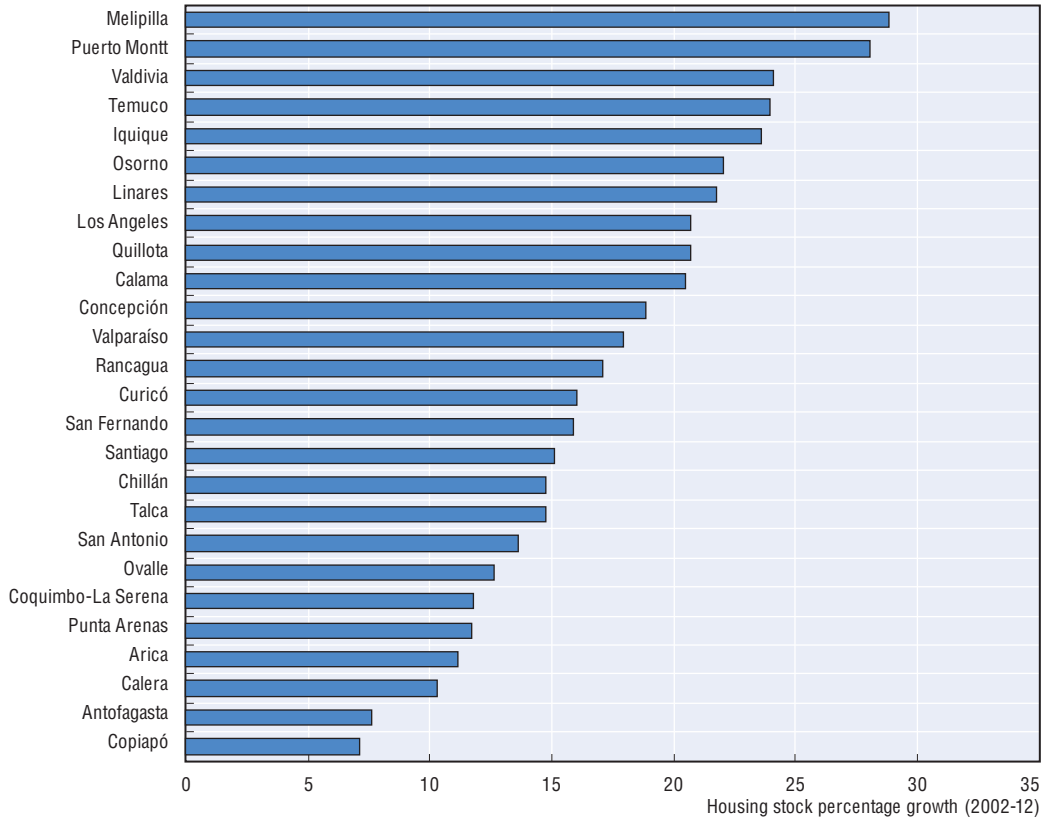


Source: OECD, based on INE (2012), *Censo 2012: Resultados Preliminares*, Instituto Nacional de Estadística de Chile, Santiago.

Public support for housing markets and the tendency towards home ownership (as opposed to rentals) has produced urban sprawl, disconnected communities and reduced mobility, which not only makes it hard to reduce inequality, but also hurts labour markets in more dynamic urban areas. Chile has one of the smallest rental markets in the OECD

Figure 1.30. **Growth in housing stock**

Per cent increase in the number of dwellings per 1 000 inhabitants (2002-12)



Source: OECD, based on INE (2012) *Censo 2012: Resultados Preliminares*, Instituto Nacional de Estadística de Chile, Santiago.

(see Figure 1.32). Support for home ownership has created a market that leads housing developers to build in peripheral locations, often far from jobs, public services and other urban amenities. Unintentionally, such support may have hindered social mobility and impeded the reduction of poverty and inequality. Also unintentionally, policies in favour of home ownership may result in disincentives for residential mobility and active labour market search. As new, better-quality housing units and complexes are built, with better urban amenities, owners of older housing may find their properties less competitive in the marketplace. Such home owners may be discouraged from seeking or taking new job opportunities elsewhere, rendering local labour markets less flexible, and constraining labour supply in dynamic areas. This may be one reason why Chile has one of the lowest residential mobility rates in the OECD, a condition that is also observed in countries such as Poland and Portugal, which also display a preference for home ownership and a similar tenure structure (see Figure 1.33).

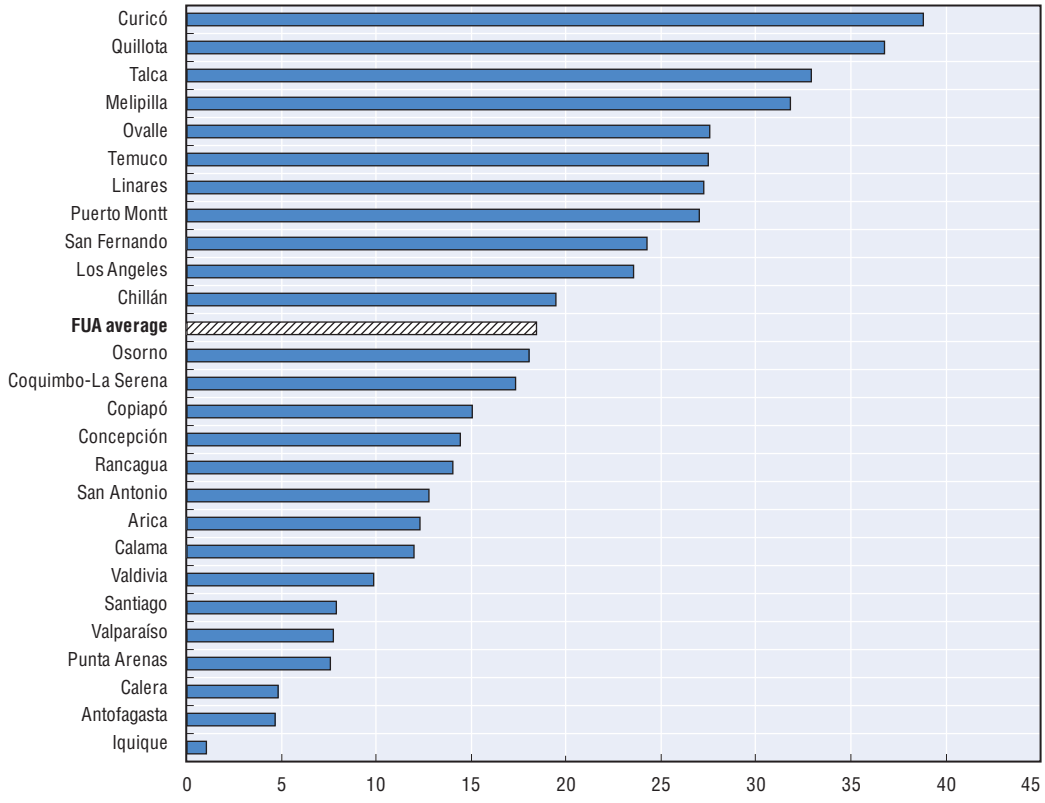
Environmental trends in Chilean cities

Air quality

Chilean cities face high levels of air pollution.[8] In the OECD *Better Life Index*, Chile ranks last among OECD countries in terms of environmental indicators capturing air pollution. Concepción, Rancagua, Calama, Valparaíso, Iquique and Santiago are the functional urban

Figure 1.31. **Social housing stock (2009-12)**

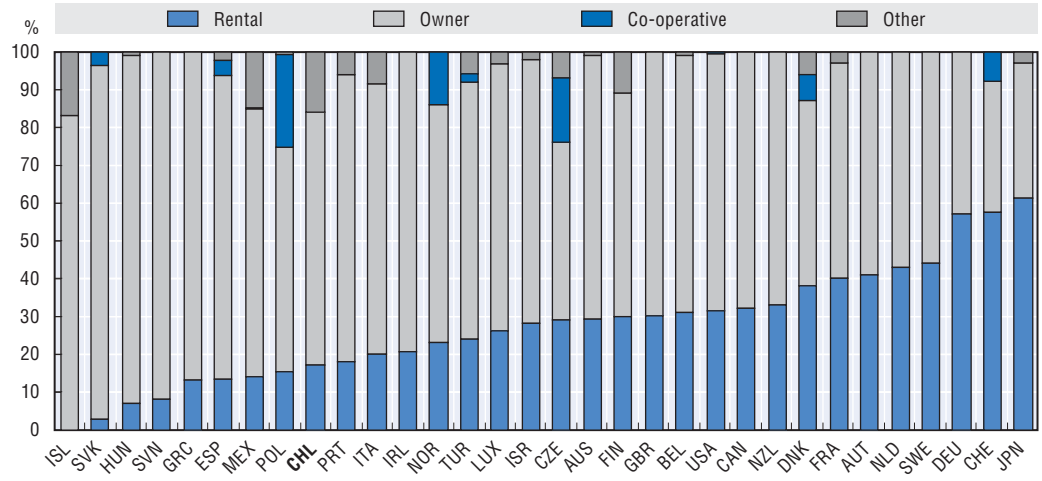
Number of social housing units offered per 1 000 inhabitants



Source: OECD, based on data from the Direcciones de Obras Municipales provided via SUBDERE, October 2012, and INE, 2012 Census data.

Figure 1.32. **Tenure structure in OECD countries**

Percentage of dwelling stock in 2009

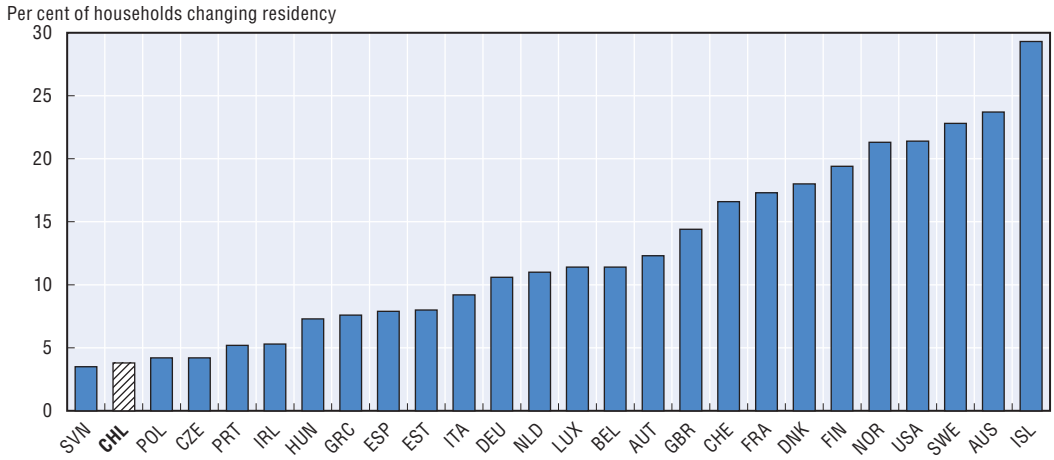


Note: The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD (2012), *OECD Economic Surveys: Chile 2012*, OECD Publishing, Paris, doi: *10.1787/eco_surveys-chl-2012-en*.

Figure 1.33. **Residential mobility in OECD countries**

Percentage of households that have changed residency in the past two years

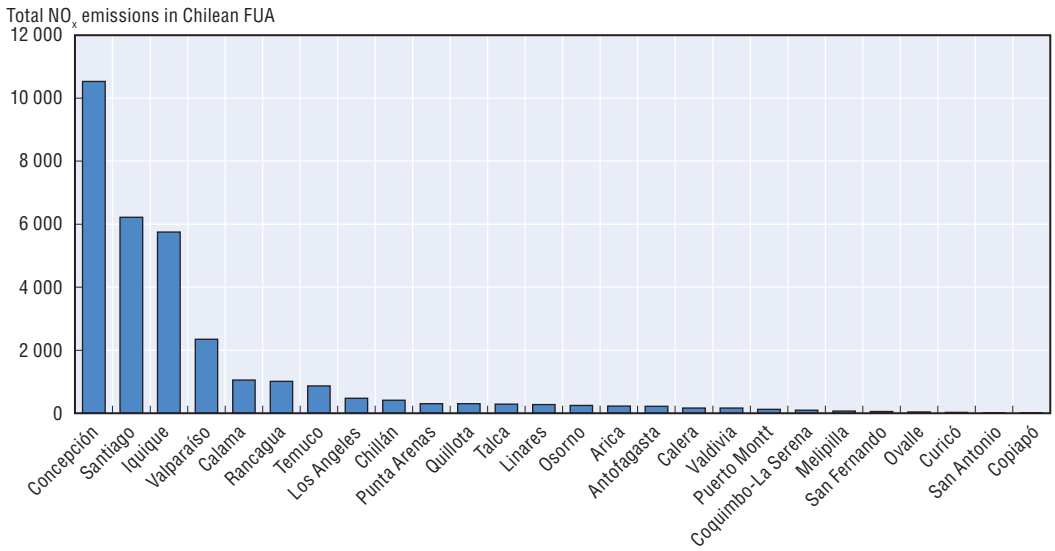


Source: OECD (2012), *OECD Economic Surveys: Chile 2012*, OECD Publishing, Paris, doi: *10.1787/eco_surveys-chl-2012-en*.

areas (FUAs) with the highest levels of nitrous oxides (NO_x), sulphur oxides (SO_x) and particulate matter ($PM_{2.5}$) emissions. Concepción has the highest levels of air pollutants based on 2009 data, with 10 528 tons/year of NO_x emissions and 18 420 tons/year of $PM_{2.5}$ emissions (see Figures 1.34 and 1.36). Calama follows closely behind, with high levels of SO_x (165 550 tons/year) and $PM_{2.5}$ (10 019 tons/year) (see Figures 1.35 and 1.36). In general, Chilean cities with a high concentration of population (Santiago, Valparaíso and Concepción) and those that are heavily industrialised, including those adjacent to heavily industrialised zones, such as Calama and Antofagasta, have low air quality.

Figure 1.34. **NO_x emissions in Chilean functional urban areas (2009)**

Tonnes/year

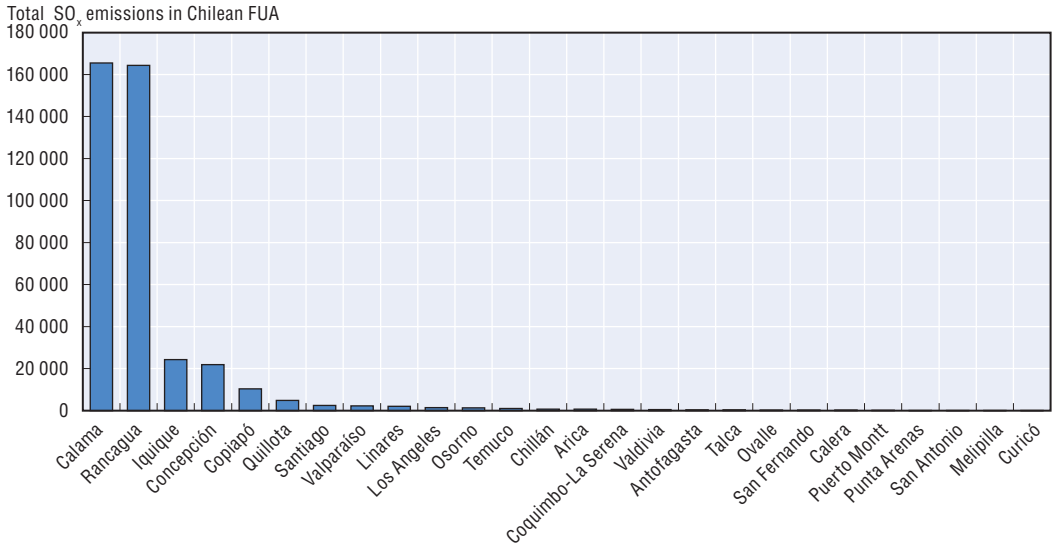


Note: Chillán FUA data does not include San Nicolás; Concepción FUA data does not include Hualquí; Curicó FUA data does not include Rauco; San Antonio FUA data does not include Cartagena and Santo Domingo; Quillota FUA data does not include La Cruz; Coquimbo-La Serena FUA does not include Andacollo.

Source: Ministerio del Medio Ambiente (MMA), (2011), *Reporte 2005-2009 del Registro de Emisiones y Transferencias de Contaminantes*, Gobierno de Chile, Chile. Data provided by the Ministerio de Salud (MINSAL) and Centro Nacional del Medio Ambiente (CENMA), 2009.

Figure 1.35. **SO_x emissions in Chilean functional urban areas (2009)**

Tonnes/year

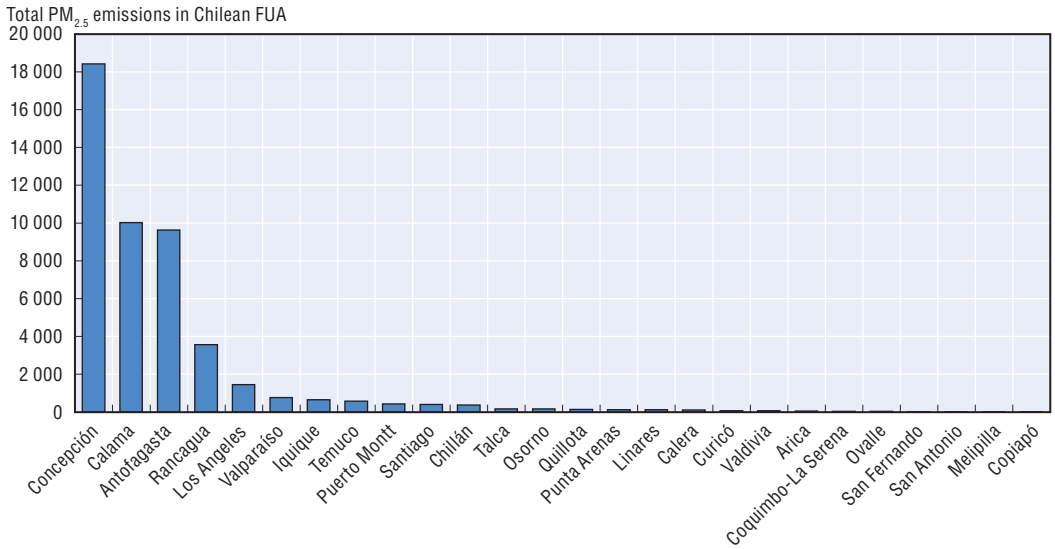


Note: Chillán FUA data does not include San Nicolás; Concepción FUA data does not include Hualquí; Curicó FUA data does not include Rauco; San Antonio FUA data does not include Cartagena and Santo Domingo; Quillota FUA data does not include La Cruz; Coquimbo-La Serena FUA does not include Andacollo.

Source: Ministerio del Medio Ambiente (MMA), (2011), *Reporte 2005-2009 del Registro de Emisiones y Transferencias de Contaminantes*, Gobierno de Chile, Chile. Data provided by the Ministerio de Salud (MINSAL) and Centro Nacional del Medio Ambiente (CENMA), 2009.

Figure 1.36. **$PM_{2.5}$ emissions in Chilean functional urban areas (2009)**

Tonnes/year



Note: Antofagasta FUA data captures its heavy industrialised zone, La Negra; Chillán FUA data does not include San Nicolás; Concepción FUA data does not include Hualquí; Curicó FUA data does not include Rauco; San Antonio FUA data does not include Cartagena and Santo Domingo; Quillota FUA data does not include La Cruz; and Coquimbo-La Serena FUA does not include Andacollo.

Source: Ministerio del Medio Ambiente (MMA), (2011), *Reporte 2005-2009 del Registro de Emisiones y Transferencias de Contaminantes*, Gobierno de Chile, Chile. Data provided by the Ministerio de Salud (MINSAL) and Centro Nacional del Medio Ambiente (CENMA), 2009.

Air pollution is of particular concern for the Santiago Metropolitan Region. The World Health Organisation (WHO) ranks Santiago as one of the most polluted cities[9] in the world, based on its high $PM_{2.5}$ levels in 2006 (WHO, *Outdoor Air Pollution Database*). These high levels of air pollution are primarily caused by the transport sector and are amplified by Santiago's geomorphology and climate. Thermal inversion, especially in winter, causes periods of high air pollution (OECD, 2005).

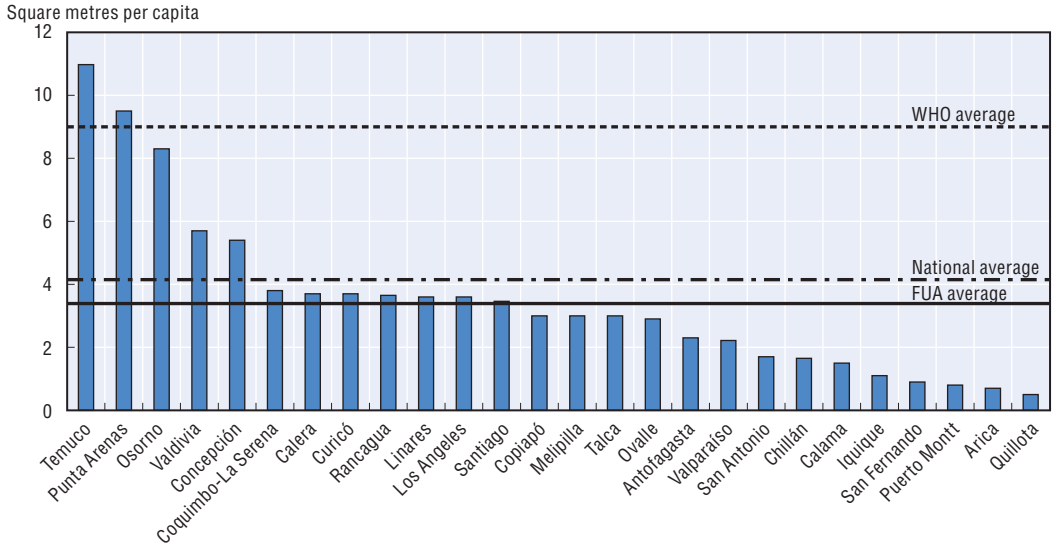
High levels of $PM_{2.5}$ combined with CO_2, provoke health risks, including cardiopulmonary diseases and lung cancer. An estimated 4 000 deaths occur each year in the Santiago Metropolitan Region that can be attributed to long-term exposure to $PM_{2.5}$ (OECD, 2005). In recent years, air quality has improved in the Santiago Metropolitan Region, due to air pollution reduction policies and decontamination plans. Nevertheless, the trends in the Santiago metropolitan area can be compared to those in other Latin American cities, such as São Paulo or Mexico City, that are experiencing rapid growth rates in transport, congestion and high levels of pollution (Bell et al., 2006).

Green areas

Chile's urban residents tend to have relatively little access to green spaces by international standards. On a national level, the availability of municipally maintained green areas averages 4.15 m^2 per capita, well below the standard of 9 m^2 set by the World Health Organisation (WHO) (MMA, 2011b; Kuchelmeister, 1998).[10] In terms of functional urban areas, Arica and Quillota have the lowest availability of green areas, with 0.70 m^2 and 0.50 m^2 per capita respectively, whereas Temuco and Punta Arenas have the most, with 10.98 m^2 and 9.50 m^2 per capita respectively. Punta Arenas and Temuco are thus the only FUAs above WHO standards (see Figure 1.37) (MMA, 2011b).

Figure 1.37. **Access to municipally maintained green areas in functional urban areas**

Green areas (m^2) per capita



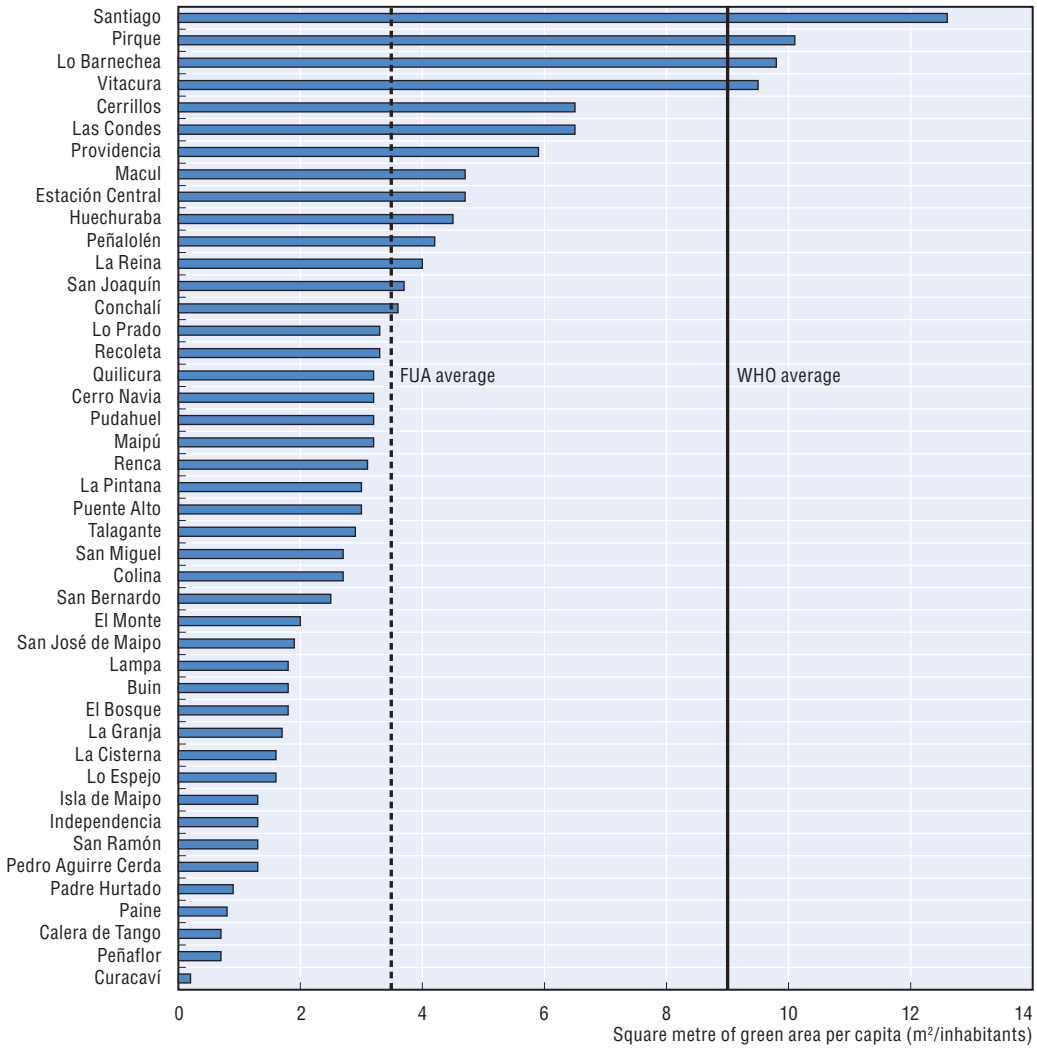
Note: Santiago FUA data does not include La Florida, and Ñuñoa; Rancagua FUA, data does not include Graneros; Coquimbo-La Serena FUA data does not include Andacollo; San Antonio FUA data does not include Santo Domingo; Chillán FUA data does not include San Nicolás; Curicó FUA data does not include Rauco.

Source: Subsecretaría de Desarrollo Regional y Administrativo (SUBDERE), *Sistema Nacional de Indicadores Municipales (Sinim)-Dato Comunal (2000, 2001, 2002, 2004, 2005, 2006, 2007, 2008, 2009)*.

Large disparities in access to green spaces can also be observed within FUAs, for example in the case the Santiago Metropolitan Region (see Figures 1.38 and 1.39). Furthermore, a correlation between accessibility to green areas and per capita municipal own-source revenue can be observed within the Santiago metropolitan area (MMA, 2011b). In general, the Santiago Metropolitan Region has an average of 3.46 m^2 of green space per capita, which is below both the national average (4.15 m^2) and the average for FUAs (3.49 m^2) across Chile (MMA, 2011b; Reyes and Figueroa, 2010). Half of the municipalities in the Santiago Metropolitan Region have less than 3 m^2 per capita, and many of those are low municipal own-source revenue municipalities (e.g. Puente Alto, La Pintada, La Granja, San Bernardo, Independencia). Municipalities such as Santiago, Pirque, Lo Barnechea and Vitacura have the highest availability of green areas, ranging from 12.60 m^2 to 9.50 m^2per capita (see Figure 1.38). Residents of low municipal own-source revenue

Figure 1.38. **Access to municipally maintained green areas in Santiago Metropolitan Region (2009)**

Green areas (m^2) per capita in 2009



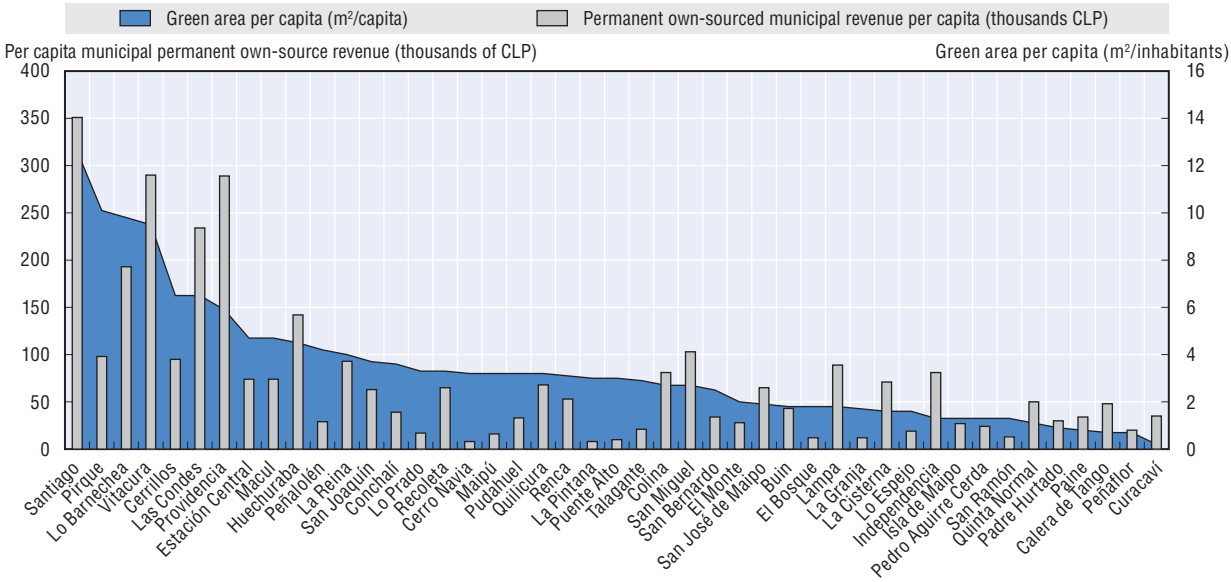
Note: Data not available for La Florida and Ñuñoa.

Source: Subsecretaría de Desarrollo Regional y Administrativo (SUBDERE), *Sistema Nacional de Indicadores Municipales (Sinim)-Dato Comunal (2000, 2001, 2002, 2004, 2005, 2006, 2007, 2008, 2009).*

municipalities tend to have less access to green areas, whereas people living in high-level own-source revenue municipalities have more. According to Reyes and Figueroa (2010), 19.6% of the population in La Pintana municipality (with a low level of municipal own-source revenue) has access to green areas within 300 m of their residential area, while 45.3% have access to the same in San Miguel (medium municipal own-source revenue level) and 74.1% in Vitacura (high municipal own-source revenue level) (see Figure 1.39).

Figure 1.39. **Correlation between per capita municipal own-source revenue and green areas in Santiago functional urban area (2009)**

Year 2009



Source: Subsecretaría de Desarrollo Regional y Administrativo (SUBDERE), *Sistema Nacional de Información Municipal (Sinim)-Dato Comunal (2000, 2001, 2002, 2004, 2005, 2006, 2007, 2008, 2009).*

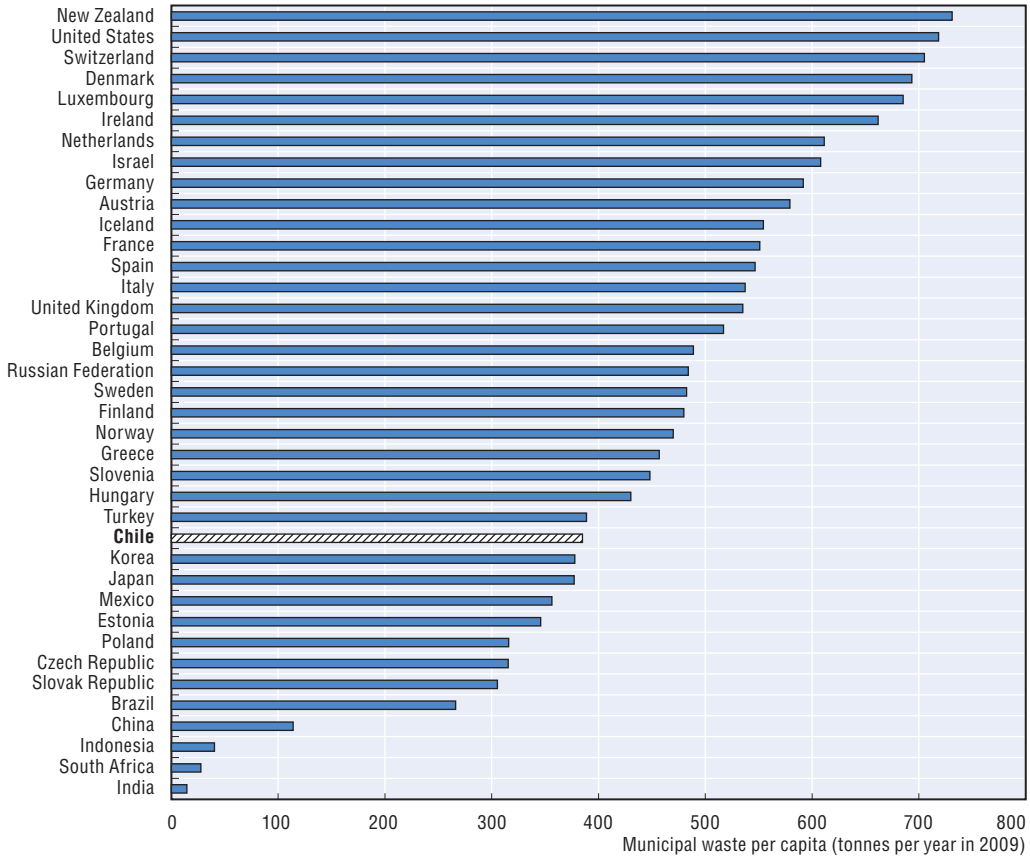
Waste

Chile has a low rate of municipal waste generation per capita compared to other OECD countries. On a national scale, Chile generated 385 kg per capita of municipal waste in 2009. Municipal waste generation rates per year in Chile are relatively low compared with other OECD countries such as New Zealand (731 kg/per capita), Switzerland (705 kg/per capita) or Denmark (693 kg/per capita) and are similar to those in Japan, Korea and Turkey (*OECD Environmental Database*) (see Figure 1.40). Chile's functional urban areas have an average municipal waste generation rate per capita of 362 kg/year. In 2009, Arica and Iquique generated the most municipal waste per capita, with 617 and 613 kg respectively. Ovalle and Copiapó generated the least municipal waste, with 211 and 263 kg/per capita respectively (see Figure 1.41) (CONAMA, 2010).

On a municipal level within the Santiago Metropolitan Region, there are large disparities in municipal waste generation rates. Municipalities with the highest municipal waste generation per capita are Vitacura (764 kg) and Independencia (640 kg). Those with the lowest rates per capita are Curacaví (199 kg), Paine (262 kg) and La Pintana (269 kg) (CONAMA, 2010). To some extent, these disparities can be correlated with levels of per capita municipal own-source revenue in municipalities. Municipalities with high

Figure 1.40. **Municipal waste in OECD and BRIICS countries**

Annual per capita kilogrammes in 2009



Note: Data not available for Australia and Canada. The baseline year is 2009 except for Japan (2008); Indonesia (2007); New Zealand, Brazil, China and South Africa (2006); and India (2000). The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: Municipal waste data is from the *OECD Environmental Database*, 2012. Population data is from the *OECD Demography and Population Database* and the *United Nations Population Prospects 2010 Database.*

municipal own-source revenue (e.g. Vitacura) tend to generate more waste that those with lower municipal own-source revenue (e.g. La Pintana) (MMA, 2011b).

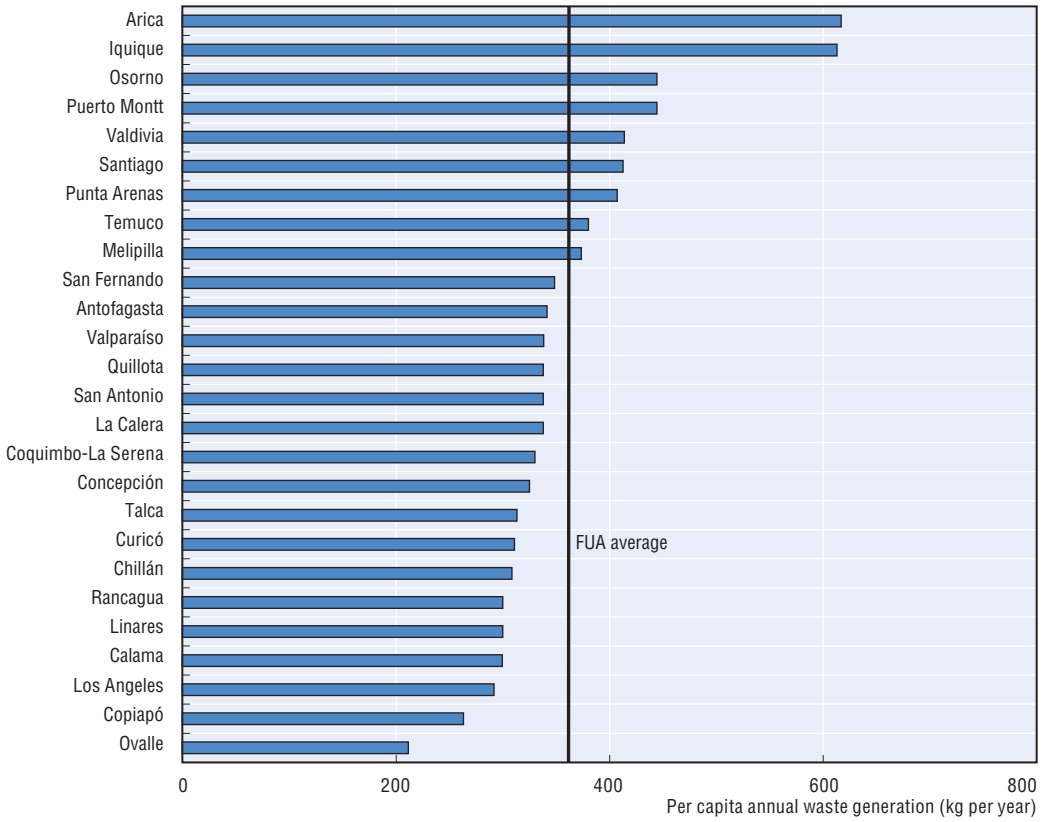
Wastewater treatment quality

In Chile, wastewater management and wastewater treatment quality is satisfactory on a national scale. Chile has high rates of access to potable water and sewage systems. As of 2005, an estimated 99.8% of the urban population had access to potable water and 94.9% was connected to sewage systems. By 2009, 95.6% of the urban population was connected to public sewage. Most investment focuses on expanding the sewage network and wastewater treatment in urban areas (OECD, 2011a).

Wastewater treatment in Chile compares well to other OECD countries. Chile has high rates of water coverage and overall quality of water treatment. Chilean levels of population connected to public sewage and wastewater receiving tertiary treatment can be compared to those in the Netherlands, Switzerland and Denmark among many other OECD countries (see Figure 1.42). Improvement in water quality standards has positively affected the

Figure 1.41. **Municipal waste generation in Chilean functional urban areas**

Annual per capita kilogrammes in 2009



Note: Alhué, María Pinto, Melipilla, San Pedro and Tiltil are not included in Santiago FUA.
Source: Comisión Nacional del Medio Ambiente (CONAMA), *Primer reporte del manejo de residuos sólidos en Chile*, Gobierno de Chile, 2010.

health of Chile's population, by contributing to the eradication of cholera and reducing the concentrations of water pollutants in heavily industrialised regions such as Antofagasta (MMA, 2011b).

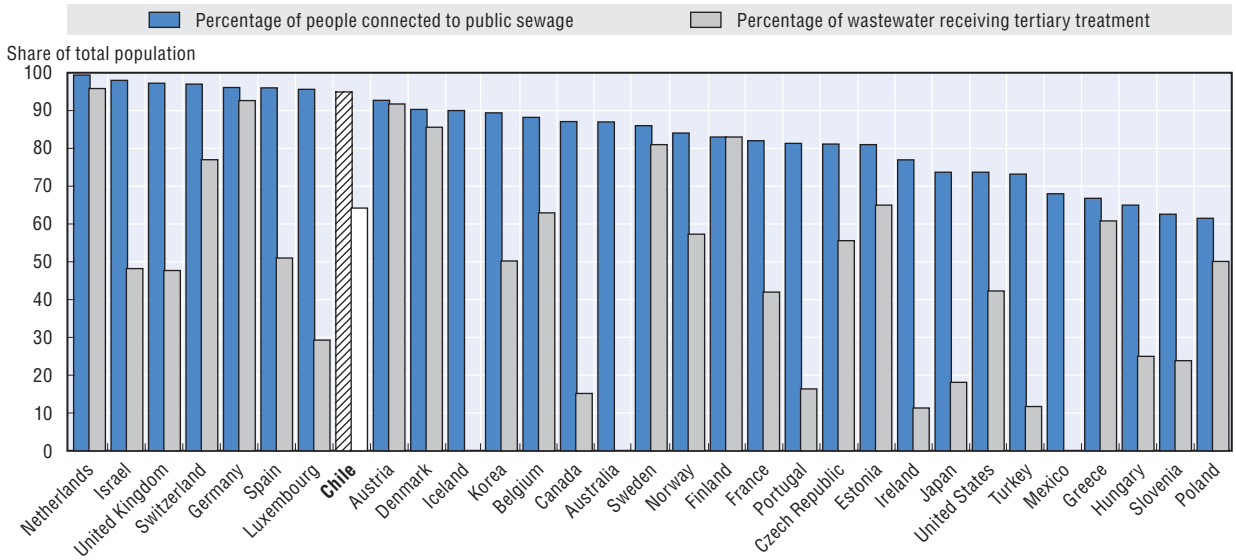
Quality of life matters

The quality of life in Chile has improved significantly over the past decades, and in general, Chileans report greater satisfaction with their lives than the OECD average (OECD, 2012a).[11] Nevertheless, based on the *OECD Better Life Index,* Chile ranks lower than many other OECD members in a variety of areas, including those directly relevant to urbanism, such as housing, income, jobs, education, environment, health and safety. With the exception of outcomes in heath (indicators are based on life expectancy and self-reported health), Chile's outcomes in the other relevant areas do not rise above the lowest quintile (see Box 1.5).

Conclusions

While they have so far been generally successful, Chile's urbanism policies and governance structures may no longer be adequate to address the challenges presented by rapid economic growth and social transformation, or to be able to sustain a strong upward trend in quality of life. Notably, medium-sized urban areas are growing in importance:

Figure 1.42. **Wastewater treatment in OECD and non-OECD countries**



Note: Baseline years are 2009 and 2010, except for the Czech Republic, Belgium, Austria, Spain, Turkey and the United States (2008); Hungary and Sweden (2006); Mexico, Iceland and Switzerland (2005); and France and Australia (2004). The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
Source: *OECD Environmental Database.*

while the population and average annual GDP growth of Chile's metropolitan areas are growing faster in real terms, rates of growth in both areas are significantly higher among the medium-sized, and to a lesser degree, small urban areas. Chile and its cities face several challenging trends that can affect residents' quality of life, including an increase in the urban population that is expected to continue for the next 30 to 40 years, putting pressure on existing resources, space and public services; uneven contribution among cities to national growth; and inter- and intra-urban disparities.

This report examines ways to address Chile's urban challenges in strategic development, land use and planning, housing, public transportation and environmental sustainability. It also explores ways to promote greater integration and coherence in the urban development process, and options for building an urban governance architecture to help promote institutional and policy co-ordination.

Box 1.5. ***How's Life* in Chile?**

Chile has made tremendous progress over the last decade in terms of improving the quality of life of its citizens. Since the 1990s, the country has seen a track record of robust growth and poverty reduction. Notwithstanding, Chile ranks low in a large number of areas, relative to most other countries in the *Better Life Index*.

Money, while it cannot buy happiness, is an important means to achieving higher living standards. In Chile, the average person earns USD 8 618 a year, much less than the OECD average of USD 22 387 a year. In addition, there is a considerable gap between the richest and poorest – the top 20% of the population earns 12 times as much as the bottom 20%.

A corrigendum has been issued for this page. See: http://www.oecd.org/about/publishing/Corrigendum_urban-policy-reviews-Chile.pdf

Box 1.5. ***How's Life* in Chile?** *(cont.)*

In terms of employment, over 59% of people aged 15 to 64 in Chile have paid employment, below the OECD employment average of 66%. Approximately 72% of men are in paid work, compared with 47% of women. People in Chile work 2 068 hours a year, more than the OECD average of 1 749 hours.

A good education is an important requisite for finding a job. In Chile, 69% of adults aged 25-64 have earned the equivalent of a high school degree, below the OECD average of 74%. There is little difference in the figures for men and for women: 70% of men have successfully completed high school and 69% of women. In terms of quality of education quality, the average student in Chile scored 439 in reading literacy, maths and science in the OECD's Programme for International Student Assessment (PISA). This score is lower than the OECD average of 497. On average in Chile, girls outperformed boys by 3 points, less than the average OECD gap of 9 points.

In terms of health, life expectancy at birth in Chile is almost 79 years, one year lower than the OECD average of 80 years.

The level of atmospheric PM_{10} – tiny air pollutant particles small enough to enter and cause damage to the lungs – is 62 microgrammes per cubic metre, considerably higher than the OECD average of 22 microgrammes per cubic metre. This is in contrast to Chile's performance in terms of water quality, where 85% of those surveyed say they are satisfied with the quality of their water, in line with the OECD average.

There is a moderate sense of community and high levels of civic participation in Chile, where 86% of respondents say they know someone they could rely on in time of need, slightly lower than the OECD average of 91%. Voter turnout, a measure of public trust in government and of citizens' participation in the political process, was 88% during recent elections; higher than the OECD average of 73%. Social and economic status can affect voting rates; voter turnout for the top 20% of the population is 92%, and for the bottom 20% it is 87%, slightly narrower than the OECD average gap of 7%.

In general, Chileans are more satisfied with their lives than the OECD average, with 77% of those surveyed saying they have more positive experiences in an average day (feelings of rest, pride in accomplishment, enjoyment, etc.) than negative ones (pain, worry, sadness, boredom, etc.). This figure is higher than the OECD average of 72%.

Chile's ranking in select dimensions of the *OECD Better Life Index*

Dimension	Chile rank (out of 36)	Country ranking immediately below	Country ranking immediately above	Indicators
Housing	**33**	Hungary	Poland	Housing conditions and spending
Income	**35**	Brazil	Turkey	Household income and financial wealth
Jobs	**32**	Spain	Hungary	Earnings, job security and unemployment
Education	**33**	Brazil	Portugal	Educational attainment; student skills; years in education
Environment	**36**[1]	n.a.	Turkey	Air pollution and water quality
Health	**25**	Portugal	Slovenia	Life expectancy and self-reported health
Safety	**34**[2]	Mexico	Estonia	Assault and homicide rates

1. While Chile scores high in water quality, it ranks lowest out of the 36 surveyed countries in air pollution, bringing down the indicator ranking.
2. Despite Chile's low score in safety, it scores a 5, considerably above the lowest score; Estonia scores 6.7 and the lowest-ranking, both Mexico and Brazil, both score 0.8.

Source: Adapted from OECD (2012), My Better Life Index, *www.oecdbetterlifeindiex.org*.

Recommendations for addressing challenging urban trends in Chile

- **Develop a single and clear definition of urban versus metropolitan areas** in order to better guide policy and decision makers.
- **Ensure that growth-oriented initiatives and policies** (e.g. infrastructure investment, active competitiveness policies, education policy and jobs and skills policy), **are equally targeted to medium-sized and small cities** as well as metropolitan areas.
- **Identify whether policy-based responses to poverty growth are needed,** for example by undertaking further research into the underlying causes and determining possible links with domestic migration.

Notes

1. The OECD has classified two levels of geographic units within each member country. The higher level (Territorial level 2/TL2) consists of 362 larger regions while the lower level (Territorial level 3/TL3) comprises 1 794 smaller regions. All the territorial units are defined within national borders and in most cases correspond to administrative regions. Regions at the lower level (TL3) are contained within the higher level (TL2).
2. Life expectancy in Chile is 80.3 for females and 73.7 for males, approaching OECD country averages (United Nations, 2009).
3. In 2007 Chile was one of the Latin American countries with the highest percentage of elderly persons: 8.5% of the population was older than 65; projections for 2050 predict high elderly-dependency ratios (Valenzuela and Rojas, 2012).
4. Defined as the surface area of the territory located within the urban limits destined for urban growth as projected by the Regulating Plan.
5. The urban area is that area within the urban boundaries destined for the development of population centres and current and planned activities, as per the territorial planning instrument.
6. Predominantly urban areas' analysis in Figure 1.18 was performed using thresholds of different size from those used for the Chilean FUA analysis in Figures 1.19 and 1.20. However, the conclusions are not affected, since no FUA in Chile would have left the medium-sized category by adapting the thresholds to those in the analysis carried out by Kamal-Chaoui and Sanchez-Reaza (2012). In addition, FUA analysis for Chile must follow the OECD methodology explained in Box 1.1 for consistency and comparability.
7. The Sigma-convergence indicator is calculated using the standard deviation of logged values of GDP per capita for the municipalities that comprise an FUA. Estimates have been calculated only for the FUAs that consist of three or more municipalities.
8. Air pollution in Chile is composed, among other pollutants, of particulate matter ($PM_{2.5}$), sulphur oxide (SO_x) and nitrogen oxide (NO_x,). These pollutants are mainly emitted by mining and thermoelectric activities in northern Chile; by industrial, transport and residential activities in the Santiago metropolitan area and central regions; and by wood combustion used as the main source of heating (biomass combustion) in the southern area of the country (OECD, 2005; GEO Chile, 2010).
9. In the WHO *Outdoor Air Pollution Database*, Santiago ranks 12th out of more than 500 cities, given its annual means of 31.7 $\mu g/m^3$. Talca comes in 11th, with annual means of 32.8 $\mu g/m^3$.
10. The data taken into account only includes green areas and parks with municipal maintenance. Degraded or abandoned green spaces are not included.
11. Participating countries in the *OECD Better Life Index* include all 34 OECD member countries, plus Brazil and the Russian Federation. Thus, the reported rankings for Chile also take into consideration these two additional countries.

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Chapter 2

Frameworks and sector policies for urban development in Chile

Chile has undergone significant transformation in the past three decades, including growth in its GDP, population levels and urbanisation. This growth has been a key factor in the county's success. Chile's urban and metropolitan development practices have traditionally been sector driven, and today the need for well-integrated approaches to urbanism are increasingly recognised among urban policy makers. This chapter makes the case for such an approach to urban development and management as a means to help reduce inequalities within and between urban areas. It provides an overview of the policy and planning frameworks governing urban development in Chile, and analyses four policy areas with significant implications for national urban programming: land use and zoning, housing, public transport and the environment, particularly with respect to air pollution, green space and the risk of natural hazards.

Introduction

Chile has undergone significant transformation in the past three decades. These changes, highlighted in Chapter 1, include growth in GDP, population and urbanisation. This growth has been a key factor in Chile's success. Over this same period, and around the world, policy makers have also experienced an increase in the complexity and interdependency of the issues they must address. Urban development and management are no exception, and the need for well-integrated approaches to managing urbanism has become ever more apparent. Chile's practices in this area have been governed by a series of discrete instruments and mechanisms that, while appropriate when they were first introduced, may be ill-adapted today to meet the demands of the country's dynamic urban reality. Greater flexibility and a unified approach to urban issues could help improve urban outcomes for residents.

This chapter makes the case for an integrated approach to urban development and management as a means to improve urban outcomes, including reducing socio-spatial segregation, congestion and imbalances in service quality, and to reduce the inequalities within and among urban areas. It begins by reviewing the constellation of urban planning and management documents at the municipal and regional levels and their impact on coherent urban development. This is followed by an analysis of four policy areas with significant implications for national urban programming: land use, housing, transport and the environment.

Chile's framework for regional and urban development planning

The General Law of Urban Development and Construction (*Ley General de Urbanismo y Construcciones*) and its related ordinance (*Ordenanza General de Urbanismo y Construcciones*) set the rules for urban planning and construction. The General Law contains the principles, attributes, responsibilities, rights, sanctions and other statutes governing the institutions, individuals or professionals involved in urban planning, urbanisation and construction. The General Ordinance develops the different regulations regarding administrative procedures, planning processes and relevant technical design standards for urbanisation and building. Technical norms define the technical characteristics related to projects and urbanisation, and construction materials and systems, in order to comply with the standards required by the *Ordenanza General*. The Ministry of Housing and Urbanism (*Ministerio de Vivienda y Urbanismo*/MINVU), through its SEREMI (regional level offices) plays a supervisory role, ensuring that the regulations and norms of the General Law and the Ordinance are met. MINVU is also responsible for proposing modifications to both legal documents.

Urban planning instruments

The General Law establishes three geographical levels of urban planning instruments, each with its own scope, approval processes, minimum required elements and elaboration

requirements: *i)* the Regional Plan for Urban Development (*Plan Regional de Desarrollo Urbano*/PRDU); *ii)* the Inter-municipal Regulating Plan and Metropolitan Regulating Plan (*Plan Regulador Intercomunal o Metropolitano*/PRI and PRM); and *iii)* the Municipal Regulating Plan (*Plan Regulador Comunal*/PRC) (see Box 2.1).

Box 2.1. **Urban planning instruments in Chile**

The Regional Plan for Urban Development (PRDU)

The Regional Plan for Urban Development (*Plan Regional de Desarrollo Urbano*/PRDU) is a non-binding, (i.e. not a statutory), tool that offers a framework for urban co-ordination across individual regions. Within their regions, PRDU aim to co-ordinate urban development, setting out the roles of urban centres, their spatial and functional relationships, connectivity and growth targets. PRDU should include an explanatory memorandum including the conceptual and technical aspects that justify the plan, its objectives, rationale and methodology; a regional diagnostic taking into consideration regional trends, strengths and weaknesses, degrees of occupancy of the territory, interactions between the region's different areas and population centres; and the main planned investment projects of the public and private sector. It should also include guidelines for the allocation of national roads, highways, railways, airports, seaports and international borders; definition of settlements that may require priority treatment; the equipping and requirements of health infrastructure, energy and telecommunications. The MINVU SEREMI are responsible for developing the PRDU, which is then approved by the region's *Intendente* and the Regional Council. In principle, the contents of the PRDU should be integrated into the various municipal Regulating Plans (see below), though in practice this is not always the case (Zegras and Gakenheimer, 2000). In October 2012, three out of 15 regions had a PRDU in place, and an additional four were awaiting approval.

The Inter-municipal and Metropolitan Regulating Plans (PRI/PRM)

Inter-municipal Regulating Plans (*Plan Regulador Intercomunal*/PRI) govern the spatial development of those urban and rural areas that are integrated into an urban unit (i.e. when more than one municipal entity comprises the urban unit). When this unit surpasses a population threshold of 500 000 inhabitants, it is considered a metropolitan area for planning purposes and its spatial development is subsequently regulated by a Metropolitan Regulating Plan (*Plan Regulador Metropolitano*/PRM), a version of a PRI. These spatial plans define the territorial boundaries subject to the planning instrument. Within an urban area, PRI/PRM define the urban boundaries in order to differentiate the urban area from the rest of the area (which is denominated rural); define the classification and characteristics of urban roads; designate land for expressways (*vías expresas*), trunk roads (*vías troncales*), and inter-municipal parks; set rules or standards governing those buildings and structures associated with infrastructure that has inter-municipal impact; set rules or standards that should be maintained by (productive) activities with inter-municipal impact; fix the average and/or maximum densities able to be established by Municipal Regulating Plans (*Planes Reguladores Comunales*/PRC); define land use for inter-municipal green spaces; define areas of risk or zones where building is prohibited at an inter-municipal level (supported by the appropriate studies, PRC can specify or diminish the areas designated as risk or no-construction zones); identify areas that are protected for their natural resources or heritage value. PRI/PRM are prepared by the MINVU's SEREMI in each of the country's 15 regions. The municipalities affected must approve the plan, which also requires approval by the region's Regional Council (*Consejo Regional*) and MINVU. In addition, PRI/PRM must pass an environmental evaluation.

Box 2.1. **Urban planning instruments in Chile** *(cont.)*

The Municipal Regulating Plan (PRC)

Each municipality must have a Municipal Regulating Plan (*Plan Regulador Comunal*/PRC), even if it is part of a PRI or PRM. Municipal Regulating Plans govern the spatial development of a single municipal entity and are developed by the municipality itself. They are subordinate to the PRI in the case of municipalities that comprise a wider urban unit. These plans incorporate different documents and studies, including a review of the socio-economic situation and potential for (industrial) development, as well as feasibility studies for physical expansion, particularly with respect to service delivery. They also articulate the municipality's urban centres in terms of population and growth potential; roadway hierarchies, including access and service roads; parking requirements; zoning plans; principal urban activities; assess the infrastructure capacity of roads, large structures and areas designated as at high risk for natural hazards or requiring protection; identify buildings classified as national monuments and traditional zones (*zonas típicas*); identify historical buildings or zones. Each municipality must ensure that the development (expansion and densification) established by its PRC can be effectively supplied with the necessary public services (i.e. sanitation, transportation, energy infrastructure and other services). The plan is developed and approved by the Municipal Council (*Consejo Municipal*) after a process of public consultation with the community, including public hearings in those neighbourhoods that might be the most affected by the plan, and with the municipality's Council of Civil Society Organisations (*Consejo Comunal de Organizaciones de la Sociedad Civil*). After the local government approves the Plan, it must be approved by MINVU's SEREMI in the region. For those municipalities that are not also part of a PRI, their PRC must be approved by the Regional Council. The modification of a PRC must follow the same administrative steps as its formulation.

Finally, beyond the PRC, municipalities may establish Sectional Plans (*Plan Seccional*). The Sectional Plan is used to define in more detail a specific area of the PRC (e.g. street layouts and widths within a given quadrant or neighbourhood), in order to guide the development for those municipalities without a PRC, or to approve major modifications to zones within an existing PRC.

Source: Government of Chile (2011), *Ordenanza General de Urbanismo y Construcciones*, Ministry of Housing and Urbanism, Santiago, Chile (modifications as of December 2011); Zegras, C. and R. Gakenheimer (2000), "Urban Growth Management for Mobility: The Case of the Santiago, Chile Metropolitan Region", report prepared for the Lincoln Institute of Land Policy and the MIT Cooperative Mobility Program.

These planning instruments, designed in the 1960s, remain static and are not adapted to the current dynamic urban reality. The urban population has increased rapidly since 1950, metropolitan areas and large cities have grown in size, and urban challenges have risen in number and complexity. These changes demand adaptable planning instruments. However, the complex administrative procedures for approving or amending Regulating Plans, and the number of documents required when submitting them, result in lengthy and intricate administrative and political processes, and raise several challenges. In the case of the PRC, the documents to be presented and the number of steps for approval are the same regardless of whether the proposal is a new plan or an amendment to an existing plan. Approximately two-thirds of Chile's municipalities are either developing or amending their plans (see Table 2.1).

The processes to create, modify or renew Regulating Plans (PR) are applicable to all municipalities (see Figure 2.1), and can result in municipalities or metropolitan areas being

Table 2.1. **Status of the Municipal Regulating Plans**

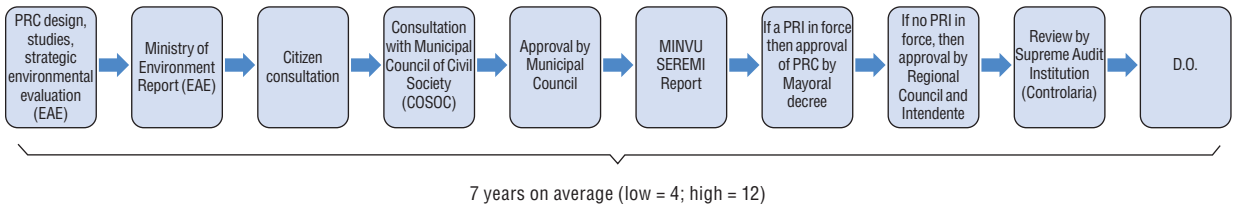
As of September 2012

Status	Number
In force or recently updated	122
Operational but in process of being updated	115
In process of development	97
No PRC	12

Source: Ministerio de Vivienda y Urbanismo (2012), Data from the División de Desarrollo Urbano.

constrained by land-use plans that are no longer appropriate for their territorial reality and could hamper their capacity to realise urban development objectives. For example, urban land-use planning in two of Chile's three metropolitan areas – Santiago and Valparaíso – is regulated by PRs approved more than 15 years ago. Santiago's current PRM was approved in 1994, and modifications presented in 2008 remain under discussion in 2012. In the case of Valparaíso, a new PRM is in the final stages of approval after a preparation and negotiation process that has lasted more than 19 years. The current plan was approved in 1965 (*www.soychile.cl*, 2012). The approval process for a PRC *averages* seven years, often rendering these plans obsolete upon approval. When faced with urgent reconstruction due to an earthquake or other natural disaster, for example, PRC approval processes are significantly streamlined and may be completed within two and a half years (see Figure 2.2). It may be beneficial for Chile to consider streamlining the regular approval process. This could be achieved, for instance, by establishing a mechanism mandating that no approval process takes longer than a specified period of time, or that no plan will be delayed in any one stage of the approval process for more than a given amount of time. Resources and incentive mechanisms, as well as a clear understanding as to why plans can take so long to be approved, would be critical to any sort of reform.

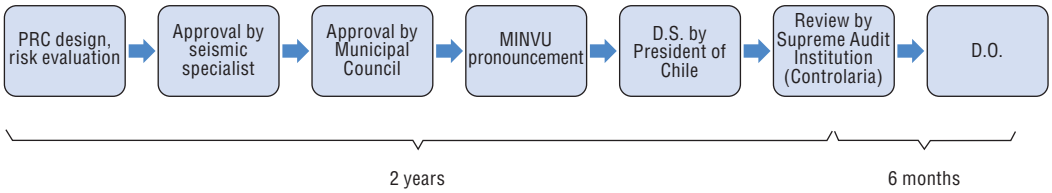
Figure 2.1. **Municipal Regulating Plan (PRC) approval process**



Source: Ministerio de Vivienda y Urbanismo (2012), data from the División de Desarrollo Urbano.

Figure 2.2. **Municipal Regulating Plan (PRC) streamlined approval process**

Post earthquake or natural disaster



Source: Ministerio de Vivienda y Urbanismo (2012), data from the División de Desarrollo Urbano.

In the case of PRI/PRM, there is the additional challenge of obtaining political agreement for a single planning document by the various (and often diverse)

municipalities comprising the urban area, as well as the MINVU SEREMI. Formal co-operation between different administrative units involves time, trust, political consensus and administrative arrangements. The approval process for these instruments requires that the relevant municipalities be consulted and provide a formal opinion on the planning document.[1] However, the incentives for reaching an agreement over a top-down process, not initiated or driven by the local authorities, can be weak.

Without a comprehensive governance structure for areas comprised of multiple local authorities, obtaining municipal agreement on a single plan can continue to present a challenge. In addition, co-operation among municipalities to implement part of any plan has been difficult, due to a history of poor collaboration, and also due to the lack of legal status attributed to bodies formed by associated municipalities. This latter issue is being addressed through new legislation permitting municipalities to associate. The capacity, however, is restricted to association for a specific project, and few municipalities are taking advantage of such an opportunity. This affects the overall co-ordination, management and planning of urban development, particularly in metropolitan areas. As a result of the various challenges, in September 2012 there were 19 PRI/PRM operating, an additional eight operational but in the process of being updated, and 20 in the pipeline (see Table 2.2).

Table 2.2. **Status of Inter-municipal and Metropolitan Regulating Plans**

As of September 2012

Status	Number
In force or recently updated	12
Operational but in process of being updated	8
In process of development	20

Source: Ministerio de Vivienda y Urbanismo (2012), data from the División de Desarrollo Urbano.

At a regional level, the Regional Plans for Urban Development (PRDU) lack sufficient weight to promote and enforce a co-ordinated approach to regional urban development. They are not statutory instruments in and of themselves; they are not linked to sanctions in the case of incompletion; and they do not regulate regional matters such as urban/rural interaction. In addition, regional governments play only a secondary role in their approval (see Box 2.1). This lack of "ownership" at the regional level, together with the ambiguity in planning requirements caused by the legislative process to replace PRDU with a statutory instrument, may be among the reasons why PRDU completion rates have been low. Currently, only 3 out of 15 regions have an approved Regional Plan for Urban Development (see Table 2.3). The implicit problem with these low completion rates is that if, as urban

Table 2.3. **Status of the Regional Plans for Urban Development (PRDU)**

As of September 2012

Status	Number
In force	3
In research	1
In the pipeline	11
No PRDU	1

Source: Ministerio de Vivienda y Urbanismo (2012), data provided by División de Desarrollo Urbano.

land-use planning instruments, PRI and PRC should be anchored in PRDU, where there are no PRDU, there is no higher-level anchor for the various Regulating Plans. At the same time, since PRDU are not statutory, they do not provide an obligatory or stable anchor.

Complementing urban planning instruments with urban management tools for greater planning coherence

The General Law of Urban Development and Construction and its Ordinance, together with the various Regulating Plans (PR), establish the framework for the spatial development of Chilean cities. These instruments provide statutes, rights, restrictions and standards on the use of land and construction. Focused on regulating the building and physical development of cities, they have significantly less influence on other areas important to urban life (e.g. public transport, infrastructure, productive or economic development). Alone, they appear insufficient to ensure an integrated approach to urban development and management. The limitations of such tools, added to the lack of a national urban development policy, make it difficult to generate and ensure co-ordination and coherence in urbanism.

Line ministries with urban responsibilities, such as the Ministry of Public Works (*Ministerio de Obras Publicas*/MOP) and the Ministry of Transportation and Telecommunications (*Ministerio de Transporte y Telecomunicaciones*/MTT) often take these statutory planning instruments into account when planning their policies. For example, MOP takes a self-regulating approach to adapt its plans to the different urban planning instruments: the Organic Law of the MOP requires that the Ministry's Planning Directorate[2] adopt the regulations of territorial planning tools. It also states that the objectives of the national plans of the MOP shall be consistent with territorial plans (Cordero Quinzacara, 2007). Despite such instruments and stipulations, these appear insufficient to ensure policy coherence. Further, there are few to no incentive mechanisms in the urban planning instruments to consistently ensure co-ordinated urban activity at the ministerial level.

Co-ordination and policy coherence in the urban space is necessary. However, it may be unrealistic to expect Chile's urban planning instruments (PRI/PRM and PRC) to serve a co-ordinating function, as this is not inscribed in the General Law that establishes them or the Ordinance that governs them. The Regulating Plans were designed to regulate land use, construction and the physical development of urban areas, and the notion of a planning instrument in Chile revolves mostly around these activities. They were not designed to promote more integrated urban development, programming or service delivery. Thus, a management instrument, one from which the land use plans cascade down, becomes essential for ensuring overall coherence.

Since approximately 2006, Chile's municipalities are responsible for elaborating Municipal Development Plans (*Plan de Desarrollo Comunal*/PLADECO). These plans are the primary instrument for planning, managing and co-ordinating local development. They integrate a diagnosis of the socio-economic characteristics, strengths and challenges of the municipality and identify its main development priorities in such aspects as infrastructure, productive development, education and the environment (see Box 2.2). Given their comprehensive approach, PLADECO represent an interesting management tool to promote coherence between urban development, land-use planning and general economic development.

The various statutory Regulating Plans (PRC/PRI/PRM) should reflect, spatially, the development plans of the PLADECO, and the intention is to ensure alignment between the management and land-planning instruments. However, given that the PLADECO concept

Box 2.2. **The principal orientations of PLADECO**

Chile's Municipal Development Plans (*Plan de Desarrollo Comunal*/PLADECO) represent a key development-planning and management tool for local authorities. Their objective is to contribute to the efficient administration of local governments and to promote the community's economic, social and cultural development. Ideally, PLADECO reflect a strategic vision for the municipality's development and establish the roadmap for achieving this vision. According to Article 7 of the Organic Law of Municipalities, the guiding principles of PLADECO are:

- Participation – the interests of citizens should be taken into consideration through a participatory process in the PLADECO's development.
- Coherence – there should be co-ordination and alignment between the scope and content of PLADECO and the range of public services provided in the municipality.
- Flexibility – the plan should undergo periodic evaluation to permit necessary adjustments and modifications, in line with changes and new challenges confronting the municipality.
- Strategic – the plan should take into account the actions required to satisfy community needs and to promote social, economic and cultural advancement.
- Operational – the plan is the leading instrument for municipal development, translating strategic guidelines and objectives into a multi-annual programme of action.

Source: Subsecretaría de Desarrollo Regional y Administrativo and CEPAL (2009), *Manual de Elaboración del PLADECO*, Santiago, Chile; Municipalidad de Puerto Montt (2012), "Que es un PLADECO?", *www.puertomontt.cl/municipalidad/pladeco/*, accessed 25 October 2012.

was introduced after many of the PR were already established, and the process to amend or renew a PR is lengthy, there are many cases where these two instruments are not yet in sync, and are thus unable to promote the necessary level of strategic coherence and co-ordination in urban management and planning. As municipalities continue to develop their PLADECO, moves to update or renew PRC should be consistent and reflective of the municipalities' development objectives. For those municipalities where land use is regulated not only by a PRC but also by a PRI/PRM, a high degree of vertical co-ordination is needed in order to align the land use planning instruments with the PLADECO.

Building a comprehensive approach to urban development through national-level policies

Aware of the need for a strategic approach to managing its territorial development, Chile has embarked on the significant undertaking of establishing a National Regional Development Policy, a National Urban Development Policy and a National Rural Development Policy. The development of these three policy initiatives is expected to be complete by the end of 2013.

The National Regional Development Policy and the National Rural Development Policy are co-ordinated by SUBDERE, with the Ministry of Agriculture also taking a strong role in the latter. The design process for the National Regional Development Policy includes a diagnostic evaluation and an inter-ministerial consultative committee including representatives from SUBDERE, from the Ministries of Public Works, Housing and Urbanism, Environment, Agriculture, Transport and Telecommunications, National Assets (*Bienes Nacionales*), and from the Chilean Economic Development Agency (*Corporación de*

Fomento de la Producción/CORFO). The intention is to build a long-term vision for the economic, social and environmental development of the territory, and to provide a framework or anchor for the various sectoral measures, including policies, programmes and plans. The policy's elaboration is supported by a series of workshops led by regional authorities, in order to validate the diagnostic, and also to build stakeholder participation (e.g. of regional authorities, the private sector and civil society) (SUBDERE, 2012).

Chile has not had a general urban development policy that provides inter-institutional coherence in the urban development process since the last policy was repealed in 2000.[3] To remedy this, Chile is also undertaking a much-needed initiative to articulate a National Urban Development Policy (*Política Nacional de Desarrollo Urbano*/PNDU). Aware of the challenges facing urbanism due to the lack of such a national-level policy, in 2012 Chile's President established a Presidential Advisory Commission on National Urban Development Policy (*Comisión Asesora Presidencial, Política Nacional de Desarrollo Urbano)* to launch the PNDU's development. The Commission is supported by five thematic sub-commissions[4] and an inter-ministerial roundtable.[5] This process is co-ordinated by MINVU, and an initial draft of the policy is expected to be complete in the first quarter of 2013.

The PNDU is intended to provide a framework for aligning the various urban development instruments. It will also allow a reformulation of various laws and regulations – including to the General Law of Urban Development and Construction – in line with national guidelines for the occupation and administration of the territory. The development of this national policy is a good opportunity to promote an integral approach to urban development and management, and to update, improve and enhance the efficiency of the urban planning instruments, including approval processes.

The PNDU's development includes a process of regional consultation, and actively involves the MINVU SEREMI. It is important that the PNDU be developed with wide consensus from the relevant urban actors. Ensuring an active and wide-ranging process of consultation with key urban stakeholders (e.g. the Ministries of Public Works, Finance, Environment, SUBDERE, regional and local governments, the private sector, civil society and citizens) is crucial for this new policy to have broad authority, prestige and acceptance.

This emphasis on overall territorial development, together with the focus on urbanism, will significantly enhance urban development and management in Chile. However, the success of these policies may depend on Chile's capacity for strategic and institutional co-ordination in territorial matters. Each of the three policies – regional, urban and rural – appear to be thought of and developed as discrete territorial initiatives rather than synergistic policies that feed into a strategic vision for territorial development (i.e. how Chile wishes the territory to develop physically, economically, socially and culturally in the next 10, 15 or 25 years). Given that the National Regional Development Strategy appears to be developing such a territorial vision, more coherent policy initiatives could be built if the National Urban Development Policy and the National Rural Development Policy were anchored in the regional-level initiative.

Together with strategic co-ordination, institutional co-ordination is key. Given that the initiatives are simultaneous, mechanisms to ensure dialogue and collaboration among the various responsible actors are critical. The established inter-ministerial committees are a good start, particularly if they can help champion mechanisms and incentives to ensure that urban development is coherent with regional ambitions as the policies are implemented. One of the factors inhibiting greater co-ordination may be the fragmentation

of territorial responsibility between SUDERE for all matters concerning regional and rural development and MINVU for all matters regarding urban development. If the objective is to provide a framework for an integrated approach to territorial development, given Chile's history of strong sectoral management combined with weak cross-sectoral co-ordination, it may need to consider placing the responsibility for such development – including urbanism – under a single roof. This was an approach recently taken by Poland to resolve a similar type of fragmentation (see Box 2.3). A move in this direction by Chile would require strong political support and clear consensus.

Box 2.3. **Improving territorial co-ordination: The case of Poland**

Until recently, responsibilities for policies that affected urban areas was scattered throughout Poland's central government, with separate ministries administering key components of what needed to be an integrated urban policy. Housing, urban policy and municipal infrastructure were the responsibility of the Ministry of Infrastructure, which needed to co-ordinate with the Ministry of Internal Affairs and Administration, responsible for public administration matters, including supervision over self-government units (municipalities/*gminas*), counties (*powiats*) and self-government regions (*voivodships*). In addition, housing, urban policy and municipal infrastructure, as essential elements in urban planning, simultaneously needed to be co-ordinated with national level spatial and regional policy programming housed in the Ministry of Regional Development. The situation would become even more complex when such matters as environment, economy, education or transport and communications were taken into account.

In order to build greater coherence, facilitate co-ordination and ensure a more integrated approach to urban policy, Poland chose to merge responsibilities for urban policy into the Ministry of Regional Development, on a basis adopted by the government in the *2020 National Strategy for Regional Development: Regions, cities, urban areas*. The decision for this institutional shift was approved by the government and Parliament, and the new law will be in force as of 1 January 2013. The Ministry of Infrastructure remains in charge of housing and local planning.

The merging of responsibilities for urban policy with those of regional policy has given a new impetus to urban planning: it is now regarded as an indispensable element of overall socio-economic and spatial development policy, which must be integrated and co-ordinated at the national, regional and functional levels (e.g. with respect to metropolitan areas). The move in this direction was welcomed by the national government, which had been looking for a more integrated approach to territorial matters, as well as by local and regional authorities expecting more efficient co-ordination of public policies and a genuine partnership between the different levels of public administration.

The Ministry of Regional Development is currently co-ordinating the preparation of a new Urban Policy. This document is expected to provide answers to longstanding issues, including governance in the functional areas of large cities (i.e. metropolitan areas); co-ordination of investment financing coming from different sources; improved co-ordination in municipal, metropolitan, regional and national socio-economic programming and spatial planning.

Source: OECD (2011), *OECD Urban Policy Reviews, Poland 2011*, OECD Publishing, Paris, doi: *10.1787/9789264097834-en*, and information provided by the Ministry of Regional Development.

Strengthening regional capacity in territorial planning and management

There are a number of instruments at the regional level that impact urban development. Among these are the statutory Regional Plans for Urban Development (*Planes de Desarrollo Urbano*/PRDU) discussed earlier; the regionally developed, non-statutory Regional Development Strategies (*Estrategia Regional de Desarrollo*/ERD); and the Regional Plan for Land-Use Planning (*Plan Regional de Ordenamiento Territorial*/PROT), which will slowly replace PRDU.[6] Care needs to be taken that such a series of unrelated or semi-related plans do not promote further incoherence, overlapping jurisdictions or a selective process for adoption and implementation.

Regional Development Strategies[7]

In 2007, a regional strategic planning competence was devolved to Chile's regional governments (*Gobierno Regional*/GORE).[8] This led to the establishment in 2009 of a regional planning division within each GORE, dedicated to elaborating comprehensive, long-term strategies for their region's growth and development. Designed by regional governments, these Regional Development Strategies (*Estrategia Regional de Desarrollo*/ERD) are well placed to take into account territorial realities and regional priorities, and to promote greater coherence in regional planning. However, because they are not statutory, the policies and sectoral investments of national ministries and SEREMI are not required to follow the development guidelines set in the ERD. National policies and programmes will sometimes refer to these but rarely use them as a guideline. This weakens their potential effectiveness as an instrument to align sector and regional priorities, as they are not statutory and thus non-binding to line ministries and SEREMI. The current absence of a national-level territorial strategy also leaves ERD without an anchor in higher-level objectives. Finally, they are not directly linked to funding streams, so their implementation is tied to annual regional budget capacity, which depends on central-level grants. This can be problematic for designing and undertaking long-term development initiatives. Despite these challenges, ERDs are well positioned to develop and implement an appropriately place-based vision for regional development. By 2012, most regional governments had increased their involvement in regional planning, and all but four regions among these have defined their ERD.

The Regional Plans for Land-Use Planning

The recent launch of Regional Plans for Land-Use Planning (*Planes Regionales de Ordenamiento Territorial*/PROT) offers another possibility for improving coherence between economic and spatial planning at the regional level. The main goal of the PROT is to give a spatial dimension to implementing ERD objectives. In November 2010, SUBDERE, MOP and MINVU signed a co-operation agreement to transfer the responsibility of designing regional land-use plans to regional governments. The intention behind this shift in competence was to enhance the role of regional governments in designing their spatial planning strategy, and to generate a closer connection between spatial planning and overall regional development planning instruments. The PROT also intend to tackle issues related to sustainable urban development strategies and the management of watersheds and coastal areas, whose implementation requires cross-sectoral co-operation and municipal input. These are developed by the regional governments in consultation with the region's municipalities,[9] and ought to cascade down from the ERD. PROT design and implementation requires co-ordination with other planning and implementation

instruments, such as the Municipal Regulating Plans (*Plan Regulador Comunal*/PRC) and the Inter-Municipal Regulating Plans (PRI) regulating municipal urban land use within an urban area. At least four main inter-related components of analysis are to be integrated within a PROT: the urban system, rural system, coastline system and watershed system. The Plan should also integrate a natural risk component. By mid-2012, 14 out of the 15 Chilean regions had formulated or were in the process of elaborating their PROT. Like the ERD, however, PROT are not statutory, and are not linked to a broader socio-economic development strategy for the territory. Thus, their ability to effectively address the challenge of co-ordinated regional and local planning remains in question.

Building coherence among regional and urban development instruments

The ERD, PROT and PLADECO have strong potential as co-ordination mechanisms for regional and urban management and planning. They bring co-ordination and management closer to the functional urban area via the GORE. However, they do not actively require horizontal co-ordination among ministries, SEREMI or urban municipalities, and vertical co-ordination may also remain a challenge. This said, the national government could, at a minimum, better define the role and relationship of the various planning documents. To improve planning coherence, a clearer definition of the interaction between regional-level strategic and planning instruments (i.e. ERD and PROT) and their municipal level equivalents (i.e. PLADECO and the various Regulating Plans) is needed. This means improving the interaction and co-ordination between regional and municipal authorities, as well as between regional government and line ministries and their SEREMI. Finally, it is important to continue building regional-level capacity in planning, ensuring that the links between ERD and PROT are clearly understood and implemented.

The government could go even further and re-evaluate the existing number of instruments, since the parallel existence of planning documents may be generating overlap and potential redundancies. For example, PROT have not yet substituted Regional Plans for Urban Development (PRDU). As mentioned, only 3 regions have operative PRDU and 11 have a PRDU in the pipeline. In the meantime, 14 out of 15 regions have established PROT. Not only does this mean double planning, but it calls into question prioritisation – i.e. which plan is given precedence for implementation in those cases where PROT and PRDU have both been approved. Given the similar aims of both planning documents and the weaknesses of the PRDU (a top-down development process with complex and long approval and amending processes and hence limited flexibility), it may be wise to redirect the focus of regional energies from developing a PRDU to developing and/or implementing the PROT.[10] This could help address the problems of overlap as well as an inefficient use of scarce resources – financial, human and infrastructure. Once the PROT are legislatively approved, the problem may be resolved, but the current potential for resource dilution remains valid until such a time.

Strengthening urban development and management outcomes

Under the tight administrative, fiscal and regulatory framework of the central state, sub-national actors remain largely bound by national guidelines. In recent years, Chile has undertaken several decentralisation reforms. However, most of the public programmes and investments to promote urban or general economic development in regions and municipalities are still largely designed or financed by the national level (OECD, 2009).

Sub-national actors have a limited role in the design and co-ordination of urban planning documents. MINVU, through its SEREMI, is responsible for developing the PRDU

as well as the PRI/PRM. Both must be approved by the Regional Council. Historically, Regional Governments have shown a lack of interest in PRDU, possibly because of their limited role in PRDU development (Rufián Lizana, 2009). Municipalities normally play a secondary role in the PRI/PRM, though they do lead the development of municipal regulatory plans (PRC), under the supervision of MINVU SEREMI. Moreover, any regulation approved in a PRI/PRM that may contradict regulations in a PRC will take priority and will automatically be integrated into the municipal-level plan. This not only indicates the limited role and influence that municipalities have on the development of their territories, but reflects the low level of local management autonomy.

Further development of the urban planning process is also challenged by a lack of financial autonomy. While it is a potentially powerful management and planning tool, the PLADECO still has minor influence in guiding local economic development (Fuentes et al., 2007). A 2004 survey reports that only in a limited number of cases has the PLADECO been considered an instrument capable of guiding strategic municipal-level outcomes or the allocation of budgetary resources (Mas Voces, 2005; Valenzuela, 2006). The challenges are due at least in part to the centralised administrative and financial system in Chile. Local governments in Chile depend largely on central government transfers and have limited sources of own-revenue, leaving few resources available for additional investment measures. Only the wealthier localities can afford to use their own-source revenue to invest in local economic development initiatives (OECD, 2009). This high dependence on external sources for financing makes creating a close link between local planning and local investment portfolios quite complex.[11] Central-level funding for development or other municipal initiatives is provided for individual projects rather than for comprehensive plans, calling into question the ability to implement an integrated approach to municipal planning.

The same lack of integration between planning requirements and financing mechanisms is also evident at the regional level and makes it difficult to realise and enforce regional strategies. Regional governments do not have an independent budget to carry out regional investment. Rather, investment for regions follows two main channels: sectoral investments by the line ministries and "regionally defined investments" funded by the National Fund for Regional Development (*Fondo Nacional para Desarrollo Regional*/FNDR). Regional governments select a portfolio of projects (not comprehensive plans) to be financed by the FNDR.[12] However, this fund is also available to municipalities that submit project proposals, most of which are oriented to financing basic local infrastructure and services in order to make up for revenue shortfalls.

The lack of financial and fiscal autonomy and flexibility at the sub-national level renders it difficult to achieve territorial synergies. From a municipal perspective, requests for FNDR funds must pass through a complex set of filters that can vary depending on the project's size. Larger projects, for example, may pass through regional governments, the Ministry of Social Development's SEREMI, and the Ministry of Finance, while smaller ones may only go through the regional government and one SEREMI (generally that of Social Development). The process lacks the flexibility and speed necessary to meet certain municipal demands for investment in basic services. From the regional perspective, the FNDR portfolio largely supports the sum of local demands rather than the integration of different regional initiatives attached to the regional development strategy. In addition, because requests for FNDR funds are subject to *ex ante* analysis on a project-by-project basis by national level actors (including SEREMI),[13] it is very difficult to achieve synergies between investment projects (OECD, 2009).

The ability to champion an overall view of regional needs and opportunities should be strengthened in order to realise such synergies. The GORE Planning Divisions might play a key role to this effect and could be supported by their investment units, established to evaluate if projects support the realisation of ERD initiatives. There are indications that regional portfolios increasingly integrate projects that involve two or more municipalities in the region.[14] However, as long as municipalities have insufficient resources to finance the execution of their main devolved competences, a need to use regional development resources for financing basic local investment and maintenance requirements can persist, making it more difficult to finance the overall development priorities defined in the regional strategies.

Initiatives to improve national/sub-national interaction

Aware of the importance of including a place-based approach to national urban policies, line ministries involved in urban development issues have launched various initiatives aimed at strengthening the co-ordination between national and sub-national planning priorities (see Box 2.4).

Box 2.4. **Improving national and sub-national collaboration in urban development and management in Chile**

The **Strategic Urban Plans** (*Planes Urbanos Estratégicos*) are a MINVU-led initiative that build co-operation among MINVU SEREMI, regional governments and municipalities in order to integrate a comprehensive portfolio of urban development projects in specific cities. The plan includes a diagnostic stage of the cities' main challenges, and a subsequent proposal for a portfolio of projects to be implemented with a long-term perspective. This tool was created after the 2010 earthquake to improve the co-ordination and effectiveness of urban reconstruction efforts. It guided and gave coherence to the reconstruction of severely affected localities. Projects are financed through various sectoral sources (primarily from the MINVU and MOP) and the FNDR. There were 138 strategic urban plans carried out: 111 urban renewal plans (*Planes de Regeneración Urbana*, PRU) of small- and medium-sized cities, and Sustainable Reconstruction Plans (*Planes de Reconstrucción Sustentable*, PRES) in major urban centres. This urban planning framework integrates national and sub-national actors, and its benefits could extend beyond the reconstruction work. There are currently 62 projects to implement in additional localities. MINVU´s aim is for 60% of the country's municipalities with more than 5 000 inhabitants to operate under the umbrella of this strategic planning tool.

The Ministry of Public Works (MOP) is developing long-term participative regional plans, the **Regional Plans of Infrastructure and Water Resource Management** (*Planes Regionales de Infraestructura y Recursos Hídricos*). These plans aim to organise the activities and investment of the MOP in each of the regions over a ten-year term, taking into account each region's specific potential. The planning process is led and co-ordinated at the regional level, and approved at the national level. Plans are elaborated giving consideration to the regional development strategy and with the participation of different public and private actors in the region (including the *Intendente*, the regional government, mayors and private-sector representatives). The first two plans were launched in December 2010 as a pilot project in the regions of Los Ríos and Arica Parinacota.

Box 2.4. **Improving national and sub-national collaboration in urban development and management in Chile** *(cont.)*

The Ministry of Transportation and Telecommunications (MTT) has developed the **Model Cities Project (*Ciudad Modelo de Transporte*)** to improve public transport and urban connectivity. The initiative seeks to complement current sectoral plans with a strategic vision for transport (specifically public and non-motorised) in the urban area. They are also incorporated into Master Transportation Plans (*Planes Maestros de Transportes*/STU). The Model Cities Project is managed by a board headed by the regional *Intendente*, and includes representatives of the SEREMI of the MOP, MINVU, MTT, as well as the relevant municipality. The programme starts with a participative diagnosis that takes into consideration such local development instruments as ERD, PROT and PLADECO, and in which stakeholder representatives define a long-term vision and objectives for the city's transport network. Once this is set, research is undertaken to define the strategy and determine which key public transport projects can help achieve the articulated vision. The programme has been developed in the cities of Antofagasta, Concepción, Copiapó, Puerto Montt, Talca and Valdivia. The intention is to introduce the initiative in the capital cities of each region.

Source: Ministry of Housing and Urbanism (2012), presentation to the OECD; Allard, P. (2010), "Plan de Reconstrucción: Chile Unido Reconstruye Mejor" Dirección Ejecutiva de Reconstrucción MINVU, Seminario Fundación País Digital, *www.paisdigital.org/documentos/presentacion_pablo_allard.pdf*; Contrucci, P. (2012), "Planes Maestros de Reconstrucción y Gestión Urbana", presentation delivered for "Planificación urbana y riesgos naturales", Institute of Urban Studies, Universidad Catolica de Chile, *http://cplanificacionyriesgo.files.wordpress.com/2012/01/contrucci-21-01-2012.pdf*; Ministry of Transport and Telecommunications (2012), "Minuta Informativa Programa Ciudad Modelo", Subsecretaría de Transportes, Santiago, Chile; and Echenique Talavera, M. (2011), "Ciudades Modelo de Transporte", presentation for the Ministry of Transport and Telecommunications, Concepción, Chile.

These planning models represent a clear step forward in terms of strategic and participative planning, and involving sub-national actors in the formulation of urban development policies. The Strategic Urban Plans and the Regional Plans of Infrastructure and Water Resource Management involve regional and local actors in the design of the plan and the strategic projects to be carried out. In the case of the projects, it recognises the importance of adapting the plan to the Regional Development Strategy. These initiatives also represent a breakthrough at the planning level, as they include a long-term strategic vision to align and prioritise projects and investments, moving beyond the traditional one-year budget-driven approach.

The degree of co-ordination and interaction between these plans and the regional and local strategies is still uncertain, however. The Regional Plan of Infrastructure and Water Resource Management and the Model Cities Project both reference the need to co-ordinate with the Regional Development Strategy. However, all of these sectoral initiatives develop their own diagnosis instead of using the diagnosis elaborated in regional and municipal development strategies, indicating that there is still room for better alignment and interaction between national and sub-national planning instruments.

The role of sub-national actors remains, in some cases, secondary. Local and regional government representatives are more often involved in approving plans and models previously decided upon by the national actors than in actively participating in the definition of these plans. For example, the Model Cities Project includes municipal representatives on the board, but the presidency of the board is assigned to the representative of the central government in the region, the *Intendente*. Encouraging a more

active participation of sub-national actors in these initiatives would help reflect specific territorial needs and realities, and secure local actors' buy-in and support for such central government initiatives.

Conclusions

The urban development process in Chile lacks a coherent approach that can generate complementarities between the different actors involved in the process. In the absence of a national urban policy, the General Law of Urban Development and Construction and the different planning documents have acted as the main guiding framework. The complex process for approving or amending these documents has left more than half of Chile's municipalities – and among them two of the most important metropolitan areas, Santiago and Valparaíso – without an updated regulatory plan, although those already established remain in force. Legally, these instruments are focused on regulating the building and physical development of cities. This helps explain why they have less influence in areas such as public transport, infrastructure and economic development, and are not well adapted to ensure policy coherence. In practice, the primary line ministries involved in urban policy tend to operate without consulting one another and on occasion at cross purposes.

Recommendations for enhancing urban planning and management frameworks in Chile

- **Streamline the PRC/PRI/PRM approval process.** This can include a mechanism whereby no approval process takes longer than a specified period of time, or no plan will be delayed at any one stage of the approval process past a given amount of time. Establishing any new process will require resources and incentive mechanisms to ensure that current reasons for delays are not relegated to another stage of the process. It can also mean more clearly defining the roles and responsibilities of the different actors in the process.
- **Build greater territorial policy coherence at the central government level by placing responsibility for territorial development – regional, urban, and rural – under one ministry.** This can help overcome difficulties in institutional and strategic co-ordination for territorial development and management. It could also help create the institutional framework necessary to promote alignment between a long-term territorial development strategy and the territorial policies (regional, urban and rural) that can realise strategic objectives. Such a move could also help address problems of central level co-ordination among ministries with urban responsibilities.
- **Build coherence among urban planning and management documents,** for example by better defining their role and interaction, and by re-evaluating them for overlap and potential redundancies.
- **Give sub-national governments (regional and local) a greater role in shaping their development process.**
  - Better incorporate local and regional government participation in the development of urban planning documents, particularly PRI/PRM and regional plans, as well as the nationally defined sectoral programmes for urban development.
  - Reinforce regional and municipal/urban development strategies (ERD, PLADECO), building capacity and developing incentives to ensure appropriate linkages among them, and addressing resource gaps.
  - Set a regionally based strategic planning agenda as a guiding framework for sectoral initiatives in each region.

Central-level horizontal co-operation needs to improve. Each of the ministries involved in urban issues has developed its own territorial participative plan. These various plans and projects introduce an innovative framework for vertical co-ordination and for promoting the participation of sub-national actors in national urban planning. However, with the exception of MTT's Model Cities Project, the plans do not support central-level horizontal co-ordination, as other relevant national institutions are not part of the planning process. Moreover, the multiplication of sectoral plans can generate duplication and overlapping of efforts as well as confusion among the sub-national actors that are called upon to participate in parallel but not complementary urban planning processes. Overall, this makes it more difficult to generate an integral view of urban development. Better co-ordination among the territorial plans of MINVU, MOP and MTT would contribute to generating complementarities and synergies.

Another characteristic of the approach to urban development is the limited role of local and regional governments. Most of Chile's urban and economic development policies are designed at the national level, with the sub-national actors playing a limited role in the design of urban planning documents. While they have the devolved competence to develop local and regional development strategies, they lack the financial autonomy needed to make the investment decisions required to implement the strategies' objectives. At the same time, the fact that these strategies are not part of a strategic framework and are not linked to the national investment process limits their influence on national policies and approaches. Recently, some programmes and policy tools have been featuring a more holistic and co-ordinated approach to urban development, but, potentially with the exception of the Model Cities Project, these initiatives either promote horizontal co-ordination (regional plans) or vertical co-ordination (Strategic Urban Plans, Regional Plans of Infrastructure and Water Resource Management), but rarely both.

Elaborating policies integral to a national urban development strategy

There are several policy areas that have an immediate impact on the quality of life of urban residents, among them are land use, housing, transportation and environmental sustainability (e.g. congestion, pollution and vulnerability to natural disasters). These policy areas are often – and logically so – approached as sectoral concerns by specific line ministries. However, they are cross-sectoral in nature, and within an urban context, they form part of an integrated urban system. Urban public policy interventions ideally should be designed for and reflective of this dynamic relationship. Chile's urbanism actors are aware of this need, but there are few mechanisms to support such a practice, and each sector appears to strike off on its own. Policies in land use, housing, transportation and sustainability could be strengthened if an integrated approach to their development and implementation were adopted.

Land-use policies

Land-use policies in Chilean cities will play a fundamental role in the success of a vision for national urban development, as they provide the conditions for cities' urban form. The current land-use planning system could better contribute to efficient urban development if the zoning system were made more flexible; if infill development was more strongly incentivised; and if there were a national framework for designating and developing natural-hazard risk zones in urban areas. Revisiting these policies is an important step in creating and implementing a national urban vision. This section reviews

the existing policies for managing land use and urban expansion, and the impact of these policies on urban form and development. It then examines relevant practices in OECD countries, and recommends policy changes that national policy makers may wish to consider when designing a national urban policy framework.

Land-use planning instruments and their limitations

As discussed earlier in this chapter, the main instruments for managing urban land use in Chile are the various Regulating Plans (*Plan Regulador*/PR). This may take the form of a Regulating Plan on the level of a municipality (*Plan Regulador Comunal*/PRC), two or more municipalities (*Plan Regulador Intercomunal*/PRI) or a metropolitan area (*Plan Regulador Metropolitano*/PRM). The Regulating Plans separate municipalities into distinct land-use zones (e.g. housing, industrial and services), each with their own set of land-use rules, including density and building height restrictions. The extent of urban development in a municipality is delimited by an urban boundary (*límite urbano*), which separates the areas that are available for urban development from the areas that are not (MINVU, 2012). In the Santiago metropolitan area, this urban boundary can be updated and extended by applying one of three conditional urbanisation designations to areas outside of the urban boundary: Conditional Urbanisation Zones (*Zonas de Urbanización Condicionada*/ZODUC), Priority Urbanisation Areas (*Áreas de Urbanización Prioritaria*/ADUP), and Conditional Urban Development Projects (*Proyectos de Desarrollo Urbano Condicionado*/PDUC) (Henrichs et al., 2009). These conditional urban developments do not include land-use zones but must provide their own infrastructure and basic services (SERPLAC Santiago, n.d.). The primary exception to restrictions on building outside of the urban boundary is found in Article 55 of the General Law of Urban Development and Construction (*Ley General de Urbanismo y Construcción*), which allows certain land uses outside urban boundaries, including social housing, services, infrastructure and industrial uses.

One main criticism of land-use policies in Chile is that the zoning system in the PRs unnecessarily restricts urban development. For example, the current system of zoning has been seen as an obstacle for new development, and zones tend to become obsolete more quickly than PRs are renewed (Peterman, 2008). Others have indicated that the zoning system limits opportunities to redevelop under-utilised areas within urban boundaries for new types of uses, such as multi-family housing (Trivelli, 2011).

Another key criticism of land-use policies in Chile is that the urban boundaries allow for development outside the boundaries without adequately ensuring services to those developments. The pressure to develop beyond the urban boundary has contributed to the rise of conditional urban developments in the Santiago Metropolitan Region, which may undermine city-wide urban development strategies (Trivelli, 2011). In addition, the demand for social housing, combined with the exemption in Article 55 of the General Law of Urbanism and Construction for constructing social housing outside urban boundaries, has resulted in a clustering of low-income residents at the urban fringe. While these social housing developments must provide access to basic services, they are not required to contribute to transport and education infrastructure. Because of this, residents of social housing on the urban periphery may face difficulty accessing employment and schools. Reliance on exceptions to urban boundaries thus has resulted in inefficient delivery of public services, and increased segregation between low-income and high-income households (Henrichs et al., 2009). A solution to unserviced development on the urban fringe would be to increase development on vacant or underdeveloped lands within urban

boundaries. This is known as infill development. However, while infill development is allowed in Chilean cities, private-sector developers, which account for 80% of urban investment, tend to find greater returns on investment in undeveloped land outside urban cores.

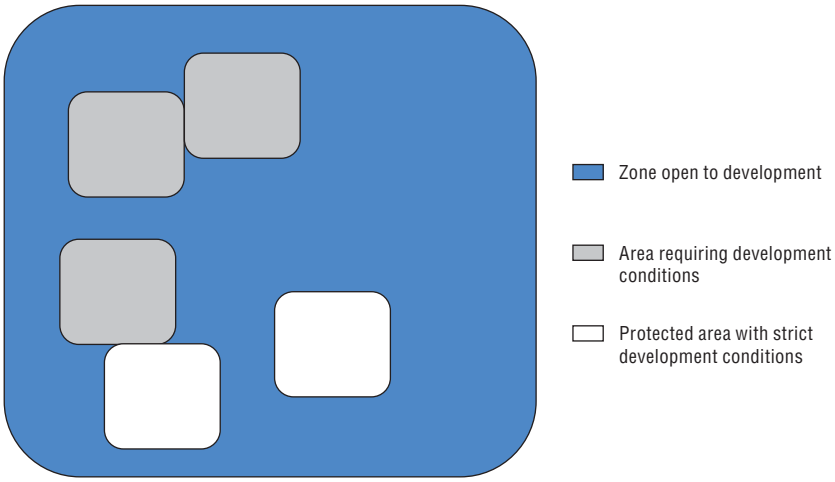
Optimising the tools available for land-use zoning in Chilean cities

A number of instruments are available to Chilean cities to overcome the challenges posed by the zoning system and the tendency to build on the urban fringe, but they could be strengthened. One important tool is to increase the flexibility of zoning, in part through conditional planning. Another is infill development and mixed use, both of which are allowed but perhaps not adequately incentivised. However, what may be most lacking is national guidance on principles of urban form, which would help guide cities in shaping the decisions made by the private sector. Reforming zoning and increasing the use of conditional planning will not be sufficient to enable coherent urban development if they are not part of an overall strategy for urban form. Such a strategy would need to specify: *i*) which land uses should co-exist; *ii*) the level of services that should be connected to developments, *iii*) appropriate levels of densification; *iv*) conditions under which an urban boundary should be extended; and *v*) how activities throughout a functional urban area will be connected through public transport. While this strategy does not necessarily have to take place at the national level, the Chilean national government would do well to set the conditions for development and provide a vision for urban form in consultation with local governments, private-sector developers and civil society organisations.

In terms of making zoning more flexible, there are options at the national level, but cities are not fully deploying them. For example, mixed-use designations are allowed by Chilean national law, but the problem of unnecessarily segregated land uses persists (Peterman 2008; CChC, 2011b), and may contribute to congestion and air pollution by increasing the travel distances between home, work, and commercial and leisure activities. A prominent proposal in Chile for reforming land-use zoning is to replace the existing zones with a simpler system based on the concept of conditional planning. This proposed system would reclassify all urban zones under three categories: *i*) protected areas with strict development conditions; *ii*) areas requiring development conditions; *iii*) zones open to development (see Figure 2.3) (CChC, 2011a). Instead of dividing the municipality into zones where some uses are allowed and others are prohibited, under this more simplified system, all uses would be allowed in "zones open to development". To balance this flexibility, conditions would be established for mitigating the impact of new development, similar to the existing conditional urbanisation zones (i.e. ZODUC, ADUP, PDUC), such as design control and the provision of urban amenities (e.g. green space), which government entities would be responsible for overseeing (SERPLAC Santiago, n.d.; CChCb, 2011).

While the Chilean national government sees a role for land-use zones and planning, it is worth mentioning the CChC proposal, as it serves to inform a discussion on the value of government-led land-use planning and zoning. Eliminating zoning cannot solve the problems of restrictive land uses and social segregation, as is demonstrated by the experiences of cities that do not rely on zoning. In the absence of zoning, cities still tend to be shaped by land-use rules in some form, but these rules may be driven by private-sector demand, giving higher-income areas more land-use protections, while leaving low-income areas with few development standards. For example, the city of Houston in Texas is well known for being the only major city in the United States without a zoning ordinance.

Figure 2.3. **Illustration of a proposal for conditional planning**



Source: CChC (Cámara Chilena de la Construcción) (2011), *Bases para una Política Nacional de Desarrollo Urbano; Propuesta de la Cámara Chilena de la Construcción para una mejor administración del territorio*, Pilar Giménez and Fernando Herrera, May 2011, *www.cchc.cl/wp-content/uploads/2011/06/DT-N67_Politica-Urbana-CChC-F.pdf*.

However, a private-sector alternative has evolved in its place, in the form of conditions that are imposed on properties at the time of sale (see Box 2.5). This has resulted in a segregation of the city by income, where wealthier areas can use their high property values to impose planning conditions, while lower-income areas enjoy fewer amenities and are subject to a greater mix of potentially incompatible uses (e.g. heavy industry and

Box 2.5. **Determining land use without zoning: The case of Houston**

Houston is the only major city in the United States without a zoning code. Instead, land conditions are transferred through private deed covenants, a form of property contract. In most other US cities, private deed covenants are used in combination with zoning to impose restrictions beyond those set out in the zoning ordinance. However, in Houston, private deed covenants operate in the absence of zoning, and are the primary mechanism in the city for managing land use. While the terms of private deed covenants can vary widely, they most commonly take the form of agreements between neighbours regarding types of land uses permitted, including rules for building heights and setbacks, and number of residents allowed. When properties in the same neighbourhood adhere to the same private deed covenant terms, they have effectively imposed land-use requirements on that zone. The City of Houston is empowered to sue to enforce covenants, but only on violations of use, setbacks, size of lot, and size, number and type of buildings (Berry, 2001).

This has resulted in land uses that have sprung up independently of a city plan. In many areas, it has still led to the separation of land uses common to cities that use land-use zones, but that is due to strong organisation on the part of neighbourhood associations. Areas lacking this kind of civil sector organisation see higher incidences of land-use combinations that elsewhere would be considered unhealthy, such as industry and residences (Qian, 2008). While mixed uses are technically allowed, they can also be prohibited by any neighbourhood that does not want them. This makes it impossible for city planners to redesignate zones as mixed use in an effort to reduce distances between home and work.

Source: Berry, C. (2001), "Land Use Regulation and Residential Segregation: Does Zoning Matter?", *American Law and Economics Review*, Vol. 3, No. 2; Qian, Z. (2008), "Planning a "World Class' City without Zoning: The Experience of Houston", in M. Jenks, D. Kozak and P. Takkanon (eds.), *World Cities and Urban Form: Fragmented, polycentric, sustainable?*, Routledge, Abingdon, Oxon, UK.

residential) (Qian, 2008). While the Chilean national government does not appear to be prepared to eliminate existing land-use zones, it does seem to prefer conditional planning rather than zoning for the new developments that extend beyond urban boundaries in the Santiago Metropolitan Region. It is important to emphasise that eliminating zoning will not address the problems of social segregation and segregated land use if conditional urban developments are not grounded in a city-wide vision for urban spatial development.

It may be more effective for the national government to provide a land-use framework that actively encourages municipalities to increase the flexibility of their existing land-use zones. The German zoning system provides a useful example of an approach that relies on zoning, and also allows for flexibility and a mix of uses throughout most of an urban area. As in single-use zoning, land-use zones are separated into categories, such as residential, commercial, industrial and mixed use. However, in each zone, other uses are also allowed either automatically or based on conditions (see Table 2.4). This allows for shorter travel distances between home, work, shopping and other activities, which can reduce congestion and air pollution. Furthermore, there is no hierarchy of zones: for example, residential uses are not favoured more than commercial or industrial uses. This has resulted in an urban form where mixed uses are the norm rather than the exception, and uses that are allowed by German federal law cannot be denied (Hirt, 2007).

Regardless of the mechanism ultimately chosen to reform land-use zoning in Chile, a vision for the conditions for urban development and form is needed. This vision could be greatly informed and shaped by the establishment of a public-private real estate observatory, which would provide a forum for analysing changes in real estate markets and addressing issues related to urban development as they arise (see Box 2.6). A vision for urban development and form would need to include targets for mixes of land uses, density and access to services, including transportation and education. This would be facilitated by a national land-use framework that encourages municipalities to increase their share of flexible, mixed-use zones. In areas of conditional planning that lack zoning, an alternative set of standards would need to ensure a minimum level of services and the management of negative externalities. These standards would need to be consistent throughout each functional urban area, to reduce the likelihood of disparities among municipalities. The conditions that new developments are required to meet should be both simple enough to reduce approval delays and comprehensive enough to meet functional city-wide development objectives.

Reforming urban boundaries

To address concerns about the impact of urban boundaries on the development of Chile's cities, it is necessary to both incentivise more efficient development within urban boundaries and to reduce the ad hoc nature of developments allowed beyond urban boundaries. Chilean cities face two paradoxical concerns: *i)* that there is not enough land for development and *ii)* that the form of urban development has become too sprawling.[15] Those who are concerned that there is insufficient land for urban development point to strict zoning restrictions and argue for the permanent removal of urban boundaries from PRs. Those who are concerned that Chilean cities have become too sprawling point to high levels of air pollution in many cities and to the distances that residents on the urban fringe must travel to reach employment and services. They argue for the stricter enforcement of urban boundaries, and for redevelopment of land within urban boundaries at higher densities. While higher densities need to be balanced with urban amenities to preserve

Table 2.4. **Flexible zoning to promote mixed use: The case of Germany**

Land-use class and subclass (German acronym)	Uses permitted by right	Conditional uses[1]
Residential		
Small-scale residential (WS)	Small-scale residential (one- and two-family); retail and restaurants which serve the daily needs of the residents; and workshops	Multi-family housing; religious, cultural, social, public, health, and sports facilities; gas stations; and non-disturbing industry[2]
Exclusively residential (WR)	Residential buildings	Retail and restaurants that serve the daily needs of the residents; workshops, non-disturbing industry;[2] small hotels; religious, cultural, social, public, health and sports facilities
General residential (WA)	Residential buildings; retail and restaurants that serve the daily needs of the residents; workshops; and religious, cultural, social, public, health and sports facilities	Hotels; non-disturbing industry;[2] gas stations; office buildings; and horticultural enterprises
Special residential (WB)	Residential buildings; retail, hotels, restaurants and other related commercial; business and administrative facilities; religious, cultural, social, public, health and sports facilities; workshops and non-disturbing industry[2]	Large office headquarters; entertainment facilities; gas stations
Village type (MD)	Agriculture and forestry enterprises; small-scale residential associated with the agriculture and forestry enterprises; other residential buildings; retail; hotels; workshops and non-disturbing industry;[2] religious, cultural, social, public, health and sports facilities; horticultural enterprises; and gas stations	Entertainment facilities
Mixed use (MI)	Residential buildings; office buildings; retail, restaurants and hotels; workshops and non-disturbing industry;[2] religious, cultural, social, public, health, and sports facilities; horticultural enterprises; and gas stations	
Town or city centre (MK)	Office facilities (including large ones); retail, hotels, restaurants and other related commercial; religious, cultural, social, public, health, and sports facilities; non-disturbing industry; parking garages; housing for owners, managers, workers in all above-listed facilities; gas stations	Other housing
Commercial		
Commercial (GE)	Commercial and office of all types; offices, warehouses and industrial enterprises; gas stations; sports facilities	Other housing; religious, cultural, social, public, health, facilities; entertainment facilities
Industrial (GI)	Industry; retail and offices; gas stations	Housing for owners, managers, workers in all above-listed facilities; religious, cultural, social, public, health and sports facilities
Special		
Special recreational (SO)	Weekend and vacation housing; related services; camping grounds	
Other special (SO)	Tourist complexes; large retail complexes; convention centres; college campuses; hospital complexes; energy facilities	

1. Local plans (*Bebauungspläne*) may allow or prohibit these.
2. The German Industrial Norms (*Deutsche Industrienorm* or DIN 18005) statute defines what constitutes a "non-disturbing industry," setting standards for industrial emissions, vibrations and noise for each residential class listed in the BauNVO.

Source: Hirt, S. (2007), "The Devil is in the Definitions: Contrasting American and German Approaches to Zoning", *Journal of the American Planning Association*, Vol. 73, No. 4, Routledge, London.

quality of life, they can provide the critical mass needed for public transport and other urban services to function efficiently (see Box 2.7). It is beyond the scope of this study to assess the degree to which Chile's cities are experiencing sprawl, but it is clear that many cities in Chile experience a major characteristic of sprawl: insufficient service provision to developments outside the urban core. This situation is exacerbated by the fact that social housing is allowed to be constructed outside urban boundaries, which results in unmanaged and under-serviced development at the urban fringe.

Box 2.6. **The Regional Real Estate Observatory of Paris/Île-de-France**

The Regional Real Estate Observatory (*Observatoire Regional de Foncier*/ORF) was created in 1987 through the combined agreement of the Minister of Public Works and the Chairman of the Regional Council of Ile-de-France. It is a joint partnership between the national and regional government. The ORF has approximately 60 members, comprised of representatives from local communities, government agencies and real estate developers. Its mission is to promote awareness and disseminate land information, and to open debate on land between all stakeholders. Among its primary responsibilities are to:

- Observe the evolution of land markets.
- Co-ordinate and bring together the various initiatives in the field of real estate knowledge.
- Facilitate the dissemination and presentation of work on land-development issues.
- Organize meetings and discussions to discuss challenges and explore solutions.
- Promote partnerships.
- Propose measures to improve land supply in Ile-de-France within the framework of a coherent regional planning.

A president is elected every two years, and the Observatory has a permanent secretariat composed of four staff members. Its funding comes entirely from member contributions.

Source: Observatoire regional du foncier en Île de France, *www.orf.asso.fr*, accessed August 2012.

Box 2.7. **Beyond density: The characteristics of compact cities**

Recognition of the role that urban form plays in both urban environmental and economic performance has led to interest in the concept of compact cities. Compact cities are characterised by dense and proximate development patterns; urban areas linked by public transport systems; and accessibility to local services and jobs (see table below). An important distinction must be made between density, which refers only to the number of residents per square kilometre of urbanised land, and compact cities, which encompass a wider set of characteristics.

Characteristics of compact cities

Dense and proximate development patterns	Urban areas linked by public transport systems	Accessibility to local services and jobs
• Urban land is intensively utilised.	• Effective use of urban land.	• Land use is mixed.
• Urban agglomerations are contiguous or close together.	• Public transport systems facilitate mobility in urban areas.	• Most residents have access to local services either on foot or using public transport.
• Distinct border between urban and rural land use.		
• Public spaces are secured.		

Source: OECD (2012), *Compact City Policies: A Comparative Assessment, OECD Green Growth Studies*, OECD Publishing, Paris, doi: *10.1787/9789264167865-en*.

Compact urban form is correlated with economic, environmental and social benefits. Economic benefits take the form of increased labour productivity, reduced infrastructure costs and more efficient use of land resources. Environmental benefits include lower air pollution and CO_2 emissions from transport, reduced transport energy consumption and conservation of farmland and ecosystems. Social benefits include greater access to services and improved health outcomes.

Source: OECD (2012), *Compact City Policies: A Comparative Assessment, OECD Green Growth Studies*, OECD Publishing, Paris, doi: *10.1787/9789264167865-en*.

The main strategy for managing and servicing urban growth in Chilean cities should be to reduce the barriers to urban development in urban cores. This can take the form of infill development, in which additional units are built on an already developed parcel, or of redevelopment, in which one structure replaces another (OECD, 2012a). Infill development would directly address the concern that there is not enough land available for urban development, and the concern that social housing is only being built on the periphery. One challenge to infill development is the relative difficulty of redeveloping urban properties compared to greenfield development on the urban fringe.[16] In Chile, another key challenge is restrictions on redevelopment in historical zones, which can be established with the goal of preventing more intense urban development. Lack of incentive by Chilean mayors to transform industrial areas to housing zones also presents a challenge. This may be compounded by concerns about residual industrial pollution and its potential impact on future residents.

Given these local impediments, a national target for infill development could help reduce local-level obstacles. Even if such a target were not mandatory, it would provide a clear signal from the national government to municipalities that redevelopment within the urban boundaries defined in the PRs is a priority. The goal would not be to privilege infill development at all costs, but rather to balance the market forces that provide incentives for greenfield development to the detriment of infill development. Portland, Oregon, provides a best-practice example of a target and tools for increasing infill development (see Box 2.8). A target for infill could be strengthened by national technical assistance to help cities catalogue underdeveloped urban land and to make this information available to potential developers. Another incentive for infill development could be to establish a split-rate property tax system. This places a proportionally higher tax on land than on built

Box 2.8. **Portland's "refill rate" as a target for brownfield development**

Portland's Buildable Lands Inventory ensures periodical revisions of the boundaries by weighing the necessity of expansion. Meanwhile, a state law requires Portland Metro to review the capacity of the Urban Growth Boundary (UGB) every five years to ensure a 20-year land supply. Metro has developed a detailed and sophisticated land-monitoring process to inventory vacant land and track the "refill rate". This is defined as the rate at which new development occurs through "infill" (when more units are constructed on an already developed lot) or "redevelopment" (when a structure is removed and another is built in its place).

In 2009, Metro found that the refill rate for new industrial development was 20%. For non-industrial use, 52% of new capacity was built on developed land. The residential refill rate has climbed steadily, from 30.4% during 1997-2001 to 33% during 2001-2006. Metro predicts the rate will rise to 38% from 2010 to 2030. If it does, the urban growth boundary will be able to accommodate 11 300 additional dwellings without expanding. Refill rates are highest in the central city and lowest in suburban residential neighbourhoods. Most residential refill is multi-family housing, often as part of transit-oriented development (TOD). Portland prioritises transport projects that support refill and investment in TODs to achieve higher density and a greater mix of uses than prevailing market conditions would support in terms of developers' construction costs and income from rent or sale.

Source: OECD (2012), *Compact City Policies: A Comparative Assessment, OECD Green Growth Studies*, OECD Publishing, Paris, doi: *10.1787/9789264167865-en*.

structures, and therefore incentivises the development of vacant or under-utilised centrally located sites in urban cores (Merk et al., 2012). Such a system has been implemented in Sydney, Hong Kong and Pittsburgh, as well as in cities in Denmark and Finland. However, given that a high number of properties in Chile are exempt from property taxes, a split-rate tax may not provide a strong incentive for redevelopment of properties in its cities.

Finally, internalising externalities is an important way to restrain unchecked growth at the urban fringe. Cities in Chile may not be taking advantage of the fact that they are creating value when they invest in urban amenities. They may also not be finding ways to sufficiently capture that value and turn it to their advantage. Two tools for internalising externalities are developer fees and value-capture taxes. What is essential about these is that they have the potential to put a value on urban amenities and the benefits of agglomeration. They can therefore discourage greenfield development while raising revenue for urban services that can help further mitigate the negative externalities of agglomeration, such as public transport to reduce congestion and green spaces to mitigate higher densities. Many cities in the OECD, particularly in North America, impose development fees on new developments to cover the costs of new infrastructure. However, if these fees are the same for greenfield and infill development, they may not reflect the actual cost of providing services to newer developments, and could result in an inefficient allocation of resources (Merk et al., 2012). Value-capture taxes provide another means for recovering the value created by urban investments by taxing the increases in real-estate value that result from increased access to urban amenities, such as public transport. Of particular interest is the example from Paris/Ile-de-France of the "transport payment" (*versement transport)*, in which companies with nine or more employees pay a surcharge to local transit authorities. This surcharge accounts for around 70% of the *Syndicat des Transports d'Ile-de-France* (STIF) finances (OECD, 2010a). Both developer fees and a type of "transport payment" could enable investments in urban infrastructure in Chilean cities that may not otherwise be possible through private concession.

Reducing risk of natural hazards through land-use planning

Chile's national government recognises the need to more systematically address risks from natural hazards through the land-use planning system. Depending on the region in which they are located, Chilean cities face risks from flooding, landslides, tsunamis, forest fires and earthquakes. The General Law of Urban Development and Construction takes natural risks into account, providing a definition for risk areas (*areas de riesgo*). The law's related ordinance permits PRs to include risk studies and designate risk zones (*zonas de riesgo*) and no-construction zones (*zonas no edificables*) as defined by the Ordinance. This is complemented by rigorous construction standards that are considered international models for earthquake safety. However, the national government does not define what constitutes "risk zones" or provide parameters for designating them, and each PR can establish its own identification of a risk zone. Further, national planning norms do not prohibit construction in natural-hazard risk zones, but rather allow each municipality to decide the allowable land uses and conditions for development in those zones. Permission to build in risk zones, however, is granted only upon the approval of a series of extensive studies. This results in a fragmented approach to natural-hazard risk planning. There is a need for a national approach to the designation of natural-hazard risk zones, so that municipalities can apply norms set by the national government. The national government

has placed a high priority on strengthening the system of planning for natural-hazard risk zones since 27 February 2010, when one of the strongest earthquakes on record and a subsequent tsunami hit a significant share of the country's population. Following this event, the national government has added the designation of zones at risk of tsunamis and other natural hazards, such as landslides, to the PR system.

Experiences in other OECD countries demonstrate ways in which national governments can provide a framework for addressing natural hazards through land use planning. For example, in France, the national government creates Natural Hazards Prevention Plans (*Plan de Prévention des Risques Naturels*/PPRn) which regulates the use of land based on the level of risk to natural hazards (see Box 2.9). The PPRn designate areas where construction is prohibited or only allowed under certain conditions, and local land-use plans are required to take these designations into account (Prim.net, 2010). In New Zealand, regional councils and territorial authorities are required by the national Resource Management Act to identify and either mitigate or avoid natural hazards through policies, plans and the project approval process. Local governments have an incentive to restrict development in hazardous areas, as they are also responsible for financing protective infrastructure (Glavovic *et al.*, 2010). In the United States, while the federal government does not require natural-hazard planning at the national level, over half of the state authorities do require municipalities and/or counties to produce local natural-hazard plans, and over half of the states also require that these plans be formally adopted (IBHS, 2010). In Chile, the national government would do well to create a definition of natural-hazard zones, and to specify the conditions for development and types of land uses applicable to them.

Box 2.9. **The French Natural-Hazard Prevention Plans**

The French Natural-Hazard Prevention Plans (*Plan de Prévention des Risques Naturels*/PPRn) are produced by the national government, and regulate land uses in natural-hazard areas throughout the country. The primary risks in continental France are floods, landslides, avalanches, earthquakes and forest fires. The PPRn indicates at-risk zones, and either prohibits construction or allows it only under certain conditions. The PPRn can cover a single natural hazard or multiple hazards, and can cover one or more municipalities. Its prohibitions and restrictions on construction in natural-hazard areas apply to all construction, both public and private-sector.

Local land-use plans (*Plans Locaux d'Urbanisme*/PLU) must take natural hazards into account, and the PPRn must be annexed to the local PLU. While the PPRn are created by the national government, they are developed in close consultation with regional and municipal officials, and the public. Beyond specifying construction conditions, the PPRn are intended to inform land-use planning decisions in areas vulnerable to natural hazards.

Source: Prim.net (2010), "Natural Hazards Prevention Plans" (*Les Plans de Prévention des Risques Naturels*/PPRn), 12 April 2010, Prim.net Major Risk Prevention Portal, Ministère de l'Écologie, du Développement Durable et de l'Énergie, Paris, France, *www.risquesmajeurs.fr/les-plans-de-prevention-des-risques-naturels-ppr*, accessed 23 September 2012.

An important first step in incorporating natural-hazard zones into Chilean PRs would be to set a national standard for mapping such zones and to provide national technical assistance to municipalities carrying out the mapping. At the very minimum, maps need

to be created for each city to identify the location of zones at high risk of floods, mudslides and tsunamis. Land uses in zones identified as at highest risk by these maps should be restricted, and, for example, all uses but recreation and agriculture might be prohibited. For zones of lower risk, building codes rather than land-use restrictions could reasonably be applied, but the restrictiveness of building codes should be linked to the degree of risk of natural hazards expected in those zones. While areas at risk of forest fires may be less easy to organise into zones, decisions to extend urban boundary limits would do well to take into account whether this would extend development into zones of fire risk.

Conclusion

Current land-use policies and practices could be better structured to meet urban development goals. One important reform would be to increase the flexibility of zoning, in part through conditional planning. Another would be to create greater incentives for infill development and mixed use, both of which are permitted but perhaps not adequately incentivised. Better enabling infill development would also help address concerns about the availability of developable land within urban boundaries. National principles on urban form would help guide cities in shaping the decisions made by the private sector. Finally, given the range of natural hazards faced by Chile's cities, the national government should define natural-hazard zones and set the conditions under which they may be developed.

Recommendations for enhancing land-use planning in Chile

- **Prioritise infill development, and/or the development of vacant and under-utilised lands within urban boundaries.** While infill development is allowed in Chilean cities, private-sector developers, which account for 80% of urban investment, tend to find greater returns on investments in undeveloped land outside urban cores. A national target for infill development could help motivate private-sector investment. Such a target could be strengthened by national technical assistance to help cities catalogue underdeveloped urban land and to make this information available to potential developers. The goal would not be to privilege infill development at all costs, but rather to balance the market forces that provide incentives for greenfield development to the detriment of infill development.
- **Establish national guidance on principles of urban form** to help guide cities in shaping the decisions made by the private sector. A vision for urban form and conditions for development should be established by the central government in consultation with local governments, private-sector developers and civil society organisations. It would need to include targets for mixes of land-uses, density and access to services including transportation and education. A national land-use framework that encourages municipalities to increase their share of flexible, mixed-use zones would also facilitate this. In areas of conditional planning that lack zoning, an alternative set of standards would need to ensure a minimum level of services and manage negative externalities. By ensuring that these standards are consistent throughout each functional urban area, the likelihood of disparities among municipalities can be reduced. Conditions for new developments should be both simple enough to reduce approval delays and comprehensive enough to meet functional city-wide development objectives.

Recommendations for enhancing land-use planning in Chile *(cont.)*

- **Internalise externalities of the development of greenfield land at the urban fringe.** For example, developer fees and value-capture taxes can discourage greenfield development while raising revenue for urban services, such as public transport to reduce congestion, and green spaces to mitigate higher densities. Development fees would need to be greater for greenfield development than for infill development, as the actual cost of providing services to newer developments tends to be higher. Value-capture taxes can also help recover the value created by urban investments by taxing the increases in real-estate value that result from increased access to urban amenities, such as public transport.
- **Create a national-level definition of natural-hazard zones and specify the conditions for development and types of land uses applicable to these zones.** This should be accompanied by a national standard for mapping natural-hazard zones and provide national technical assistance to municipalities carrying out the mapping. Land uses in zones identified as at highest risk by these maps should be restricted, for example by prohibiting all uses but recreation and agriculture. For lower-risk zones, building codes rather than land-use restrictions could reasonably be applied, but the restrictiveness of building codes should be linked to the degree of risk of natural hazards expected in those zones.

Housing policies

Thanks to an ambitious housing policy, Chile has sharply reduced its housing deficit.[17] In 1990, close to 30% of the Chilean population lived in poor housing conditions. This figure dropped to 12% in 2000, and to less than 10% in 2009 (OECD, 2012b). Among the factors behind this success include a housing stock that increased at a rate faster than the population, and a rise in public housing subsidies: between 1976 and 2007, roughly two out of three households in Chile were built using some form of public support (Simian, 2010). While social expenditure in Chile is among the lowest in the OECD area (OECD, 2012b), public spending on housing in Chile as a per cent of GDP is much higher than in most OECD countries (see Figure 2.4), and highlights the importance Chile has placed on solving its housing deficit.

These policies, however, are excessively focused on quantity, neglecting important aspects critical for their long-term effectiveness, including quality, location and co-ordination with other urban development policies (e.g. public transportation and urban land use). The result is a concentration of social housing in the peripheries of select municipalities – areas that are normally far from job and service centres, have poor transport provision and infrastructure and face a high incidence of social problems (i.e. poverty, unemployment and criminality).

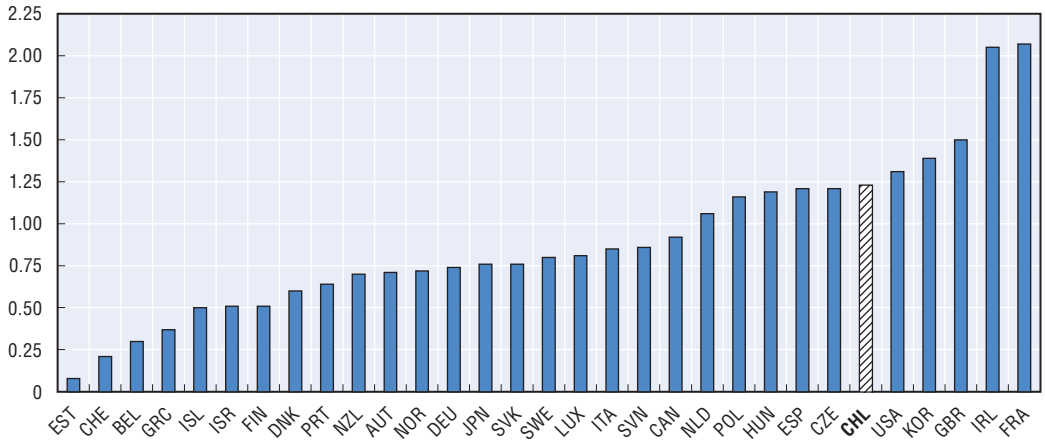
Thus, while housing policy in Chile reflects policy success, after a general review of the policy approach, consideration must also be given to its interaction with other urban policy areas, such as land-use or transportation, and its impact on urban outcomes, particularly with respect to socio-spatial segregation.

Policy structure, successes and opportunities

Under the control and direction of the Ministry of Housing and Urbanism (*Ministerio de Vivienda y Urbanismo*/MINVU) since 1965, the primary objective behind Chile's housing

Figure 2.4. **Public spending on housing and community amenities**

As percentage of GDP, 2009



Note: 2006 for Canada; 2005 for New Zealand.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD (2012), *OECD Economic Surveys: Chile 2012*, OECD Publishing, Paris, doi: *10.1787/eco_surveys-chl-2012-en*.

policy has been to widen access and reduce the stock of inadequate housing. Since 1978, housing policy has been structured around two main pillars: *i)* demand subsidies targeted to households with saving capacity and access to credit; *ii)* the construction or assignment by MINVU of housing to low-income population with a reduced savings capacity. Public support for housing is comprised of demand-side targeted subsidies: the government provides a voucher to buy or build a house to first-time home buyers who comply with basic eligibility criteria. In addition to reducing a housing stock deficit, the policy has also aimed to improve the material and financial capacity of the population by facilitating access to a capital asset. Table 2.5 summarises the three leading subsidy programmes according to the targeted beneficiary group.

Other housing-related subsidies and programmes include:

- A leasing subsidy to help families who are unable to accumulate savings[18] in order to access home ownership. Recipients sign a rental contract with a real estate company under the obligation to buy the home at the end of the contract. With the subsidy, recipients can pay the rental charges and eventually the home.
- Subsidies directed at improving housing quality and standards, including the *Programa de Protección del Patrimonio Familiar, Titulo II and III* (targeted to repairing, upgrading or extending the house) and a MINVU subsidy for providing thermal retrofitting.
- Subsidies and programmes devoted to improving neighbourhood infrastructure and equipment (e.g. public squares, paving, green areas, lighting) such as the *Programa de Protección del Patrimonio Familiar Titulo I*.
- Programmes directed at improving the social, economic and physical aspects of a neighbourhood (e.g. through the *Programa de Recuperación de Barrios*).

The amount of poor-quality or inadequate housing has substantially decreased over time. The share of subsidies devoted to housing improvements or upgrading as a percentage of the total housing subsidies (including those for buying and for upgrading a

Table 2.5. **Overview of primary housing subsidies in Chile (2012)**

Target group	Vulnerable groups	Emerging groups	Middle-income households
Subsidy name	*Fondo Solidario de Elección de Vivienda, D.S. No. 49*	*D.S. No. 1, Titulo 1*	*D.S. No. 1, Titulo 2*
Official target population	Most vulnerable families that cannot obtain a mortgage	Families that are able to contribute with own resources or a mortgage to the final housing price	Families that are able to contribute with own resources or a mortgage to the final housing price
Minimum eligibility criteria	Maximum 8 500 points in proxy means test (*Ficha de Protección Social*). 10 UF[1] of minimum savings	Maximum 13 484 points in proxy means test (*Ficha de Protección Social*). 30 UF[1] of minimum savings	Maximum 8 500 points in proxy means test (*Ficha de Protección Social*). 50 UF[1] of minimum savings
Criteria to determine priority	*i*) Family size and characteristics (e.g. single- person household, children or elderly persons, disability, former political prisoner); *ii*) social and housing vulnerability (e.g. overcrowding, housing type, access to water, sanitation); *iii*) waiting time (former unsuccessful applications)	*i*) Family size and characteristics (e.g. single- person household, disability); *ii*) average savings; *iii*) waiting time; *iv*) socio-economic characteristics based on the proxy means test; *v*) former political prisoner; *vi*) completed military service as of 2004	*i*) Family size and characteristics (e.g. single-person household, children or elderly persons, disability, former political prisoner); *ii*) average savings; *iii*) waiting time; *iv*) socio-economic characteristics based on the proxy means test; *v*) former political prisoner; *vi*) completed military service as of 2004
Maximum housing price	800 UF-1 000 UF depending on region and location	1 000 UF-1 200 UF depending on region and location	2 000 UF depending on region and location
Maximum subsidy	380 UF-590 UF depending on location + 110-200 UF of viable location subsidy or 110 UF of feasibility subsidy	500 UF-700 UF depending on location	300 UF-400 UF depending on location
Subsidy top-ups (maximum values)	Additional savings (20 UF); disability (80 UF); large families (70UF); buildings of more than three stories (110 UF)	Disability (20 UF); location subsidy if located in a *Proyecto de Integración Social* (100 UF), a *Zona de Renovación Urbana* o *Desarrollo Prioritario* (400 UF), or a *Zona de Conservación Histórica* (300 UF)	Disability (20 UF); location subsidy if located in a *Proyecto de Integración Social* (100 UF), a *Zona de Renovación Urbana* o *Desarrollo Prioritario* (400 UF), or a *Zona de Conservación Histórica* (300 UF)
Mortgage loan	Not permitted	Permitted	Permitted

1. UF is a CPI-Indexed Unit of Account.

Source: OECD (2012), *OECD Economic Surveys: Chile 2012*, OECD Publishing, Paris, doi: *10.1787/eco_surveys-chl-2012-en* – modified and updated, based on information provided by MINVU and MINVU website, *www.minvu.cl/opensite_20100827194336.aspx*, accessed June 2012.

house) rose from 0.2% in 2005 to 7.8% in 2007 and 14.5% in 2009 (Observatorio Habitacional MINVU) and the quality standards of subsidised housing have progressively improved.

The major earthquake and tsunami that hit Chile in February 2010 seriously damaged the housing stock, especially in the regions of Maule and Bio-Bío, O'Higgins, Araucanía, Valparaíso, and the Metropolitan Region of Santiago. Approximately 10% of the total housing stock was damaged or destroyed, and the urban and transport infrastructure was also seriously affected. While good seismic building codes were instrumental in reducing damages, many of the destroyed homes belonged to relatively poor people, were built with poor-quality materials and/or adobe, and were located in particularly vulnerable (i.e. high-risk) areas, especially along the coast (MIDEPLAN, 2011; OECD, 2012b). Others were old houses located in the historic city centres, such as those of Talca and Curicó (El Maule), and Concepción (Bio-Bío). Port cities such as Talcahuano (Bio-Bío) were also severely affected. The government of Chile has made significant investments to rebuild after the earthquake and repair the main damages (see Box 2.10).

The impact of these two consecutive natural disasters on poorly constructed homes located in vulnerable areas highlights the importance of conducting regular inspections and enforcing codes regulating housing quality and location. The government is using the reconstruction opportunity to relocate people to safer areas and to develop pilot measures

Box 2.10. **The February 2010 earthquake and tsunami**

In February 2010, Chile was hit by the strongest earthquake in its recent history – and the fifth strongest on record – as well as a tsunami that destroyed several towns, and severely affected many others. The most affected regions were El Maule and Bio-Bío, followed by O'Higgins, Araucanía, Valparaíso and the Metropolitan Region of Santiago. This natural disaster generated important economic losses, estimated by Chile's government at approximately USD 30 billion (15% of GDP), with the greatest part (about USD 21 billion) due to the destruction of infrastructure.

Infrastructure damage includes that associated with ports, roads, energy generation and communications, as well as houses, hospitals and schools. Approximately 370 000 houses were destroyed or damaged, representing close to 10% of the total housing stock (MINVU, 2010; Muir-Wood, 2011). The Central Bank estimates that the 2010 disasters reduced Chile's potential economic output by 1-1.5% during 2010, mainly due to the destruction in the capital stock (Central Bank of Chile, 2010).

Earthquake-induced damage was partially covered by insurance. However, a large portion of the financial burden associated with reconstruction fell on the State. The government was quick to implement a substantial reconstruction plan, focusing on rebuilding public infrastructure and providing financial assistance to families in the lowest three income quintiles needing to rebuild their homes. MINVU calculated that 220 000 families required government support for repairs or reconstruction. Financing came from a number of sources, including: temporary and permanent tax increases; budget reallocations, including from a national copper fund (*Fondo Ley Reservada del Cobre*); and private donations. Most public infrastructure projects have been completed, and it is expected that the target of 220 000 housing subsidies will be completely allocated by December 2012. The objective is to finish the reconstruction work by 2014.

The disaster of February 2010 modified MINVU´s priorities – providing housing solutions to the families affected by the earthquake became one of the Ministry's most important work streams. MINVU has also been focused on implementing a long-term strategy for disaster-risk reduction to ensure a safe return to risk areas and reduce the damage in high-risk locations vulnerable to future disasters.

Source: Adapted from OECD (2012), *OECD Economic Surveys: Chile 2012*, OECD Publishing, Paris, doi: *10.1787/eco_surveys-chl-2012-en*; Ministerio de Vivienda y Urbanismo, (2011), *Plan de Reconstrucción MINVU; Chile Unido Reconstruye Mejor,* fourth edition, January 2011; *www.minvu.cl/opensite_20100827194336.aspx*, accessed June 2012; Gobierno de Chile (2010), "Chile unido reconstruye mejor", *www.gobiernodechile.cl/especiales/chile-unido-reconstruye-mejor*, accessed June 2012.

for improving earthquake resilience. An initiative to facilitate the elaboration and approval of PRC for disaster stricken municipalities was also undertaken, which included identifying risk areas, the type of risk possible (e.g. flooding, earthquake), the forms of construction permitted or prohibited (e.g. housing and infrastructure such as hospitals and schools) and areas where building is permitted but only under specified conditions. Finally, mechanisms were launched to co-ordinate reconstruction planning efforts among the different institutions involved at national and sub-national level. MINVU´s Strategic Urban Plans (*Planes Urbanos Estratégicos*), discussed earlier in this chapter, were key in this process (see also Box 2.4). The government could use this experience to extend the new, resiliency-focused building guidelines to other parts of the country. This could help harmonise urban development practices, avoid the development of irregular settlements, enforce the control of housing standards and reduce building permits in high-risk areas (OECD, 2012b).

Socio-spatial segregation: An unintended consequence of Chile's housing policy

Until now, Chile has focused its housing policy on volume, in order to reduce a large housing deficit, and on home ownership as a means to combat poverty. Despite these positive intentions and successful results, policy implementation may not be reaching those most in need. It is compounding socio-spatial segregation, leading to greater disparities within and among urban areas, and limits residential mobility, which impacts labour market flows and economic development.

The social targeting of subsidies needs to be re-evaluated. Evidence suggests that the means proxy test (*Ficha de Protección Social*) to determine eligibility for a subsidy is an imprecise and unreliable measure of income and household situation (OECD, 2012b; Comité de Expertos, 2010). Traditionally, some housing programmes in Chile target not only the most vulnerable groups, but also assist middle-income sectors (see Table 2.5). A study based on the 2003 CASEN national household survey found that a high number of subsidy beneficiaries came from the upper two income quintiles. When combined, the figure is almost equivalent to the number from each of the remaining three quintiles (see Table 2.6) (Aparici and Sepulveda, 2010). Subsequent research, based on the 2006 CASEN survey, found similar results (Simian, 2010). Deficiencies in the allocation criteria result in subsidies being received even by upper-middle income groups. For example, there is no points-based ceiling in the means proxy test[19] that establishes minimum eligibility criteria for middle-income families' subsidies (*D.S. No. 1, Título 2*). In addition, housing vulnerability of applicants is currently not taken into account. Finally, the maximum housing price is quite high (2 000 UF, or more than 90 000 USD in the case of middle-income families) which makes applying attractive for better-off families (OECD, 2012b).

Table 2.6. **Income distribution of housing subsidy beneficiaries**

Income quintile	% recipients
V (highest income level)	12.1
IV	20.1
III	23.0
II	23.0
I (lowest income level)	21.8

Source: Encuesta de Caracterización Socioeconómica Nacional CASEN-2003.

To maximise the reach of limited resources and improve outcomes for lower-income families in urban areas, the government should consider focusing further on the most vulnerable segments of society. The government has recently revised the system, criteria and reliability of the means proxy test (*Ficha de Protección Social*). In addition, the new DS49 subsidy (i.e. the main subsidy for vulnerable groups), includes different (and some additional) variables for eligibility,[20] which will likely better target subsidy allocation to the most vulnerable segments. Better consideration of housing and family needs is an important factor to meet the aims of this policy, as better-off families in Chile generally do not have difficulty in accessing housing or mortgages (OECD, 2012b). Subsidies to middle-income groups could be restricted to houses located in "social integration projects".[21] It could also discourage better-off families from demanding housing subsidies, thereby freeing resources for those more in need. Such efforts should be structured as a means to better target existing resources rather than as a reduction in public investment in housing.

Housing policies have compounded socio-spatial segregation trends, which are a historic problem in Chile. The need to provide large quantities of housing to address the severe housing deficit drove a search for the lowest priced land, found almost exclusively at the urban periphery where the poor had already located (Zegras et al., 2000). Given rising land prices, construction companies reinforced this trend and tended to build subsidised housing at extreme urban peripheries, where land was cheaper. In addition, as a means to keep prices accessible and improve profits, little emphasis was placed on quality (Morandé and García, 2004). The increasing proportion of social housing located in municipalities outside Santiago city limits demonstrate this: it represented 3% of all social dwellings built in the period 1979 to 1983, 40% in the period 1990 to 1995, and 34% in 1996 to 2002 (Trivelli, 2010). Between 1990 and 1998, 60% of Santiago's social housing was built in three of its poorest municipalities: La Pintana, Puente Alto and San Bernardo. Between 2006 and 2008, the trend persisted, and these municipalities concentrated 40% of the subsidies to vulnerable groups (Simian, 2010).

The lack of an integrated perspective of urban development further exacerbates socio-spatial segregation, contributing to the formation of "ghettos" with patterns of social exclusion (e.g. high unemployment, dependency, crime and violence). The areas identified for social housing construction are not necessarily provided with the proper urban infrastructure, facilities and services, such as green areas or public transport. Connectivity between communities of social housing and city centres or other areas where jobs and services are concentrated is deficient (see Box 2.11). Long distances between where people live and where they work, coupled with infrastructure deficiencies, result in higher costs in terms of money and time for the subsidy recipients, and negative urban outcomes in terms of congestion and pollution, and even in quality and access to education (OECD, 2009). It is important to bear in mind that the situation is not the result of any single policy initiative or approach – that is, only housing policy or transport policy or land-use policy – but rather stems from the incoherence or inconsistencies that arise from the combination of these policies when practically applied.

Box 2.11. **Social segregation within a municipality: Puente Alto and the Bajos de Mena community**

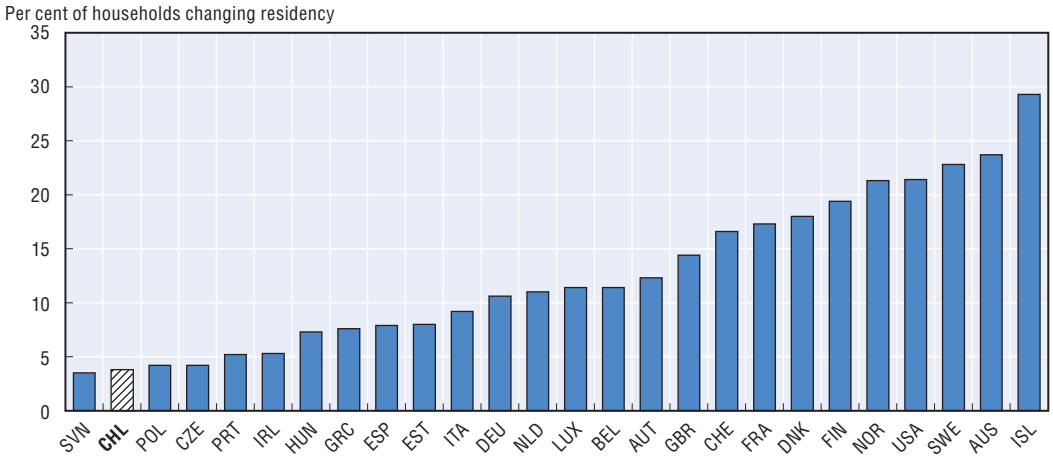
Segregation is sometimes reproduced within municipalities as well as between them. Bajos de Mena is a community of approximately 120 000 inhabitants within the municipality of Puente Alto in the Santiago Metropolitan Region. The neighbourhood is surrounded by a highway and has only one main connection with the rest of the Puente Alto. In addition, public transport is scarce and travel time is lengthy – an average journey to Santiago city centre can take approximately 90 minutes. The Bajos de Mena community also faces a lack of public or commercial services, without police stations, pharmacies, gas stations or banks.

Source: Lasegunda (2012), "Bajos de Mena, el barrio de Puente Alto que se convirtió en el "gueto' de los pobres", *www.lasegunda.com/Noticias/Nacional/2012/05/743542/bajos-de-mena-el-barrio-de-puente-alto-que-se-convirtio-en-el-gueto-de-los-pobres*, accessed 12 July 2012.

Residential mobility in Chile is one of the lowest in the OECD area (see Figure 2.5). It is especially low among the poorer segments of the population and among those living in subsidised houses (Simian, 2010). Low rates of residential mobility can be an obstacle to labour adjustment, making labour markets less efficient (Caldera-Sánchez and Andrews, 2011). In Chile, this can be attributed to several interconnected factors: an excessive focus on home

Figure 2.5. **Residential mobility in OECD countries**

Percentage of households that changed residence within the last two years[1]



1. For Chile, refers to the percentage of households that changed municipality.

Source: OECD (2012), *OECD Economic Surveys: Chile 2012*, OECD Publishing, Paris, doi: *10.1787/eco_surveys-chl-2012-en*, data based on the 2007 *EU-SILC Database*, on HILDA for Australia, AHS for the United States, SHP for Switzerland and CASEN (2006) for Chile.

ownership by housing policies, a reduced secondary market for subsidised housing, and the socio-spatial segregation of Chilean cities (OECD, 2012b; Simian 2010).

Chile's housing policies aim to improve the capital of the low-income population[22] by orienting subsidies towards buying a home rather than renting one. Banks, however, do not usually accept social housing as collateral for a mortgage (OECD 2012b). In addition, subsidised housing faces low resale values due to relatively poor construction quality and location, as well as associated restrictions on selling property purchased under a subsidy programme. This negatively impacts the wealth generation objective of Chile's housing policy, and also affects residential mobility.

The lack of residential mobility is closely related with the spatial segregation of social housing. Previous housing programmes to encourage residential mobility, like the 1995 *Programa de Movilidad Habitacional*,[23] had a limited effect (Simian, 2010). This was partly due to the limited choices for affordable housing in a better location. Subsidised housing has been confined to a few municipalities and neighbourhoods in the urban peripheries. This results in an "immobilising effect" of social housing on residents, stranding tenants in marginalised communities with few possibilities of social or economic progress (Rodríguez and Sugranyes, 2005).

A more robust rental market could help promote residential mobility. Chile's rental market is small[24] – especially in the low-rent segment. Chile could consider expanding its housing subsidy policy to include a rent-subsidy voucher programme, giving recipients the freedom to choose the type of housing and the location that best meet their needs. A rent subsidy could facilitate residential mobility. OECD country experience with housing vouchers shows that when given the choice, people will move to neighbourhoods where there is less poverty and less segregation (OECD, 2011d). For example, an analysis of the spatial distribution of voucher recipients in the 50 largest metropolitan areas of the United States found that among rent-subsidy voucher recipients, only 22.2% lived in neighbourhoods where poverty rates exceeded 30% (Devine et al., 2003).

For rent-subsidy measures to successfully promote residential mobility, a series of complementary measures and programmes are necessary, including: comprehensive urban development programmes to confront socio-spatial segregation; clear regulations to allow residential mobility without losing the public subsidy; inter-municipal collaboration on voucher programmes; assistance/counselling to help recipients identify rental opportunities; and aggressive landlord outreach to expand rental options available to voucher recipients (Turner, 2003; OECD, 2011d). Without such parallel measures, there is a risk that rent-subsidy programmes will replicate the socio-spatial segregation and residential mobility problems associated with homeownership subsidies. Rental subsidies should be considered as a complement to improved, better-targeted and less spatially segregated home-ownership subsidies for the poorest income segments.

Measures to provide affordable housing in more central areas should be encouraged as a means to better integrate vulnerable families into the urban fabric and reduce spatial segregation. Land in urban centres is more expensive in the short term, but the economic, social and environmental returns can make the investment profitable in the medium and long term. Centralised areas already have infrastructure in place, as well as a public service network. While these may require updating or expansion to absorb greater use, investment in building entirely new structures is not necessary. In addition, it can help minimise some of the negative urban environmental outcomes associated with commuting, particularly road congestion and pollution. Finally, it can help improve quality of life in reducing transport costs (both in time and money), given quicker and/or shorter journeys. To support this, the Chilean government is buying some land for subsidised housing in more central locations to try to reduce segregation and improve the social mix (OECD, 2012b).

An improved location subsidy could also enable social housing dwellers to settle in well-located areas. The main subsidy for vulnerable groups (DS49) includes a viable-location component, if the subsidised house is located close to infrastructure and public transport facilities, and close to health and education services. This location subsidy was recently reformed to try to avoid price distortions.[25] However, additional reforms are needed to make this subsidy a real incentive for vulnerable groups to remain in central areas. Between 2007 and 2009, almost half of the location subsidies granted in the Metropolitan Region of Santiago were for homes in municipalities outside Santiago itself (Trivelli, 2010). The location subsidy can enhance access as far as infrastructure and choice of location are concerned, but further reform may be needed to improve its effectiveness.

Plans to extend the urban boundary of cities like Santiago or Valparaíso should be carefully contrasted with measures for recovering underused central locations within cities. The revisions of the Metropolitan Regulating Plans (PRM) of Santiago and Valparaíso include expanding urban limits by integrating new land for development. While this can encourage an additional supply of land, it may reinforce residential segregation, commuting costs and times (OECD, 2012b). An alternative would be to encourage the development of underused lands, or rehabilitate damaged houses and buildings in city centres. Such land would normally be located in areas where public services and infrastructure already exist, resulting in more efficient economic, social and environmental returns. Some recent estimates suggest that wasted and underused land within the current urban borders of Santiago is of approximately the same total area as the proposed expansion of the urban boundary (Trivelli 2011).

Various efforts have been made to recuperate and upgrade deteriorated areas of city centres. These include: a repopulation plan in the municipality of Santiago Centre, aiming to increase the supply of new housing and promote the urban regeneration of the city centre (Conteras Gatica, 2011); the Programme for Urban Recovery and Development in Valparaíso (*Programa de Recuperación y Desarrollo Urbano de Valparaíso*) to promote the social and economic regeneration of the city; various renewed efforts through Sustainable Reconstruction Plans (*Planes de Reconstrucción Sustentable*) to recover damaged areas, as well as generating urban upgrades to city centres affected by the February 2010 earthquake and tsunami.

Caution will be needed to ensure that the stock of affordable housing in city centres does not deteriorate. The recovery of city centres or deteriorated centrally located neighbourhoods is often associated with a boost in real estate market prices. This can lead private-sector housing developers to demolish degraded structures and build units that are more expensive than current tenants can afford, thereby increasing overall real estate prices (OECD, 2011e; Livert Aquino and Gainza, 2011). This tendency corrodes the stock of affordable housing for the lower- and medium-income segments by contributing to their displacement, and making centrally located areas increasingly unaffordable for housing subsidy recipients. This was seen in Santiago city centre, where the urban revitalisation subsidies generated a residential renaissance that helped reduce the city centre's population loss but which also may have squeezed out lower-income residents, forcing them to the urban periphery (Zegras, 2000; SUR 1999).

Different policy options are available to counteract such a trend, including: requiring developers who demolish existing affordable units in central areas to build new ones in their place, or to pay a special fee to be used for building new affordable housing in another central location; instituting a monitoring system of the current housing stock by price, standard, tenure and occupancy (OECD, 2011e). To boost their effectiveness, such measures should be complemented by general plans to develop and upgrade deteriorated areas of city centres. Additionally, in order to encourage the rental of affordable housing, the MINVU could also leverage the perpetual use of social housing for rent in central areas, creating a pool of social housing units to be leased out to eligible vulnerable households through a below-market use contract.

Inclusionary housing policies are used in many OECD countries in order to increase the supply of affordable housing and might be applicable in Chile to further enforce quotas of affordable housing in new housing developments. These policies require developers to set aside a specified proportion of affordable housing units (percentages often range between 10-20%) in large developments. Best practices include mandated percentages rather than voluntary incentives, a range of options for meeting inclusionary mandates, and in-lieu fees that are set close to the cost of housing construction (OECD, 2011e). Since 1997, the Metropolitan Regulating Plan (PRM) of Santiago defines certain areas where building projects are required to devote at least 5% of land to social housing (*Zonas y Proyectos de Desarrollo Urbano Condicionado*). However, approvals have been very lengthy, and there is no time limit for compliance. Additional administrative obstacles and legal ambiguities have severely limited the implementation of this policy (CChC, 2011b). In order to encourage the supply of well-located, affordable housing and promote more socially diverse communities, it is suggested to extend the application of quotas to new development projects, speed-up project approval processes and impose a time limit for compliance (OECD, 2012b).

Further limiting tax exemptions for housing would complement stronger inclusionary policies. Housing construction enjoys a reduced VAT rate. The tax benefit was restricted in 2009 to properties below 4 500 UF.[26] As the *OECD Economic Survey of Chile 2012* suggests, the government should consider further capping the reduced VAT rate for housing construction to make the tax benefit less regressive. Housing incentives could remain for affordable social housing (e.g. for vulnerable groups), and to provide preferential tax treatment for affordable housing built in well-located central areas as a means to incentivise supply by developers.

Chile could also develop more aggressive incentives for developers to build mixed-income houses in well-located areas. Mixed-income housing has been rising in popularity across OECD countries where cities provide housing for lower-income residents alongside more affluent ones in order to address spatial and social segregation. In the United States, for example, developers are offered a number of incentives to build mixed-income housing, including low-interest financing tools, density bonuses, tax abatement programmes, rehabilitation assistance, fast-tracking of plan reviews and permits, and reduced or waived fees. The SMART programme in Austin, Texas, could be of interest to Chile, as it offers these benefits for construction projects that: *i)* include affordable units; *ii)* meet elevated construction standards; and *iii)* are located near public transport (see Box 2.12).

Chile's Social Integration Projects Programme (*Proyectos de Integración Social)* promotes dwellings that should house at least 30% of subsidised vulnerable families and at least 30% of subsidised emerging or middle-income families. Emerging and middle-income families living in these units receive an extra subsidy bonus. One of the first projects to be developed through this programme, San Alberto Casas Viejas, has been set in the outskirts of Puente Alto, a municipality with among the highest concentrations of social housing in the Santiago Metropolitan Region. The initiative is still in its early stages, and thus it is too soon to evaluate its effectiveness. However, it highlights the need for additional measures or incentives to encourage developing more spatially integrated neighbourhoods. Simply bringing higher-income families to lower-income areas does not necessarily mean further social integration, or economic development for these areas. The development of low-income areas requires comprehensive urban development plans, integrating housing, public transport, infrastructure and social development initiatives. This, in turn, will require better inter-institutional co-ordination and enforced urban development strategies.

The government should consider modifications to the property tax exemptions,[27] as they generate a heavy burden for low-income municipalities that lack the resources to invest in local economic development. Social housing is developed according to central-level, top-down planning processes; municipal authorities are not fully consulted regarding social housing, its placement and the service costs it generates. This puts municipalities hosting social or low-cost housing in a very challenging position: they have a reduced tax capacity due to property tax exemptions associated with such housing, while still needing to provide local investment in infrastructure and services for the new settlements (e.g. paving, lighting, drainage, basic health care, and primary and secondary education).[28] To address this challenge, the government could phase out property-tax exemptions for DFL2 houses,[29] and reconsider the long list of institutions that are exempted (OECD, 2012b). Other changes could be implemented in order to apply the tax exemption only to low-income properties belonging to households under the poverty level

Box 2.12. **Mixed-income housing initiatives in the United States**

Over the past decade, mixed-income housing has been rising in popularity across the United States. Local governments offer a number of incentives for their development, including low-interest financing tools, cash subsidies and grants, free or low-cost land, density bonuses, tax abatement programmes, rehabilitation assistance, fast-tracking of plan reviews and permits, and reduced or waived fees. In high-rent markets such as New York City, Los Angeles, and the District of Columbia, mixed-income projects allow teachers, police officers, fire fighters and other municipal workers to live in the neighbourhoods where they work.

The city of **Austin, Texas,** adopted the SMART (Safe, Mixed-income, Accessible, Reasonably-priced, Transit-oriented) Housing Policy Initiative in 2000 to try to meet affordable housing demands. Prior to the implementation of this award-winning programme, Austin had an active building community, but very little of the housing development was affordable. The SMART Housing Policy offers an incentive-based approach to encourage developers to build affordable housing that also meets elevated construction standards, and is located near transit. It provides for fee waivers as well as faster review and inspection times for developers building qualifying housing projects. It can also provide additional density, or floor/area ratio, to encourage provision of affordable housing and other community benefits, such as parking, open space and streetscapes. The initiative offers developers a schedule of incentives based on the level of affordable housing provided. For example, if 10% of a project's units are "reasonably priced", a developer could have 25% of certain city development fees waived. The waivers are on a sliding scale, so the higher the percentage of affordable units, the greater the waiver, all the way up to 100%. Multi-family projects can also take part in the SMART programme. All units are required to meet standards for transit, Green Building and accessibility for people with disabilities that exceed those established in the City of Austin's code. This results in new dwelling units that are more energy-efficient, accessible and located close to transit service. This programme has contributed to spark development inside city limits. Since the programme began in 2000, 2 659 single-family units and 4 904 multi-family units have been created.

In order to expand its affordable housing stock, **New York** implemented an inclusionary zoning ordinance in 2005 that requires developers of market-rate housing to set aside a certain percentage of their units as affordable dwellings or to pay a fee into an affordable housing fund. In exchange for affordable units, the city offers a range of incentives. For example, the city sold land to its development partners for USD 1 to build the first phase of Hunter's Point South, a USD 350 million mixed-use complex designed to include 20 000 square feet (1 858 m^2) of retail space, a school and 900 rental units, 75% of which will be affordable to low- to middle-income families. Located on the East River waterfront in Long Island City in Queens, the project is being developed by a locally based affordable housing developer.

The **California** Density Bonus Law requires new residential rental projects with ten or more units to make a minimum of 5% of units affordable to people earning 50% of the area median income (AMI) or less, or at least 10 per cent of units affordable to those earning 80% of AMI, in exchange for a 20% density bonus. In addition, local governments can grant a maximal 35% density bonus for making 10% of units affordable at 120% of AMI or less in for-sale projects. Developers may pay an in-lieu fee into a housing trust fund, which adjusts annually based on land and construction costs.

Source: SMART Housing (2005), "A Strategy for Producing Affordable Housing at the Local Level", Austin, Texas, *www.lakecountyfl.gov/pdfs/2025/SMART_Housing.pdf*; Affordable Housing Finance (2006), "Austin Texas: Incentives to Aid Affordable Projects", *www.housingfinance.com/ahf/articles/2006/oct/AUSTIN1006.htm*, accessed June 2012; Urban Land Institute (2012), *http://urbanlandstaging.uli.org/Articles/2012/April/ul/KirkMixedIncome*, accessed June 2012.

(currently exempted properties may be secondary residences) and to further compensate municipalities through the Common Municipal Fund (*Fondo Común Municipal*/FCM) for the fiscal shortfall due to the tax exemption (OECD, 2009).

Aware of socio-spatial segregation challenges, MINVU is implementing the *Programa de Recuperación de Barrios*. This programme seeks to improve the social and economic environment of marginalised and segregated neighbourhoods where most social housing is settled. It is based on an integrated and multi-sector approach that takes on social, economic and physical aspects of neighbourhood rehabilitation projects, involving citizens in their design and execution (see Box 2.13). This innovative programme promotes an

Box 2.13. **MINVU's *Programa de Recuperación de Barrios***

The *Programa Recuperación de Barrios* was created in 2006, and focuses on deteriorated and vulnerable neighbourhoods. The programme operates within well-delimited zones, and its focus is to strengthen the social networks of the inhabitants, improve the neighbourhood's identity, and rehabilitate the public spaces used by the community. It aims to do so by confronting challenges like connectivity, urban integration, paving deficits or the lack of green areas and community facilities. It also aims to restore residents' self-confidence and encourage bottom-up participation in the neighbourhood's development. In its pilot phase (2006-2010), the programme was implemented in 200 neighbourhoods of 80 municipalities throughout Chile's 15 regions. The programme integrated comprehensive urban interventions, including construction management and social management plans. From 2011, MINVU carried out several reforms to improve the targeting of the project. Neighbourhood selection is based on a system that combines the selection of priority zones based on a set of social and housing vulnerability indicators (both quantitative and georeferenced), and bottom-up municipal demand within the priority zones. The final selection of the qualifying zones is made by a jury composed by the *intendente*, SERVIU, MINVU, GORE, a representative from the Chilean Association of Municipalities, SEREMI. Finally, a local counterpart made of a neighbourhood development council manages the programme.

The programme structures the projects in three phases: *i*) preparing the neighbourhood contract; *ii*) executing the contract; and *iii*) closing the contract, evaluating the project and setting the agenda for the future. The phases vary in length according to the complexity and needs of the neighbourhoods. During Phase One, trust is established between the neighbours and the team in charge of the project, and their collaborative work begins. The first activity is a technical study with a diagnosis of the urban and social environment and the safety conditions in the neighbourhood. The study identifies the most important shortages and the key actors, and proposes an integrated plan of action. Simultaneously, the team helps the community diagnose its problems, promoting the involvement of all the social groups living in the neighbourhood and soliciting their demands and expectations. The neighbourhood's different interest groups conduct the self-diagnosis separately. This activity begins by collecting information to build the history of the neighbourhood and setting up the neighbourhood development council – the key participation structure – made up of representatives of the social and territorial organisations, the institutions with responsibility over the territory, including the municipality and community leaders. Then a shared diagnostic study is developed, with information coming from the technical study and self-diagnosis done by the different interest groups. This diagnostic is the basis for designing the integrated plan for the neighbourhood. Projects and initiatives eligible for financing by the programme are

Box 2.13. **MINVU's *Programa de Recuperación de Barrios*** *(cont.)*

incorporated into the investment and social management plans. An inaugural work, or "confidence investment", is planned and executed in the first phase to validate the government presence in the neighbourhood and generate trust among the beneficiaries. The first phase ends with the signing of the neighbourhood contract by the neighbourhood development council, the municipality and the MINVU.

In Phase Two, the physical work proposed in the investment management plan is executed and the actions of the social management plan are completed. This involves calls for tender for the construction of the work, hiring contractors and supervising the execution of the project or projects. Finally, the closing of the neighbourhood contract with the neighbourhood development council includes an evaluation of the programme, recording the experiences of the participants of the project, drawing up an agenda for the future, the alignment of the community's commitments with the facilities' operation and maintenance needs, and the formulation of new multi-sector projects. At a "closing event", the neighbourhood history compiled by the project is presented to the community to promote the continuity of the social and community dynamics initiated by the project and to strengthen the community organisations formed by the programme.

Source: Rojas, E. (2009), *Building Cities: Neighbourhood Upgrading and Urban Quality of Life*, Eduardo Rojas (ed.), Inter-American Development Bank, Washington, DC; Ministerio de Viviendra y Urbanismo (n.d.), *Programa Recuperación de Barrios*, *www.minvu.cl/opensite_20070212164909.aspx*, accessed June 2012.

integral vision of urban development, and the bottom-up participation of the neighbours in the programme development process. However the programme has limited resources (about USD 1 million per neighbourhood). The programme's design emphasises interaction among various sectors and has helped build social capital and social networks that can be used to move other projects forward at the public sector and community levels. Yet, cross-sector/inter-institutional interaction has been scarce. Clear and complementary roles for other sector institutions like the MTT, the MOP, the Ministry of Education, the Ministry of Social Development and the Regional Governments should be established. In addition, avoiding fragmentation and promoting integrated development initiatives will be crucial for achieving an integrated approach to urban development. Without this, the effectiveness of urban development initiatives, even if they are well designed, as in the case of the *Programa de Recuperación de Barrios*, can be diluted.

Conclusions

Over the past two decades, Chile has made an important investment in social housing, successfully reducing the housing deficit. There has also been a public effort at improving social housing quality. The size of the houses, the construction materials and the access to basic facilities, such as electricity and sanitation, have significantly improved over the same period. This is an important first step, but to avoid further entrenching socio-spatial segregation, housing policies should actively integrate social housing into the urban fabric. Accessibility to job centres, urban services, infrastructure, public transport and access to education facilities are all factors that need to be considered, as much as the construction of the houses themselves. This will be crucial in improving the quality of life and economic dynamism of urban areas for all of Chile's residents.

Recommendations for enhancing housing policy outcomes in Chile

- **Improve the targeting of housing policies to those most in need**.
  - Consider restricting subsidies to middle-income groups to houses that are located in "social integration projects". This could further promote mixed-income housing areas, and discourage better-off families from demanding housing subsidies.
- **Provide social housing in centrally located areas to enable better connectivity and less risk of socio-spatial segregation**. While centrally located land can be more expensive in the short term, the pre-existence of infrastructure saves money, and better accessibility reduces commuting time and its associated costs, including pollution.
  - Further improve the effectiveness of the current location subsidy.
  - Continue efforts to recuperate and upgrade deteriorated areas of city centres; encourage the development of under-used land, and the rehabilitation of damaged houses and buildings in city centres.
  - Counteract potential gentrification in city centres: public authorities can require developers who demolish existing affordable units in central areas to build new ones in their place or to pay a special fee to be used for building new affordable housing; institute a monitoring system of the current housing stock by price, standard, tenure and occupancy.
  - Further promote incentives and regulation-based inclusionary policies, including those requiring developers to set aside a specified proportion of affordable housing units in large developments, and/or to build mixed-income houses in well-located areas.
  - Limit housing VAT tax exemptions to the development of affordable housing (e.g. vulnerable and emerging groups), offering, for example, a special tax treatment to affordable housing built in well located areas in city centres as a way to promote this supply by developers.
  - Create a pool of social housing units to be leased out to eligible vulnerable households through a below-market use contract by leveraging the perpetual use of social housing for rent in central areas.
- **Encourage co-ordination between housing and other urban development policies** (e.g. infrastructure, public transportation and social development) to help improve social housing conditions and the quality and social outcomes of future housing policies.

Public transportation policies

Like housing, adequate public transportation and transport infrastructure are crucial for improving the quality of life of urban residents. At the intra-urban level, the quality of road infrastructure and public transport influences mobility and home-to-work connectivity within the urban perimeter and its adjacent areas. At the inter-urban level, transport infrastructure is essential for urban capacity to attract and retain investment and capital and to develop competitive advantages. The transport sector in Chile has progressed greatly in recent decades: public transportation is more widely available within and between cities and the quality and extension of transport infrastructure has improved. However, challenges remain to enhance, expand and diversify transport networks and to integrate transport policy within an urban planning system.

Improving urban transport infrastructure and modalities can facilitate internal connectivity and access to jobs and services, ease traffic congestion and reduce pollution –

all of which can contribute to a better quality of life for urban residents. Urban transport in Chile is under pressure from the spatial growth of Chilean cities, the rapid increase in the number of private cars, and increased congestion. The socio-spatial segregation patterns of Chile's urban areas and the challenge of developing a co-ordinated public transport system will need to be considered when designing and implementing public transport initiatives.

As cities expand, pressure on transport increases

Chile's urban growth patterns in recent years have been determined, among other things, by income growth, real estate company growth and land speculation, and expansionary pressures from housing policies (Barrias et al., 2005). Spatial growth can be attributed in part to high-income residents moving far from the centre in search of cleaner and greener areas, but is more strongly correlated to the location of social housing at urban peripheries,[30] where land prices are low. At the same time, economic activities, jobs and services appear to have clustered in central locations (the exception to this may be the Metropolitan Region of Santiago) (Livert Aquino and Gainza, 2011; OECD, 2012b).

This considerable spatial expansion has been accompanied by significant development and upgrading of the urban transport infrastructure, including the construction of urban highways under Chile's concession programme (see Box 2.14). From approximately 2001 to 2009, about 180 kilometres of new or upgraded urban highways were built in the Santiago Metropolitan Region, including such projects as the *Costanera Norte*, a modern expressway of 43 kilometres inaugurated in 2005, connecting Santiago from east to west, and enabling easy access to Santiago's airport, the highway to Valparaíso, and so on. The Ministry of Public Works (*Ministerio de Obras Publicas*/MOP) has undertaken the construction of urban bridges and viaducts, ring roads and coastal routes in various urban areas of the country (e.g. *Camino La Pólvora,* which provides new access to the port of Valparaíso, the Llacolén bridge in Concepción and the widening of the coastal esplanade in Antofagasta) (MOP, 2010). However, improved infrastructure itself is a driving force for further spatial growth. The increase in city size and the extension of urban transport infrastructure generates new challenges related to improving connectivity and

Box 2.14. **Chile's Concession Programme**

In 1993, Chile launched an innovative concession programme based on public-private partnerships focused on a number of highway-network development projects. These have been developed mainly through build-operate transfer (BOT) arrangements. Concession contracts are awarded through a public international bidding process. The winning concessionaire signs a contract with the national government under which a concessionaire finances, builds and operates the infrastructure facility. In exchange, tolls are collected for a fixed length of time, and the infrastructure facility reverts to the government when the concession contract expires – normally 20 to 30 years. Most contracts include minimum revenue assurance by the government, in the event that toll proceeds fall short of the agreed amount (OECD, 2009). The concessions co-ordination Unit of the Ministry of Public Works (*Ministerio de Obras Publicas*/MOP) regulates and controls the system.

Source: OECD (2009), *OECD Territorial Reviews: Chile 2009*, OECD Publishing, Paris, doi: *10.1787/9789264060791-en*; *www.concesiones.cl*.

accessibility, traffic regulation and environmental control. Inter-institutional co-ordination and the urban governance framework will be crucial for assuring a harmonious and sustainable urban development process in which transport, housing and environmental policies and priorities are all taken into consideration.

The extension of urban areas creates long commutes and traffic congestion, and tends to result in more trips from bedroom communities located at the periphery to central areas where jobs and services are concentrated (CEPAL, 2012). The fact that low-income residential areas are located far from job and service centres increases the need for daily long-distance commuting, especially during peak hours (CEPAL, 2010b and 2012). At the same time, the average number of trips taken per person has increased (Secretaría de Planificación de Transporte (SECTRA) *www.sectra.gob.cl/Indicadores_de_Movilidad/Indicadores/tasa_viajes.html;* IEA, 2009), a trend common to most of Chile's larger cities. In Santiago, for example, the trip rate rose from 1.61 in 1991 to 2.98 in 2006 (Secretaría de Planificación de Transporte (SECTRA) *www.sectra.gob.cl/Indicadores_de_Movilidad/Indicadores/tasa_viajes.html;* IEA, 2009). Generally, longer and more frequent trips, especially in peak hours, result in higher individual costs in money and time, and social costs in terms of congestion and pollution. This can manifest in such negative externalities as loss of productivity due to long commuting times, and higher health costs due to poorer environmental conditions (OECD, 2006). In addition, from 2000 to 2010, the private vehicle fleet grew by more than 58% in Chile (INE, 2011, 2005, 2003). This was paralleled by a rise in the percentage of total trips made in private transport versus public transport (CEPAL, 2012). In common with most of Chile's larger cities,[31] these trends are leading to greater road congestion and elevated pollution levels.

While the number of personal vehicles is on the rise and the government is facilitating inter-urban connectivity, public transport remains an important feature of Chile's urban landscape, particularly for low-income municipalities. In 2006 on average, approximately 54% of the daily motorised trips in the Santiago metropolitan region were made on public transport (bus, metro, collective taxis).[32] If daily commuting is disaggregated by income, results show that the lower-income segments are still highly dependent on public transport (CEPAL, 2012).

Public transport, while much upgraded, could be improved

Different initiatives and investments have improved, upgraded or expanded the range of public transport in Chilean cities. Much of the emphasis has been placed in Santiago, given its large share of the country's total population and productive output, as well as Chile's two other functional metropolitan areas, Valparaíso and Concepción. In 2001, Santiago's subway (Metro) had 52 stations and three lines; by 2012, it had 108 stations and five lines, with an additional 103 kilometres of track. In addition, considerable attention has been placed on improving the service of the *Transantiago* public bus transport system (see Box 2.15). In Valparaíso, an urban train was inaugurated in 2005, with 20 stations connecting the city with Viña del Mar and the town of Limache, 43 kilometres away. In 2005, the metropolitan area of Concepción inaugurated the BIO Train service, providing a 48-kilometre link between the city of Concepción and the municipalities of Talcahuano, San Pedro de la Paz, Chiguayante and Hualqui (www.biotren.cl/BiotrenEmpresa.aspx accessed 30 October 2012). In addition, a new fleet of buses with more capacity and better conditions for passengers (*taxibuses*) was established in 2011, and a new service of night buses was established in June 2012.

Box 2.15. **Santiago's bus transport system and the *Transantiago Plan***

The metropolitan area of Santiago has faced transportation challenges in recent years, particularly with the transition to its integrated public bus system, Transantiago. Public authorities have been resolving the chief problems identified in the design and operation of this system. While these problems affected the efficiency and effectiveness of road-based public transportation (e.g. requiring passengers to transfer more often between feeder buses, trunk buses and the Metro), they also affected the overall public transport system, including the Metro. Transantiago's initial design and service deficiencies dramatically increased demand for and use of the Metro system. From 2006 to 2007, the number of passengers using the Metro practically doubled,* generating major congestion and service problems. Different measures have been implemented to resolve this, including an infrastructure upgrade, an increase in the number of trains, better organisation and distribution of service, more frequent running times and public information campaigns. Despite these efforts, Santiago's Metro continues to face severe congestion at peak hours (see *El Mercurio* newspaper, 24 June, 2012).

* In 2006, the Metro system transported about 331 million passengers. In 2007, this jumped to 600 million (with no increase in the number of Metro lines). In 2011, there were close to 640 million passengers (Metro de Santiago, 2011). This increase occurred very rapidly, with the number of daily metro passengers rising from 1.2 to 2.3 million (Metro de Santiago, 2007).

Source: OECD (2009), *OECD Territorial Reviews: Chile 2009*, OECD Publishing, Paris, doi: *10.1787/9789264060791-en;* CEPAL (2011), Institucionalidad y Transporte Público Urbano: Santiago de Chile y Medellín.

Public transportation still suffers from several shortcomings, including long travel times and areas with insufficient coverage or lack of intermodal co-ordination (e.g. transfer points between buses and suburban trains or the metro).[33] There is also a potential need to redirect attention and resources to other, non-metropolitan urban areas that face similar questions of sprawl, congestion, pollution and socio-spatial segregation. While significant emphasis has been placed on resolving transport issues in Santiago, many other cities in Chile (e.g. Antofagasta, Coquimbo and Temuco) also face major transport problems, including insufficient coverage, low running frequencies, lack of intermodal co-ordination and a lack of basic urban transport infrastructure. These urban areas should not be overlooked. Public transport and transport infrastructure play an important role in improving the quality of life, attractiveness and economic potential of these cities. Improving transport facilities and services would thus be a way to promote the economic development of cities outside the metropolitan region, and to counterbalance the concentration of economic activities, population, congestion and pollution in a single metropolitan area. With this in mind, a fund of equivalent value to the one used for the development of Transantiago was earmarked for cities interested in enhancing their public transport systems.

Public transport can move more people than private cars over a given amount of road space, or indeed, as in the case of a subway, without occupying any road space at all. Public transport improvements can help reduce traffic congestion and emissions. Effectively promoting public transport remains an important congestion management strategy, and a way to reduce pollution. However, passengers must have an incentive for using public transport services, for example, faster commuting times, lower costs, greater comfort and/or safety. Unless commuters believe that using the service is preferable to using a car, those who can afford it will opt for private transport. While public transportation is well patronised in Chile's cities, some potential passengers may be deterred by the real or perceived impression that it is inefficient, unclean or unsafe. To increase the use of public

transport, not only must the modal infrastructure be diverse (e.g. bus, tramway, subway) and connectivity improved, but performance, attractiveness and efficiency must also be taken into consideration.

One expedient for encouraging the use of public transport would be a reduction in fees for frequent travellers. Chile's public transport fare structure includes fare differentiation to improve service management (e.g. higher prices at peak hours) or to increase social equity (reduced prices for students and senior citizens). However, there is no fee reduction for frequent use at present. Many OECD cities have a 10-ticket "bonus" or monthly or yearly passes with lower per-use fares than individual tickets (see Box 2.16). Such a mechanism could further attract passengers and provide a less costly public transport solution for lower-income riders. To ensure a positive social outcome, such measures in Chile would need to be tailored to low-income residents' lack of capacity to save. A progressive reduction of the price relative to monthly frequency of use would be one option (e.g. a weekly, bi-monthly or monthly pass that maximises per-trip savings). Finally, given the current saturation of public transportation in cities like Santiago, such a fee reduction policy should be introduced with measures to increase the system's capacity and improve inter-modal co-ordination.

Box 2.16. **Comparing metro ticket prices in Santiago, Madrid and Paris**

The price of a single ticket for Santiago's Metro is between CLP 560 and CLP 670, depending on the hour of the day (between EUR 0.90 and EUR 1.10). This is less costly than single-ticket prices in Madrid (between EUR 2 and EUR 1.50) or Paris (EUR 1.90). However, a traveller buying a set of 10 tickets in these two European capitals can lower the cost per trip to a price almost equal to that of Santiago's during peak hours (close to EUR 1.20 both in Madrid and Paris). Seasonal or monthly passes further reduce costs for frequent travellers. A monthly pass for adults costs EUR 51.30 in Madrid and EUR 62.90 in Paris.* This considerably reduces the prices for frequent users. Moreover, considering the importance of the public transport system for the low-income segment in Chile, price comparisons should consider that minimum salaries are considerably higher in France and in Spain than in Chile.

* Much lower prices apply for students or seniors: e.g. EUR 32.90 and EUR 11.60 for a monthly pass in Madrid if the traveller is a student or a senior, respectively. Prices do not include the use of the metro in suburbs or outside the main city areas of Madrid or Paris.

Source: RATP website, *www.ratp.fr*; Metro Santiago website, *www.metrosantiago.cl*; Metro Madrid website, *www.metromadrid.es*.

Conclusions

Many OECD countries employ a variety of measures to enhance the attractiveness and performance of public transport systems, including improving co-ordination between the different public transport modes; adapting fee structures; physically extending services (i.e. adding new segments, lines or covering more urban areas); increasing service frequency; making operational improvements; and giving public transport traffic priority over other traffic at intersections and on roads. For such measures to be effective, particularly as congestion management, they should be accompanied by other initiatives to discourage the use of cars, for example by restricting vehicle access to certain zones (e.g. historic centres), or to make automobile use more efficient through incentives for the purchase of more efficient public and private vehicles (e.g. hybrid or electric), and promoting and improving infrastructure for the use of bicycles and pedestrian travel (OECD/European Conference of

Recommendations for enhancing public transport policy in Chile

- **Improve public transport service,** by improving co-ordination between the different collective transport modes; physically extending services; and giving public transport traffic priority over other traffic at intersections and on roads.
- **Introduce parallel measures to make automobile use more efficient** and/or to reduce the use of cars by individuals, including restricting vehicle access to certain zones (e.g. historic centres), developing incentives for ride-sharing and promoting the use of bicycles and pedestrian travel.
- **Promote public transport and infrastructure facilities in cities outside Santiago** to encourage the economic development of other urban areas, and to counterbalance the concentration of economic activities, population, congestion and pollution in metropolitan areas.
- **Introduce frequent-traveller reduction fees** to encourage use of public transport and to curb prices.
- **Improve public transportation access and accessibility in low-income municipalities** to facilitate access to job opportunities and services, reduce traffic congestion and pollution, and enhance overall quality of life. Developing and enforcing a comprehensive urban planning system that promotes policy coherence and synergies between transport and related development policies is essential.
- **Actively involve local institutions early on and throughout the design and development of transport-related initiatives** to tailor them to local circumstances, needs and overall urban dynamics.

Ministers of Transport, 2007). Promoting the use of public transport, restricting or limiting the use of private cars and improving the co-ordination between the different transport modes will require a robust urban planning system, integrated land use and transport policies, and better co-ordination between the different actors and institutions involved in transport and other policies related to urban development.

Environmental policies

Chilean cities face a range of environmental challenges related to urban development. Although national standards exist, a mismatch between incentives and targets at the municipal level and a lack of inter-municipal co-ordination has led to striking disparities within functional urban areas, as demonstrated in Chapter 1. Air quality is the primary challenge, followed by maintaining water quality, managing the impact of urban areas on surrounding ecosystems and assuring access to open space. Waste management, on the whole, has improved. This section examines the existing system of environmental impact evaluation in Chile, followed by an assessment of the environmental challenges facing Chilean cities.

Environmental evaluation mechanisms

In Chile, the environmental impacts of urban development are assessed and managed through two systems:

1. The Environmental Impact Assessment System (*Sistema de Evaluación de Impacto Ambiental*/SEIA) evaluates the impact of all development and infrastructure projects,

whether in urban or rural areas (SEA, 2012). The SEIA is carried out by the separate Environmental Evaluation Service, which is a decentralised body overseen by the President of the Republic through the Ministry of the Environment (OECD, 2011e).

2. The Strategic Environmental Evaluation (*Evaluación Ambiental Estratégica*/EAE), assesses the environmental risks and effects of local and regional territorial development plans, including the Regulating Plans (PRs) at the municipal, inter-municipal and metropolitan level (PRC, PRI and PRM) (MMA, n.d.). The Ministry of Environment undertakes these evaluations.

The SEIA is more established than the EAE, but it is limited by its project-by-project focus. The SEIA can only require mitigation, repair or compensation for environmental damage. The Environmental Evaluation Service does not have the mandate to consider the larger urban system in assessing a project's environmental impact (SEA, 2012). The result is case-by-case treatment of environmental externalities that does not consider how each effort at mitigation, repair or compensation may undermine or contribute to an urban area's overall environmental quality. One mechanism that has been developed is the Urban Transport System Impact Study (*Estudio de Impacto al Sistema de Transporte Urbano*/EISTU), which sets conditions to mitigate a development's potential impact on roadways and parking for large projects (SST, n.d.). However, the vast majority of projects that would otherwise require an EISTU are typically split into smaller parcels in order to avoid triggering the study requirement. This has resulted in tendency to "build first, service later" (SEA, 2012). Another weakness of the SEIA is that it has little control over the enforcement of its decisions by line ministries (OECD, 2005). Given this, the OECD has called for increasing the enforcement role of sectoral administrations at the regional level, including the SEREMI (OECD, 2005).

The EAE does have the potential to strategically assess the sustainability of urban development, as it evaluates the risks and effects of PRs and other territorial plans. However, this instrument was only recently established by national law in January 2010, and its impact on the development of these plans is still unclear. It has not been incorporated yet into new PRs, and has only been applied retroactively to approximately 20 existing PRs. The EAE are designed to be undertaken in parallel with the development of a new PR, so that the establishment of environmental objectives informs and is informed by the establishment of land-use plans. However, in practice, they have not yet realised their potential to establish long-term objectives for an urban area's environmental impact or to integrate those objectives in an over-arching master plan. To increase the effectiveness of the EAE, it may make sense to broaden its role beyond evaluating the environmental impact of the PRs. For example, the EAE could assess the overall impact of urban development plans on long-term sustainability goals, including reducing pollution, reducing greenhouse gas emissions, reducing eco-system pressures and increasing environmental quality of life for city residents. A range of city-level sustainability plans across the OECD provide models for this broader role.

Reducing urban air pollution by reducing incentives for car ownership

Air quality has a measurable impact on human health, the environment and the attractiveness of cities. In the OECD "Better Life Index", Chile ranks lowest in environmental quality, primarily due to its air quality. The concentration of some air pollutants has decreased over the past decade, but air quality is still poor (see Chapter 1). High levels of PM_{10}, $PM_{2.5}$ and ozone present a threat to human health, the environment

and a city's attractiveness (Bell et al., 2006; OECD, 2010a; OECD, 2011e). The key driver for air pollution in cities is on-road transportation, which continues to be a primary mode of urban transport[34] in Chile.

National air quality regulations have produced some positive results, but the current incentive structure still favours personal vehicle ownership, a major contributor to air pollution. National air-quality regulations were updated for a number of air pollutants ($PM_{2.5}$ SO2, NO, HC and CO), and a "Clean Air Programme" was launched in 2010, aiming to improve air quality in the biggest cities through sectoral emission reduction strategies (e.g. firewood, industries, transport and monitoring). The Plan for the Prevention and Anti-Pollution of the Metropolitan Region (*Plan de Prevención y Descontaminación de la Región Metropolitana*/PPDA) was updated in 2006, targeting major pollution sources in metropolitan areas, such as transport (e.g. diesel vehicles, fuel standards), as well as the industrial and residential sectors (OECD, 2011e). However, these standards are unlikely to have the desired effects if cities have little incentive to reduce their dependency on tax revenues from private vehicles. The vehicle tax is the third single largest revenue source for Chilean municipalities, which could discourage municipalities from implementing policies that would reduce car ownership and use (Ministerio de Interior, 2012). Municipal revenue structures would thus need to be redesigned to decrease the structural dependency on cars in cities. At the very least, incentives could be implemented to facilitate or promote the purchase of public and private vehicles that use alternative forms of energy.

In addition, the administrative fragmentation characterising many of Chile's functional urban areas hampers effective pollution reduction plans and strategies. Commuters within functional urban areas often drive across municipal boundaries. This means that transport-related pollution is a problem shared by all municipalities comprising a functional urban area. Effective pollution reduction plans would therefore need to be conceived across administrative boundaries, and with respect to "air-sheds" (see Box 2.17). Air-shed management for pollution reduction has been successfully implemented in a number of OECD countries and cities. New Zealand's government has published national guidelines for air-shed management, and several cities in Canada have developed air-shed management plans, regional air-shed agencies and air-shed pollution reduction strategies, as in Alberta, the "Capital of Alberta Air-shed Alliance", or in the "Georgia Basin". Air-shed management organisations usually cross many administrative boundaries (ACAA, 2012), and could help better address pollution reduction in Chile's metropolitan areas.

The need for watershed management

Overall water provision and quality in Chilean cities is good (see Chapter 1). However, it varies among municipalities and could be improved through integrated watershed management. Repeated attempts to create an integrated watershed management strategy in Chile have failed, but watershed management still presents an option for improving river basin water quality. Water policies in Chile are designed nationally, and municipalities are mainly responsible for their implementation. Eight central agencies[35] are involved in designing water policies. In 2009, an inter-ministerial committee on water policies was established to co-ordinate actions between departments and agencies involved in national water policies and strategies. The committee is led by the Ministry of Public Works (*Ministerio de Obras Publicas*/MOP), and includes representatives from the General Secretary of the Presidency, the Ministry of Economy, the Ministry of Agriculture, the Ministry of Mining, the

Box 2.17. **Air-shed management plans and strategies**

New Zealand's Ministry for the Environment released national guideline values to facilitate regional air-shed management. Air-sheds are defined as volumes of air that are bounded by geographical and meteorological constraints and are affected by polluting activities. The government suggests five steps for developing and implementing regional air-quality management plans:

1. Determine the state of the air and pressures on it and how these will change over time.
2. Use monitoring data and national guideline values to establish regional criteria and reduction targets.
3. Devise management or reduction strategies and assess their costs and benefits.
4. Refine strategies through community consultation and implement them.
5. Evaluate the effectiveness of reduction strategies by assessing changes in the pressures on, and state of, the air environment and refine strategies if necessary.

Air-quality management plans should be established through regional co-operation and collaboration of agencies and institutions within respective air-sheds, and pollution-reduction strategies can include policies and rules in regional policy statements and plans, education programmes, national policies and regulations and incentive schemes.

The ***Georgia Basin, Puget Sound International Air-shed Strategy*** is a multi-agency international co-operative effort addressing air pollution problems in the Georgia Basin Puget Sound area, which includes the Georgia Basin in Canada and the Puget Sound in the United States, with Seattle and Vancouver as the region's largest cities, as well as Victoria (British Columbia) and Olympia (state of Washington). Various local governments, First Nations/Tribal agencies and NGOs have worked together on developing a common air strategy. A network of federal, state and regional partners focus on inter-agency (and cross-border) co-operation and information-sharing, facilitating the design of well-informed, basin-wide target setting, reduction strategies and regulations. A number of sectoral and local strategies are developed by participating agencies, such as the *Northwest Ports Clean Air Strategy* (NWCAS), which was created through a partnership between the Ports of Seattle and Tacoma and addresses port-related contributions to air quality and climate change. NWCAS encourages voluntary, collaborative action among the three major area ports – Seattle and Tacoma in Washington and Metro Vancouver in British Columbia – to reduce port-related diesel emissions in the Georgia Basin-Puget Sound.

Source: New Zealand Ministry for the Environment (2010), "Applying the Guideline Values to Airshed Management", New Zealand Government website, *www.mfe.govt.nz/publications/air/ambient-air-quality-may02/html/page5.html*, accessed 7 September 2012; Environment Canada (2012), "Georgia Basin/Puget Sound, International Airshed Strategy", Environment Canada website, *www.pyr.ec.gc.ca/airshed/index_e.htm*, accessed 7 September 2012; OECD (2011), *Environmental Impacts of International Shipping: The Role of Ports*, OECD Publishing, Paris, doi: *10.1787/9789264097339-en*.

National Energy Commission, and the National Environment Commission (OECD, 2011b). Chile's water sector was partially privatised during the 1990s, and the Superintendency of Sanitary Services was created to periodically set rates and define and enforce standards for concession companies (Akhmouch, 2012). Rising water demand, the need to regulate water quality and environmental flows, and the increasing necessity to manage surface and groundwater resources, led to a proposal in 1992 to create watershed management corporations that was not pursued (OECD/Economic Commission for Latin America and the Caribbean, 2005). In April 2008, another attempt was made with the launch of a National

Strategy for Integrated Watershed Management (*Estrategia Nacional de Manejo Integrado de Cuencas Hidrográficas*), which promoted a national institutional framework to promote the creation of local watershed bodies, aiming to co-ordinate water and related resource use. While this strategy was also unsuccessful, it prompted the creation of the User Organisations and Water Efficiency Unit by MOP in 2011. The 2008 strategy is judged to have failed mainly due to problems with its design, and for providing insufficient evidence for the benefits that the significant institutional changes in water management could bring (OECD, 2011b). Other OECD countries have successfully established river basin organisations and pursued watershed management, while recognising the challenge of managing the multiple actors and interests involved in such co-ordination efforts (see Box 2.18).

Box 2.18. **River basin organisations and water information systems for watershed management**

River basin organisations and water-specific bodies can play an important role in regional water policy implementation and for the co-ordination of watershed management with multi-actor involvement. Examples of river basin organisations can be found in Australia (Murray-Darling Basin Authority), France (6 *Agences de l'Eau*), Mexico (25 *organismos de cuenca*), Portugal (5 *Administraçoes de Região Hidrográfica*), the Netherlands (Water Boards) and Spain (9 *confederaciones hidrográficas*).

In **Mexico**, 13 regional CONAGUA offices have recently been transformed into Basin Authorities, which are expected to be responsible for formulating regional policy, designing implementation programmes, collecting water fees, and recommending fee rates. In addition, 25 Basin Councils were established within the basin boundaries of the Basin Authorities, which in some cases includes entire states. When states are divided between two or more Basin Councils, they participate in all the Basin Councils within their territory.

Spain has a long tradition (since 1926) of river basin organisations that function as single authorities within the unit of single natural river basins, and as bodies of line ministries in regions. One task is to harmonise water policies and urban planning, as well as managing information on territorial development, fisheries, irrigation, infrastructure and other water-relevant issues. EU *Water Framework Directive* resulted in 23 planning areas, corresponding to the 23 basins in Spain. Some of the River Basin Authorities integrate intra-regional stakeholders, others function inter-regionally, which increases the complexity and the risk for tension among the various stakeholders.

Water information systems (WIS) and databases are key conditions for making informed decisions on water policies and effective watershed management. They have been established mainly for hydrological issues (water scarcity, quantity and quality aspects), but are still rare for economic and financial information (tariffs, infrastructure financing, etc.) as well as for institutional and territorial data (allocation of responsibilities, urban/rural challenges, etc.).

Source: OECD (2011), *Water Governance in OECD Countries: A Multi-level Approach*, OECD Studies on Water, OECD Publishing, Paris, doi: *10.1787/9789264119284-en*.

A need to better manage the impact of unplanned urban expansion on ecosystems and hazard risks

Urban expansion can put pressure on ecosystems and biodiversity. While the Strategic Environmental Evaluations (EAEs) are intended to take into account the impact of PRs and other regional plans on ecosystems, in practice, the EAEs have not yet had much effect on mitigating the potential impact of urban expansion on biodiversity. The recent introduction of Chile's Biodiversity and Protected Areas Service (which replaced the National Forestry

Corporation) has not yet had much influence, particularly with respect to ensuring compliance with the goals of the *National Biodiversity Strategy* (OECD, 2011e). Chile's fragile ecosystems in the Andes, coastal areas and deserts have experienced continuous biodiversity losses due to extensive, partly unplanned, urbanisation. This calls for an integrated approach to biodiversity within urban and regional development plans. Other OECD cities, such as the City of Edmonton, Canada, have successfully integrated their biodiversity strategy with urban planning (City of Edmonton, 2009). A crucial condition for estimating the impact of urban expansion on the local ecosystem is a cost evaluation of potential ecosystem service losses and of increasing natural-hazard risks. This was successfully accomplished through catchment planning in South Africa's uMhlatuze municipality (Goodstadt et al., 2010). In some cases, "offsetting policies" can compensate biodiversity losses associated with urban development by improving the health of ecosystems elsewhere. Biodiversity "offsetting policies" have been implemented by a number of governments, including Brazil, Canada, the European Union and the United States. While offsetting schemes usually aim at producing a "net gain" or avoiding a "net loss" of environmental benefits, it is not always easy to determine whether respective schemes achieve their objectives, and success can be complicated by political, economic and ecological uncertainties (Maron et al., 2010; Gordon et al., 2011).

Urban expansion can also increase the risk of natural hazards for urban areas, in particular flooding, as the increase in impermeable surfaces reduces urban land's ability to absorb rainwater. However, flooding risks are not yet well reflected in storm-water management and flood-risk governance in Chile. The expansion of impervious urban surfaces is a key factor for increased flood hazard, and vegetation cover and its distribution in urban areas plays an important role in avoiding storm-water related flood events. In many Chilean cities, green space has expanded more slowly than the overall expansion of urban land (Ebert, A. and J. McPhee, 2009). Flood risk from storm water is particularly high in areas where storm-water infrastructure has not been adapted to elevated runoff in creeks coming from mountains, as in Santiago (Ebert, A. and J. McPhee [2009]). Urban expansion in the eastern part of Santiago towards the Andean piedmont has also increased the amount of impervious surfaces, contributing to increased risks from flood hazards (Romero, 2012). To reduce the risk of flooding and to increase absorption of storm water, between 2006-2010, the city of Chicago replaced the pavement in more than 100 alleys in the city with more permeable surfaces and plantings (OECD, 2012c; City of Chicago, 2010).

The heightened flood risk from urban expansion, insufficient green space and a lack of storm-water infrastructure has received little attention in urban planning in Chile so far. Since 1997, storm-water infrastructure has been the responsibility of MOP and the Ministry of Housing and Urbanism (*Ministerio de Vivienda y Desarrollo Urbano*/MINVU). Since 2003, urban developers have been obliged to provide storm water drainage, and storm water management was opened to concession, supervised by the Superintendency of Sanitary Services (*Superintendencia de Servicios Sanitarios*/SISS). The MOP is also responsible for drafting master plans for storm-water drainage in cities with over 50 000 inhabitants (OECD, 2005). A recent assessment of environmental and urban planning policies has not reported any progress on the success or failure of implemented plans for storm-water management concessions (OECD, 2011e).

The need to increase access to open spaces in some urban areas

Insufficient access to green space per capita is a common phenomenon in Chilean cities, and has tended to worsen, in particular in lower-income urban areas. In Santiago, green space

per capita increased by 15% between 2001 and 2009. However, with 3.46 m^2 per capita, it is still significantly below the 9 m^2 of green space per capita recommended by the World Health Organisation (WHO) guidelines (see Chapter 1) (MMA, 2011b; Kuchelmeister, 1998).[36] While overall green space per capita slightly increased in Santiago, vital green spaces in peripheral areas were not maintained, leading to green-space losses in poorer areas of the city (Hölzl, 2011). The uneven distribution of green space in Santiago is evident: central and peri-central municipalities, such as Santiago or Providencia, enjoy good access to green space, while peripheral municipalities, such as Calera de Tango and Padre Hurtado, have very poor access to green space (see Figure 1.38, Chapter 1). In addition to this divide between wealthier and poorer communities in access to green space, wealthier communities are better able to develop and maintain their own communal green space, which is likely to increase the unequal access to green space among communities in many Chilean cities.

The issue of access to green urban space has entered the Chilean political agenda. A 2008 survey of urban life conducted by the MINVU highlights the issue of urban green space as a key concern for urban improvements (Hölzl, 2011 citing Barton et al., 2012). However, thus far, no policies have effectively addressed the issue. Research suggests that a number of positive externalities are connected to increasing the ratio of urban green space in poor neighbourhoods. Green space can help achieve water-quality goals, protect sewer systems, recharge groundwater supplies, improve air quality, provide green-collar jobs and reduce energy costs for the urban poor (Dunn, 2010). A possible approach to overcoming socio-spatial disparities between wealthier and poorer communities may be to create inter-municipal or regional park agencies, such as the Washington State Parks agency or the East Bay Regional Parks District (EBRPD) and the Regional Parks Foundation (RPF) in the San Francisco Bay Area in California. These examples could provide models for pooling resources or issuing bonds for green space development and maintenance. This was also done for the "Augustus Hawkins Nature Park" in Los Angeles (see Box 2.19).

Municipal waste management has improved

Waste generation rates in Chile compare well to other OECD countries, as demonstrated in Chapter 1, and municipal waste disposal has improved over recent

Box 2.19. **Los Angeles' Augustus Hawkins Nature Park**

Located in an industrial neighbourhood in the south of Los Angeles, the 3.4 hectare Augustus-Hawkins Nature Park was developed on a brownfield, a former Los Angeles Department of Water and Power pipe-storage yard. Built by the Santa Monica Mountains Conservancy and the Mountains Recreation and Conservation Authority, and funded through USD 4.5 million in California park bonds, the nature park opened on 16 December 2000, and was transferred to the City of Los Angeles in 2005.

Citizen consultation was part of the park's design process. For example, workshops were held with local residents, mainly lower-income Latinos and African-Americans, which revealed the preference for an "urban nature park". The park features a community centre, a nature education programme for children, picnic areas and public toilets. The financial model and the community engagement for the creation of the park makes it an interesting model for park development in poorer neighbourhoods.

Source: Byrne, J. et al. (2010), "Green and Open Space Planning for Open Space Consolidation: A Review of the Literature and Best Practices", Urban Research Program, *Issues Paper* 11, March 2010, Griffith University, Brisbane, Australia.

decades, in part due to increased sanitation and environmental regulations (MMA, 2011b). Nevertheless, waste management is generally tackled in a reactive way, focusing mainly on the collection and final disposal of waste in landfills. Waste management and recycling policies are still relatively new. It is estimated that the valorisation rate of waste in Chile was approximately 10% in 2009 (CONAMA, 2010).

In 2005 the directive council of CONAMA approved a policy on integrated solid-waste management (*Política de Gestión Integral de Residuos Sólidos*). The main objective of the policy is to manage solid waste in an integrated manner so as to minimise health and environmental risks while ensuring a sustainable and efficient development of the waste sector (MMA, 2011). On a national and regional level, executive secretaries (*Secretarías Ejecutivas*) were created to oversee waste management throughout the life cycle of products (creation/use/disposal). This initiative has had a positive impact in the Santiago Metropolitan Region, where the waste management policy directive led to the creation of the *Plan de Acción Santiago Recicla*, currently Chile's most important waste-recycling programme (Box 2.20).

Box 2.20. **Plan Santiago Recicla**

Santiago Recicla is a recycling initiative started in 2009 by CONAMA RM (the National Environmental Commission for the Metropolitan Region), the Metropolitan Government of Santiago and the Casa de la Paz Foundation. This initiative seeks to integrate public and private action that leads to efficient and sustainable waste management throughout the region. Recycling is the focus of the initiative. The main goal of the *Santiago Recicla* action plan is to increase the recycling of household solid waste (*resíduos sólidos domiciliarios*) to 25% in 2020. Today, it is estimated that only 14.4% of household solid waste is recycled, a percentage below that in other OECD countries.

The *Santiago Recicla* action plan is based on municipal local initiatives and inter-municipal co-operation. So far, 41 municipalities have invested in the first phase of the action plan, which is oriented towards the recuperation of non-organic waste such as paper and cardboard, glass, metal scraps and aluminium, PET and Tetra Pak. Main projects are:

- Glass bottle collection for the benefit of COANIQUEM, operated by Cristalerías de Chile.
- Glass bottle collection for the benefit of CODEFF, operated by Cristalerías Toro.
- Tetra Pak collection for the benefit of Aldeas Infantiles SOS, operated by Tetra Pak Chile.
- Newspaper and paper collection for the benefit of Fundación San José, operated by SOREPA S.A. (*Sociedad Recuperadora de Papel* S.A.).
- PET plastic bottle collection and recycling, operated by RECIPET S.A., for the benefit of CENFA (*Centro de la Familia*).

Several other initiatives encourage social participation and serve an educational purpose, to increase awareness of the value of recycling.

Overall, *Santiago Recicla* seeks to promote integrated waste-management systems that engage the different actors implicated in waste life cycles and recycling. This vision also brings together stakeholders and business networks to stimulate job creation and new sources of income. Finally, *Santiago Recicla* promotes capacity-building to improve the management and commercialisation of waste.

Source: Comisión Nacional del Medio Ambiente Región Metropolitana (CONAMA RM) (2009), Metropolitan Government of Santiago and Fundación Casa de la Paz, *Recycling Action Plan (Plan de acción reciclaje), Mesa Intersectorial "Santiago Recicla" Región Metropolitana*, Versión 6.0, Santiago, Chile.

Conclusion

The environmental performance of Chile's cities has improved over recent decades, but additional efforts are needed to further reduce air pollution, increase access to green space and to minimise natural hazard risks and ecosystem impacts. The Strategic Environmental Evaluations (EAEs) are a promising tool for assessing the environmental impact of land-use plans, but could be broadened to evaluate the overall impact of urban growth on environmental performance and quality of life. Air pollution should be tackled through disincentives on car ownership, which may mean redesigning municipal revenue streams that significantly depend on vehicle taxes. Minimising natural hazards, notably flood risk, calls for a more comprehensive approach to managing storm-water drainage and mitigating the expansion of impermeable surfaces in urban areas. Mechanisms to offset biodiversity losses should be integrated into the EAEs. In terms of waste management, Chile may wish to consider incentives and ways to promote the implementation of successful initiatives in other metropolitan and urban areas.

Recommendations for enhancing environmental policy in Chile

- **Broaden the mandate of the Strategic Environmental Evaluations (EAEs)** to evaluate the overall impact of urban growth on environmental performance and quality of life; consider integrating into the EAEs mechanisms to offset biodiversity losses caused by urban expansion by improving the health of ecosystems elsewhere.
- **Address air pollution** by disincentivising car ownership, which also means redesigning municipal revenue streams that depend on vehicle taxes. This could be complemented by incentives for alternatively powered vehicles (e.g. electric, hybrid), particularly those associated with public transport, but also including cars.
- **Establish pollution-reduction plans across administrative boundaries, taking "air-sheds" into account.**
- **Ensure a more integrated watershed management approach** to maintain the already good overall water provision and quality in Chilean cities and to reduce variations among different municipalities. Future efforts at watershed-based management could include establishing river basin organisations and co-ordinating watershed management.
- **Better manage the impact of urban expansion on flooding,** in part through a more comprehensive approach to managing storm-water drainage and also through increasing the permeability of road surfaces.
- **Ensure sufficient access to green space per capita,** in particular in lower-income urban areas. One mechanism for smoothing out green space disparities between communities may be to create inter-municipal or regional park agencies that can pool resources and issue bonds for green-space development and maintenance.

Conclusions

Chile has made significant strides in meeting the high demands of rapid urbanisation. This is evident in its successful increase of housing stock, its move to improve public transportation in its largest metropolitan region, and in the quality provision of such basic public services as water and waste management. Additional progress can be made, however. Attention should be focused on strengthening regional and local level territorial-

planning instruments. To ensure that they reflect sub-national requirements and development objectives, regional and local actors should participate early in the planning and implementation phases. Reforming land-use planning instruments, as well as zoning, will also be important moving forward, as these are no longer meeting the dynamic requirements of fast-growing cities. Re-evaluating housing policy, with an eye on perverse incentives and negative externalities such as social segregation, will be critical for reducing disparities and improving the quality of life for poorer residents. Chile is a car-oriented culture, and consideration should be given to encouraging the use of alternative modalities, such as public transportation, alternatively powered vehicles, bicycles or pedestrian areas. Not only could this have a positive impact on urban congestion, it could also help address air and noise pollution levels. Other environmental urban policy matters, such as green space, watershed management, and the impact of unplanned urban expansion on ecosystems and hazard risks, will also need to be considered. Addressing these will require an a co-operative and coherent approach both at the national and local levels, among relevant ministries, and the municipalities forming an urban area, given that the environment does not limit itself to administrative boundaries. The urban policy challenges that Chile faces are not the result of action taken by any single policy actor. The problems are multi-faceted and multi-dimensional, and their successful management will require an equivalent, integrated response.

Notes

1. Municipalities may offer a formal opinion within a period of 60 days. If they do not, the answer is considered favourable.
2. The Directorate of Planning is the strategic advisory body of the MOP in matters of planning, policy definition and general co-ordination. It is in charge of proposing policies and development plans in such infrastructure as roads, ports and airports, or water resources.
3. Chile's last urban development policy was enacted in 1979, amended in 1985 and then repealed in 2000.
4. These five thematic sub-commissions cover: urban planning; institutionalism; patrimony/heritage; social cohesion; and sustainability.
5. The inter-ministerial roundtable consists of representatives from the ministries of Public Works, National Assets Environment, Agriculture, Interior, Social Development, Defence, Finance, Economy and Energy.
6. This will occur gradually once the legislation currently in Congress proposing PROT as a statutory planning instrument is approved.
7. These should not be confused with the central government's established Strategic Regional Plans (one for each region). Strategic Regional Plans are top-down documents designed as a roadmap for *Intendentes* to ensure the President's Programme of Government is executed at the regional level. These plans are not necessarily implemented by the GORE, but it is conceivable that *Intendentes* will try to combine these central-level strategies with the Regional Development Strategies developed by GORE. The central government's Strategic Regional Plans lack a solid connection to the regional government's own development strategy, and having been prepared for the four-year presidential term, could run into obstacles associated with the electoral cycle.
8. The responsibility for regional planning was transferred from the Ministry of Planning.
9. While consultative or participatory processes are often included as part of the planning cycle, as in many countries, the robustness of this process has been questioned by actors at various levels in Chile.
10. The argument against this is that the PROT have still not gained a statutory status, while the PRDU remain a legal requirement. However, given the few PRDU in place, the fact they are required does not seem to be a sufficient incentive for their approval. In addition, because the PROT will be replacing the PRDU, the pressure from the central level to develop these has been weak.

11. In August 2012, a draft law (*Ley de Aportes*) was introduced to Congress that could create links between planning and financing by establishing a contributory fund. Municipalities seeking financing for roads, infrastructure or green space can apply to the appropriate fund. This is a positive step to increase municipal resources and capacity. However, it does not strengthen municipal financial or managerial autonomy, nor does it help detach financing from a project-by-project approach to a programme-based one.
12. Different requesting entities (mostly municipalities, but also provinces, the regional government itself, regional development agencies and de-concentrated national public services) submit proposals to the *Intendente,* who selects a portfolio of projects for submission to the National Investment System. DIPRES (the National Budgetary Secretary) can validate or comment on the initiatives selected by the Regional Government.
13. National actors can approve, comment or reject each of the individual projects in the FNDR regional investment portfolio.
14. Information obtained during OECD interviews with senior officers from these ministries, June 2012.
15. Urban sprawl is defined here as expansion of urban development characterised by low density, segregated land use and insufficient infrastructure provision. Urban sprawl can take the form of "leapfrog development", in which development "leaps" over undeveloped land (OECD, 2012a).
16. Greenfield development is defined here as new development in greenfield areas, typically located at urban fringes with both urban and rural land use (OECD, 2012a).
17. Based on estimates of Quantitative Housing Deficits using the MDS-MINVU methodology.
18. As shown in Table 2.6, even the subsidy for vulnerable families requires a minimum saving.
19. The *Ficha de Protección Social* is a proxy means test that measures social stratification. It assigns scores to families based on employment, actual and imputed potential income, health status and family composition. It is used by the Chilean government to select the beneficiaries of social programmes.
20. The additional variables are: *i)* family size and characteristics (e.g. single-person household, children or elderly persons, disability, former political prisoner); *ii)* social and housing vulnerability (e.g. overcrowding, housing type, access to water and sanitation); *iii)* waiting time (number of unsuccessful applications).
21. Housing projects in which at least 30% of the households must be beneficiaries of the subsidy to vulnerable groups, and at least 30% beneficiaries of the subsidy to emerging or middle-income families. These projects to promote social integration are still in their early stages. Housing subsidies provide a top-up of 100 UF to the general subsidy for emerging and middle-income groups, which seems to offer a mild incentive for middle-income or better-off families.
22. The driver behind this policy, which encourages buying property, is that home ownership will improve the material and financial capital of the population and help combat poverty.
23. From 1996 the MINVU authorised the use of the housing subsidy for those who purchased previously owned houses. Until then, the subsidy could only be used for new houses. In addition, the *Programa de Movilidad Adicional* facilitated the repeal of the prohibition on selling a subsidised house either before five years of occupancy (*prohibición de anajenación*), or if the occupant of the house has outstanding debts with SERVIU, in special cases with a previous authorisation from MINVU.
24. Chile's rental market is currently very limited: only 17% of the dwelling stock is rental.
25. The location subsidy was created in 2008. However in its previous form, this subsidy generated speculation and distortions over social housing prices (Trivelli, 2010). To avoid this, the government reformed the subsidy. After the reform, families were allowed to use this extra resource to invest in housing improvements. In this way, the extra grant does not need to be part of the housing price.
26. This maximum price threshold is still very high considering that the value of an average flat in a well- located residential area in Santiago, including the wealthier municipalities (e.g. Providencia or Las Condes), is approximately 50% of this amount.
27. Low-income properties are exempt from property tax. At the same time, properties of less than 140 m^2 –most of those in low-income municipalities – pay only half of the property tax.
28. The provision of primary and secondary education and primary health are partly financed on a per pupil/per patient grant by the central government. However, this grant is complemented with municipality's own resources.

29. Those smaller than 140 m^2, which currently pay only 50% of the property tax.
30. From 1976 to 2007, on average 67% of the building permits were granted to subsidised houses (see Simian, 2010). Social housing was systematically located in the periphery.
31. Calculated as a share of trips by private transport out of total motorised trips on an average working day, see *www.sectra.gob.cl/Indicadores_de_Movilidad/Indicadores/tasa_motorizacion.html*.
32. Information from SECTRA (*www.sectra.gob.cl/Indicadores_de_Movilidad/Indicadores/viajes_modo.html)* for a working average day in 2006. The share excludes trips made by non-motorised modes (e.g. walking, bicycle).
33. See the transport section of Chile's Programme of Government 2010-2013, *www.gob.cl/programa-de-gobierno/oportunidades/transporte/*.
34. The stock of private vehicles in Chile grew from 2.5 million in 2005 to 3.4 million in 2010, at annual growth rates in different places between 3% and 7% (INE, 2011).
35. Ministry of Health; General Office of Water; Water Works/Infrastructures Office; Water Works/ Infrastructure Office; Superintendent's Office for Sanitation Services; National Commission for the Environment; Rural Potable Water Programme; National Commission on Irrigation; Chilean Commission on Copper.
36. The data taken into account only include green areas and parks with municipal maintenance. Degraded or abandoned green spaces are not included.

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Chapter 3

Revitalising Chile's urban governance architecture

Chile's urban governance architecture has provided a solid framework for urban development, but it may no longer be adequate to meet the pressures of continued rapid urbanisation. Improving Chile's urban outcomes will require adjusting its urban governance framework, including building the capacity to bring central and sub-national, public and private actors together to build a "whole-of-city" approach to urban initiatives. This chapter focuses on Chile's urban administrative structures, recent sub-national reforms and sub-national financing practices. It analyses the administrative and institutional fragmentation affecting urban governance and explores institutionally based governance models, including those for metropolitan areas. Finally, it examines mechanisms to reinforce strategic planning and public service delivery capacity based on the country's own context and international experience.

Introduction

Actors in urban development at all levels in Chile agree that the current urban governance architecture is strained. It is challenged by high levels of centralisation, administrative and institutional fragmentation, a lack of co-ordination among public and private sector actors, and an urbanism framework that is top-down, sectoral, and rigid in its design and implementation. This complicates the formulation of plans for robust and sustainable urban policy outcomes, including an enhanced quality of life for urban residents.

Improving Chile's ability to enhance its urban outcomes depends on moving towards a strategically driven, integrated approach to urban development and policy formulation. Success will depend on bringing together central and sub-national, public and private actors and building a "whole-of-city" approach to urban initiatives. It will also require more capacity for cross-sectoral policy making, and the design of coherent policy initiatives based on broader strategic objectives. Greater autonomy in urban administration and management for sub-national actors will be critical. Adjustments in the institutions and frameworks of urban governance could help Chile overcome administrative and institutional fragmentation, add flexibility to an otherwise rigid system of sub-national finance and competence allocation and build a broad-based commitment to urban solutions, introducing a much needed degree of local-level ownership in urban activity and outcomes.

This chapter outlines Chile's existing urban governance architecture in terms of its institutions and frameworks. It then provides an analysis of the fragmentation affecting these structures and explores mechanisms to revitalise them based on international experience and Chile's own national context.

Current urban governance institutions: Central, regional and local

The success of any urban area is based on the activities and interactions of a wide variety of public and private sector actors, operating at central, regional and local levels. In Chile, given its centralist tradition and low degree of decentralisation, urban development priorities tend to be centrally established in Santiago, with little or no sub-national consultation. Most urban planning activity occurs within various line ministries. Regionally deconcentrated branches of these line ministries, together with regional and local governments (see Annex 3.A1) are then responsible for policy implementation, service delivery and maintenance. At the same time, the central government has a strong and extensive relationship with the private sector, through concession arrangements for infrastructure development, operation and maintenance, as well as for public service delivery.

The central level

In Chile, responsibility for urbanism is distributed across several institutions, with the ministries of Housing and Urbanism (*Ministerio de Vivienda y Urbanismo*/MINVU), Transportation and Telecommunications (*Ministerio de Transporte y Telecomunicaciones*/MTT),

and Public Works (*Ministerio de Obras Publicas*/MOP) playing the predominant role. Since 2010, the Ministry of Environment (*Ministerio del Medio Ambiente*/MMA) has been involved in the approval of urban Regulating Plans for land use, though not in their articulation or development.

The Ministry of Housing and Urbanism (MINVU) has overall responsibility for urban policy and planning at a national level and is in charge of developing regional, inter-municipal and metropolitan land-use plans. To date, MINVU's focus has been on solving Chile's housing deficit, an area in which it has been very successful (see Chapter 2). Beyond housing policy, however, it has traditionally lacked the institutional framework to address all the elements involved in urban planning (López Moya, 2010; CChC, 2011). Chile's central government institutions, which function effectively in a vertical dynamic, are less inclined to co-ordinate horizontally, and MINVU exercises little authority in other sectors of the urban development process, such as in transport or public works, that involve the participation of other national ministries and public agencies (see Box 3.1). Given the number of the actors involved in the urban process, it is vital to develop institutional and planning frameworks that promote a coherent approach. At present, co-ordination and collaboration in policy programming is rare, however, and approaches to urban development and management remain siloed and with limited cross-sectoral dialogue and/or consultation.

The Ministry of Interior's Subsecretariat for Regional Development (SUBDERE) co-ordinates regional affairs and regional development across Chile, including rural development and rural policy, but it has no direct involvement in urban development matters. The result is a strict separation of urban management from that of the rest of the territory, and risks creating a "Swiss cheese" effect in territorial development, co-ordination and management.

A further concern with the current central-level institutional architecture as it relates to urbanism is the limited participation of other key actors in the urban dialogue. How cities grow and develop is the sum total of multiple policies and actions in a complex system of territorial aspirations involving the physical environment, finance, economic growth and competitiveness, social and cultural development, education and the labour market. In Chile, it is difficult to assess how actively ministries such as Economy, Education, Finance, Health, Labour and Social Development are engaged as regular members of an urban conversation. This has reinforced a narrow and sectoral perspective on urban matters. The introduction of a national-level urban development policy that these different actors can "own" to guide their sectoral objectives, and which reflects the communities' ambitions for their cities, may help to address this issue. It will also require greater co-ordination on urban matters at the central level, for example through a standing inter-ministerial committee (e.g. the Inter-ministerial Committee on City and Territory). The present institutional structure also limits an integrated approach to addressing regional-level concerns with urban implications. For example, the Region of Valparaíso has experienced high rates of cancer and other severe illnesses linked to heavy industrialisation, which has had an impact on health services throughout the region, especially in urban centres. An integrated approach to urban development would take into account the consequences of a rising demand for costly, intensive health care and its associated demographic issues. This will have an impact not only on social services but on economic development, infrastructure and public transportation, and housing – the last three of which are managed by the core urban actors.

Box 3.1. **Primary actors in the urban development process at the central government level**

The Ministry of Housing and Urbanism (MINVU) has traditionally been focused on addressing the urban-housing deficit and in providing social housing. At the same time, through its Urban Development Division, it has the primary responsibility for urban planning at a national level. MINVU, mostly though its regional secretariats (SEREMI), has a significant level of influence on Chile's land use plans. It is in charge of developing regional, inter-municipal and metropolitan plans, as well as overseeing the development of municipal land-use plans. The ministry currently has four main priorities: reconstruction after the February 2010 earthquake, amendment of the Housing Policy, eradication of slum areas and developing the new national urban policy.

The Ministry of Transport and Telecommunications (MTT) is in charge of transport policies, including enforcing vehicle emissions, granting bus route concessions, overseeing public and private operating companies, developing street sign standards and vehicle circulation bans. The MTT is the link between the government and transport-related enterprises such as the State Railways Company and Metro S.A. Through its regional secretariats (SEREMI), the MTT leads the implementation and evaluation of the Impact Assessment System for Urban Transportation Systems (SEISTU), which aims to mitigate negative impacts on the transportation system associated with building projects.

The Ministry of Public Works (MOP) is in charge of planning, designing, building, expanding, repairing, maintaining and operating the national public infrastructure system, including roads, highways, bridges, tunnels and airports. Within its legal powers, the MOP is responsible for the implementation of the Law on Private Concessions and for controlling and supervising the private concession scheme on infrastructure. Finally, the Water Directorate under the Ministry of Public Works is responsible for the management and administration of water resources and granting property rights for water use.

The Ministry of Environment (MMA) was created in 2010 to replace the former National Environment Commission (CONAMA). The MMA participates in the strategic environmental assessment of urban and transport policies and plans. It is responsible for the administration of the system of environmental impact evaluation (SEIA) and approving environmental impact studies and declarations (including those for land-use plans, real estate projects and transport projects). The SEIA evaluates and certifies public and private initiatives including those related to: urban development, tourism, airports, railways, highways and public roads that may affect protected areas, and ports. In addition, the different land-use plans (regional, inter-municipal/metropolitan and municipal) are required to undergo a Strategic Environmental Assessment supervised by the MMA.

The Housing and Urban Development Agency (SERVIU) is an executive unit under the MINVU that deals with the construction and maintenance of urban roads. It has played a central role in implementing public transport corridors like Transantiago. SERVIU offices are established in each of Chile's 15 regions.

The Department of Transportation Planning (SECTRA) is a technical agency under the MTT responsible for the planning process of the urban transport system in Chile's cities. It advises national and regional authorities in the decision making and management of investment projects and initiatives that the process generates. SECTRA is responsible for developing and monitoring Transportation Master Plans. These are a set of projects and initiatives to meet the present and future mobility needs of the population, based on a holistic view of the city.

Source: Ministerio de Vivienda y Urbanismo, *www.minvu.cl*; Ministerio de Transporte y Telecomunicaciones, *www.mtt.gob.cl*; Ministerio de Obras Publicas, *www.mop.cl*; Ministerio del Medioambiente, *www.gobiernodechile*, accessed April 2012.

The regional level

Regional-level activities are the responsibility of the 15 regional governments (*Gobiernos Regionales*/GORE), established in 1993. Each is led by an appointed regional executive, the *Intendente*, and has a Regional Council (*Consejo Regional)*. GORE are divided into three administrative units: Administration and Finance (*Administración y Finanzas*); Planning (*Planificación)*; and Analysis and Oversight (*Análisis y Control de Gestión*). These units implement the various dimensions of regional policy and are responsible for regional public administration. The GORE have no own-revenue raising capacity, and depend entirely on the central level for regional development resources. At the same time, GORE are the key administrators and disbursers of funds for the local authorities – particularly those associated with the National Regional Development Fund (*Fondo Nacional para el Desarrollo Regional*/FNDR).

Intendentes, directly appointed by the President of the Republic, lead the GORE. Among the *Intendentes'* functions is to oversee development initiatives and ensure the co-ordination and integration of sectoral policies in their region. Currently, the average length of service for an *Intendente* is slightly over one year. This is disruptive to stability and continuity, and is an obstacle to effective oversight as well as to the credibility of the office.

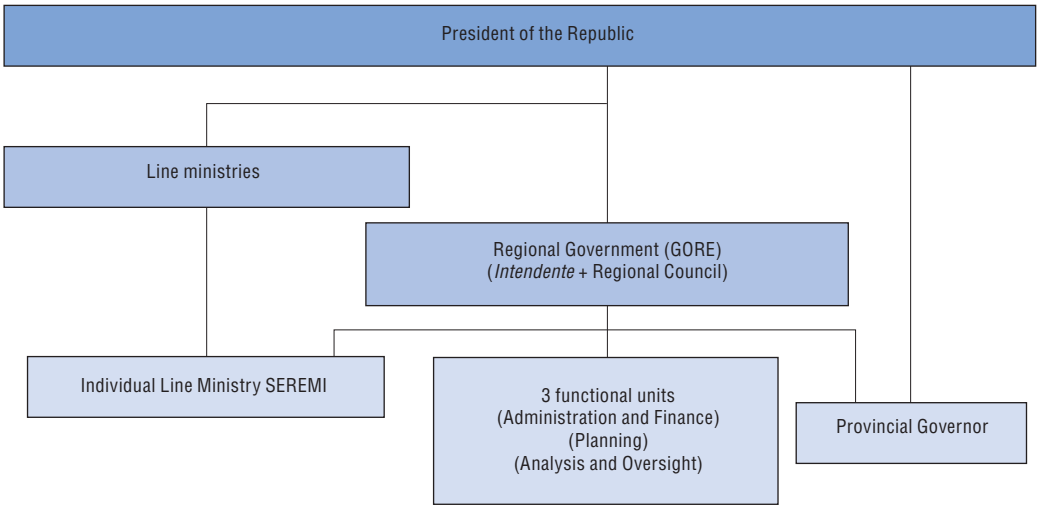
The *Intendente* presides over the Regional Council (*Consejo Regional*/CORE), whose members are elected by the municipal councillors of the region's municipalities. The Regional Council approves: municipal Regulating Plans,[1] regional urban development plans, regional development strategies and the regional budget; and, based on *Intendente* proposals and recommendations, Programme Contracts (*Convenios de Programación*/CP) and the distribution of the funds in the FNDR. In a move toward greater democratisation, Congress passed legislation at the end of 2012 to change the election process of Regional Council members from indirect election to direct election by citizens. This reform also enables Regional Councils to elect their own president, and to approve the regions' annual budget, comprised of central transfers, funds received from Programme Contracts and now revenues generated from the regions' mining, aquaculture and casino arrangements (Government of Chile, 2009; Plan Creo Antofagasta, 2012). The change will become effective in the 2014 election cycle.

Ministerial Regional Secretaries (SEREMI) support the *Intendente,* serving as a "cabinet" of technical advisors. These are the regional delegations of line ministries. Central-level ministries with sub-national competences have a SEREMI and/or equivalent body in each region, representing such ministries as Housing and Urbanism, Transportation and Telecommunications, Public Works, Education, Environment, Finance, Health and Social Development. SEREMI are responsible for carrying out national-level policies and programmes within their region. They are responsible to line ministers and must also co-ordinate their actions with the *Intendente*, though not necessarily with each other.

Provincial governors, also appointed by the President, support the region's *Intendente* as well. The governors are often viewed as valuable given their proximity to citizens, but the role they are given in territorial management and policy implementation is limited and will depend on the region and the particular *Intendente* in office.

This regional administrative structure generates some opacity on the level of responsibility and accountability (see Figure 3.1). First, the *Intendente* as the executive head of the region and president of the Regional Council should act in the best interest for the region's development. However, as a representative of the central government in the

Figure 3.1. **Central/regional institutional reporting structure**



region, the *Intendente* is also called upon to represent and implement national-level policies and guidelines, which may not always align with regional priorities. Second, the SEREMI are also in an awkward position: they answer directly to their ministry, because they are regional representatives of sectoral priorities and policies, yet they also serve the *Intendente* and work to implement sector initiatives at the regional level in line with the *Intendente*'s priorities. While in theory the priorities of all parties should align, as the SEREMI are responsible to their ministries, the ministries to the President, and the *Intendente* is carrying out the President's programme at the regional level, in practice SEREMI will tend to align priorities with their ministry. This is reported as particularly evident in Santiago, due in part to the SEREMIs' physical proximity to their line ministry. Such alignment is to be expected not only because the SEREMI are branches of line ministries and not direct departments of GORE responsible for executing regional priorities, but also because SEREMI civil servants and their ministers tend to outlive the average mandate of an *Intendente*, and following ministerial priorities provides greater stability and structure in administering actions and programmes. Finally, the institutional role and administrative function of provincial governors is unclear, as is their degree of influence in implementing national or regional policy within their territories. In addition, provincial governors may feel some of the same push/pull as the *Intendentes*, as they must take into account both the priorities of the *Intendente* and the needs of the municipalities in their territory. Some consideration should be given to the exact role of provinces in light of resource constraints.

The local level

Chile's 345 municipalities are legally autonomous, public corporations whose function is to satisfy the needs of the local community. Each municipality is led by a mayor (*Alcalde*) and a Municipal Council (*Consejo Municipal*), both directly elected every four years. Municipal Councils have 6 to 10 councillors, depending on the municipal population. They are responsible for budget, concessions, local ordinances, public service delivery and so on.

In practice, municipal autonomy in fiscal, financial and urban management is limited. The majority of local authorities are highly dependent on central-level funds to execute their competences. In 2010 and 2011, municipal spending in Chile, as a share of total public

spending, was approximately 16%[2] (Asociación Chilena de Municipalidades, 2012). Even when regional expenditures are included, decentralised expenditure in Chile is still less than 20%. This is quite different from what is generally seen among OECD countries, where in 2010, sub-central government expenditure represented about 30% of total public spending (OECD/Korea Institute of Public Finance, 2012). In addition, municipal income and expenditures represent a decreasing share of total public resources, potentially indicating a trend away from further decentralisation (Valenzuela and Rojas, 2012). A further difficulty is the absence of multi-annual budgets and dedicated budget lines. For example, the Municipal Regulating Plans (*Plan Regulador Comunal*/PRC) are not linked to budget lines, and their implementation depends on receiving project approval from GORE and the Regional Council, which can be a lengthy proposition. Finally, despite municipal planning responsibilities (e.g. for land-use and other development initiatives), plans that are developed by local authorities can be overridden by central government authorities. These factors all contribute to reducing municipal autonomy (i.e. decision-making capacity and authority) over their territory.

Recent reforms at the sub-national level

Recent legislative changes have been introduced to enhance governance capacity at the sub-national level. This includes increasing GORE competences, building municipal administrative capacity and paving the way for a legally recognised metropolitan management structure.

The statutory reforms proposed in *Ley 20.390,* a 2009 law[3] amending the 1992 Constitutional Law of Regional Governments (*Ley Organica Constitucional en Materia de Gobierno y Administración Regional – Ley 19.175*), aim to significantly change the structure and operation of GORE. The law enables the president to transfer ministerial competences and public service delivery responsibilities to the GORE, particularly with respect to public administration, territorial planning, economic development, and social and cultural development. It also permits GORE to enter into annual or multi-year Contract Plans (*Convenios de Programación*/CP) with each other, with one or more ministries, or with municipalities (Government of Chile, 2009).

The amendments to Law 19.175 also introduce regional-level legislation that recognises metropolitan areas[4] as unique territorial entities (Government of Chile, 2009). Distinctions between types of municipalities – metropolitan, urban, rural – were not made in the past. This statutory recognition of a metropolitan area is a driver behind Chile's move toward developing a metropolitan governance framework – a task under the direction of SUBDERE and a first step towards re-examining the overall urban governance architecture.

Article 110 of the Law enables the establishment of a metropolitan area co-ordinating council (*consejo coordinador regional de acción municipal*). The competences attributable to such a council include planning and co-ordinating inter-municipal initiatives dedicated to preventing and solving problems that arise from administrative fragmentation and which require a co-ordinated effort to resolve.

The legislation also establishes a Metropolitan Investment Fund (*Fondo de Inversión Metropolitano*/FIM) to finance projects of metropolitan significance (Government of Chile, 2009). This fund would be distinct from the FNDR and would be nourished by taxes on casinos and fees associated with mining and aquaculture patents that regions are eligible to receive.

The legislative changes provide a strong foundation for developing a comprehensive metropolitan governance structure, both in terms of institutional governance (the council) and finances (the FIM). Consideration will need to be given to how FIM funds are managed and disbursed, as addressing metropolitan area challenges often requires taking an integrated programme-based approach to planning and financing rather than a project-by-project approach, which is the norm in Chile. In addition, care will need to be taken that mechanisms are also in place to help tackle co-ordination issues and resource shortfalls in medium-sized urban areas that exhibit metropolitan area challenges as well as small urban areas.

In 2009, Chile also moved to foster voluntary urban and metropolitan co-ordination through reforms that permitted municipalities to associate. *Ley 20.346* enables the formal association of municipalities in order to establish not-for-profit organisations for different purposes. The impact of this initiative on co-ordination is not clear, though it has been reported that fewer than 10 municipalities have taken advantage of the opportunity, and an incentive structure to support it may be lacking. Finally, the government has also taken some initial reforms, applicable to all municipalities, to strengthen the municipal councils, enhance administrative integrity and transparency, and to improve municipal management and professionalism (Plan Creo Antofagasta, 2012).

Current urban governance frameworks: Sub-national finance and competence allocation

Finance and budgeting practices should better support sub-national development objectives and the policies and programmes designed to achieve them. At present, urban programming is not linked to budget lines and there is little sub-national autonomy in fund allocation. This creates a system that functions on short-term plans and projects, unable to undertake long-term development planning. Multi-annual budgeting and planning frameworks could be one mechanism to help address this issue, while also strengthening the finance and planning capacity of sub-national authorities. The present sub-national funding mechanisms are also a source of inefficiency between regional and local levels in service delivery, and do not effectively incentivise horizontal co-operation or build municipal capacity. Finally, the financing structure is not aligned with competence allocation, and demonstrates insufficient flexibility to account for the generally higher service demand and cost per capita associated with a metropolitan area versus a small urban one, for example.

Sub-national finance mechanisms

In order to address inter-and intra-urban inequalities, Chile may need to adjust its sub-national finance practices, which are restricting fiscal autonomy for municipalities. Currently, there is a missed opportunity for building scale and more effectively delivering services in the poorer municipalities, while also placing the wealthier ones at a significant advantage for autonomy, service provision and ultimately an enhanced quality of life for residents.

Municipal budgets are based on own-source revenue, a system of horizontal transfers through the Municipal Common Fund (*Fondo Común Municipal*/FCM), and central government grant mechanisms, including earmarked transfers for health and education, as well as access to specific – generally sectoral – funds. Municipal own-source income is generated through the property tax, user fees and proceeds from certain concessions.

Although the property tax is an adequate source of financing for urban services that cannot be subject to user fees (Bird and Slack, 2008), municipalities have difficulty taking sufficient advantage of this capacity, due to an extensive tax-exemption structure and restrictions preventing local communities from adjusting the tax-rate levels required for financing the quality of services desired (Valenzuela and Rojas, 2012).

Generating own-source income: The role of taxes

Chile's municipalities generate their own revenue through a combination of municipal licenses (e.g. commercial and professional licenses), property tax, vehicular circulation permits, waste management fees, and various other fees, duties or taxes related to urbanism and construction (e.g. fines and fees generated by own property) (see Table 3.1).

Table 3.1. **Own-source revenue generators in Chile**

2011

Source	Value in thousands of USD	%
Municipal licenses	555 410	34.0
Property tax	528 820	32.4
Vehicular circulation permits	190 131	11.6
Waste management fees	130 873	8.0
Other fees, duties and taxes	227 915	14.0
Total	1 633 149	100

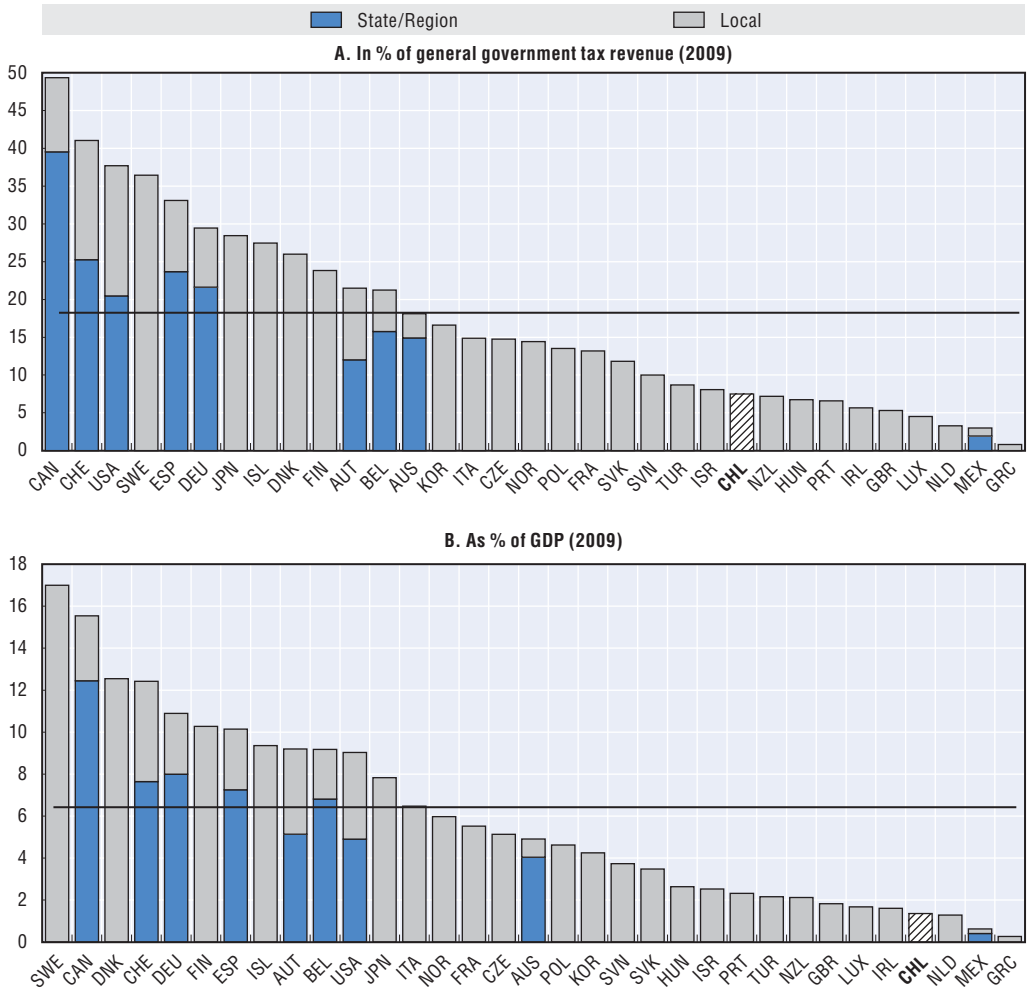
Source: Ministerio de Interior (2012), "Sistema Municipal Chileno", presentation to OECD, June 2012, Municipalities Division, Subsecretariat of Regional Development and Administration (SUBDERE), Santiago, Chile.

Sub-national tax revenues in Chile, however, are significantly below the OECD average in terms of percentage of general government tax revenue. This is also the case when considering sub-national tax revenues as a percentage of GDP (see Figures 3.2a and 3.2b).

It is generally agreed that sub-central governments should rely on taxes raised on assets that are relatively immobile (e.g. property) and relatively stable. Thus taxes on individuals and households are more suited to sub-central governments than corporate income tax, for example (OECD/Korea Institute of Public Finance, 2012). While sub-national taxes in Chile follow this pattern, a look at the composition of sub-central government revenue as a percentage of total general government tax revenue reveals that Chile's municipalities have a very restricted source of tax-based income, one that is concentrated on property taxes and goods and construction (see Figure 3.3). In 20 of the 34 OECD members, personal income tax is included in the mix and usually represents a large share of revenue for municipalities in these countries (OECD/Korea Institute of Public Finance, 2012).

Property tax is the most decentralised type of tax and considered the most appropriate tax for sub-central governments. In some OECD countries, it is entirely decentralised, though in most cases, this tax is highly decentralised, with municipalities receiving the larger share. The share is approximately 50% in Chile, making it higher than in some other OECD countries, but lower than the OECD average of 70% (see Figure 3.4). In Chile, property tax is managed by the central government, which decides the tax rate, the tax base and the frequency of its adjustments, leaving the municipality with a passive role. Rates are calculated based on land and building value, with no changes that could capture the increase in property values resulting from publicly financed urban development projects. In addition, there is an extensive exemption structure associated with property tax in

Figure 3.2. **Sub-central government tax revenues**



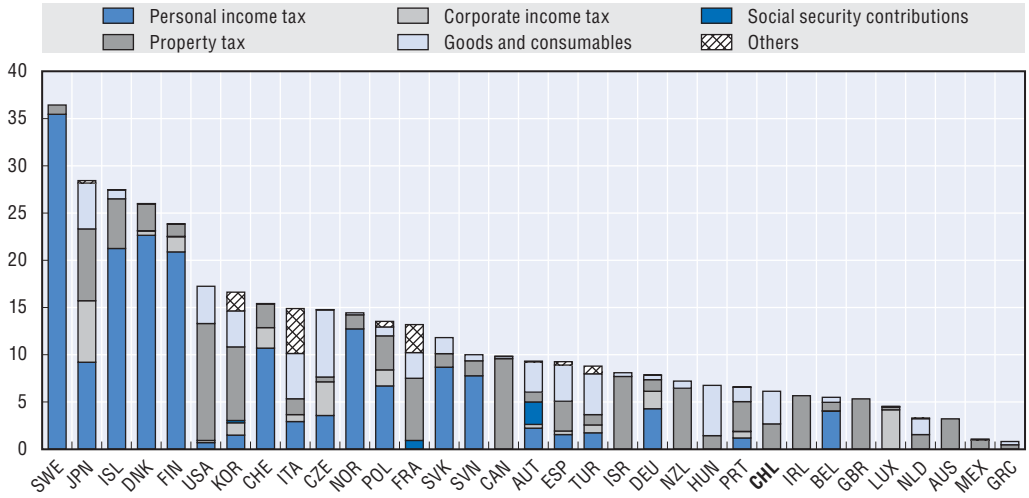
Notes: For Figures 3.2a and 3.2b, data for Australia, Greece, Mexico, Poland and Portugal correspond to 2008 rather than 2009. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
Source: OECD/Korea Institute of Public Finance (2012), *Institutional and Financial Relations across Levels of Government*, OECD Fiscal Federalism Studies, OECD Publishing, Paris, doi: *10.1787/9789264167001-en*.

Chile. For example, low-income properties (usually social housing) are exempt from paying property tax, and properties of less than 140 m^2, most of which are in low-income municipalities, are exempt from 50% of the tax. It is reported that approximately two-thirds of Chilean properties are exempt from property taxes, as well as the first USD 20 000 of the assessment value of each non-agricultural property, the first USD 10 000 of each property for agricultural use, and some government-owned properties (Valenzuela and Rojas, 2012). While the state transfers money to compensate for property tax exemptions, it is estimated that the compensation level is less than 10%[5] of what would otherwise be collected if the exceptions did not exist.

Chile's property-tax exemption system further strains the limited resources of low-income municipalities. The location of social housing is decided by the SERVIU in a top-down process, with little to no consultation with local authorities. Municipalities, however,

Figure 3.3. **Composition of sub-central government tax revenue**

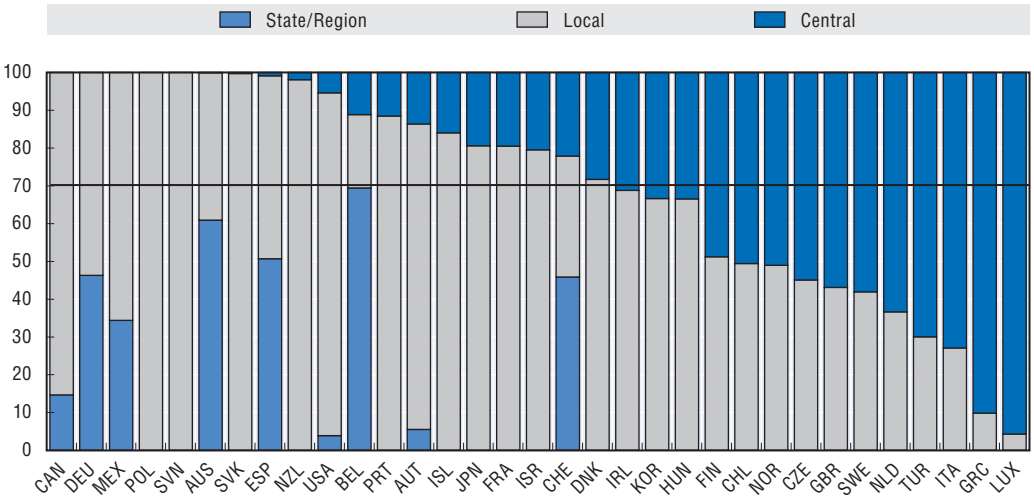
in % of total general government tax revenue (2009)



Notes: Data for Australia, Greece, Mexico, Poland and Portugal correspond to 2008. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD/Korea Institute of Public Finance (2012), *Institutional and Financial Relations across Levels of Government*, OECD Fiscal Federalism Studies, OECD Publishing, Paris, doi: *10.1787/9789264167001-en*.

Figure 3.4. **Share of sub-central governments in total property tax revenue (2009)**



Notes: Data for Australia, Greece, Mexico, Poland and Portugal correspond to 2008. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Source: OECD/Korea Institute of Public Finance (2012), *Institutional and Financial Relations across Levels of Government*, OECD Fiscal Federalism Studies, OECD Publishing, Paris, doi: *10.1787/9789264167001-en*.

remain responsible for providing the new communities with such public services as paving, lighting, drainage, basic health care and primary and secondary education.[6] Social housing and the tax exemptions that accompany it tend to represent a heavy burden for low-income municipalities: additional revenue is not generated, either as central-level grants or from own-revenue sources such as property tax, but the extension of public

services into the new communities must be provided. This further drains municipal resources, fundamentally reduces municipal disposable income and inhibits the capacity for local investment in economic development.

This system can also reinforce income gaps between wealthier and poorer urban areas, not only at the inter-urban but also at the intra-urban level. Wealthier municipalities, especially in metropolitan regions, are able to levy more resources through property tax than poorer ones. The five municipalities that concentrate the population with higher incomes generate half of Chile's property tax yield. This is explained in part by low land and asset prices in low-income municipalities, which, as noted above, result in the exemption of most real property from the property tax. It is also partially attributable to the fact that low-income households are exempt from paying the property tax. As high land prices concentrate in just 30 municipalities, the remaining 315 municipalities consist largely of exempted properties (Valenzuela and Rojas, 2012). Low land prices and concentration of exempted properties in lower-income municipalities yield low own-revenue sources for many of Chile's local authorities.

The fiscal clout of wealthier municipalities enables them to provide more public goods and services with own-revenue sources, and may render them less motivated to co-operate in the provision of services with poorer neighbours. It also gives them more negotiating power with the central government for project development and implementation. The result is a self-reinforcing mechanism for socio-spatial disparities (OECD, 2009c). To address this and to build municipal revenue capacity, a reform of the property-tax exemption structure should be strongly considered (see also Chapter 2).

OECD experience shows that high dependence on one type of local tax revenue can negatively impact the effectiveness of local service delivery. Good practice in local finance recommends greater autonomy for municipalities to set tax rates, to periodically adjust the tax base to changes in the real estate market (even within a "bandwidth" established by the central government), and for flexibility for elected municipal councils to adopt surcharges for determined periods of time in order to finance local investment projects in specific areas as needed (Valenzuela and Rojas, 2012).

Thus, diversification of the system may be necessary, whereby municipalities can build their own revenue bases though a range of taxes, e.g. property, income, sales and business taxes. User fees are also an option. Care needs to be taken with such fees, however. While these can enhance accountability and efficiency by creating a direct link between a service and the price asked for it, they can also be distorting across municipalities, as poorer municipalities may have a much smaller base from which to collect such fees (Valenzuela and Rojas, 2012).

Finally, the financing system risks creating disincentives for "whole-of-city" or even national policy initiatives, for instance in environmental policy. Wealthier municipalities, such as Vitacura in the Santiago Metropolitan Region or Antofagasta in the North, generate a significant amount of revenue from vehicular taxes. In the case of poorer municipalities, such tax revenues will be lower, since fewer residents own cars, and depend on public transport, creating an imbalance of transport-related income generation, and a potential disincentive for wealthier authorities to support policies that advance alternative means of transportation as a congestion management policy.

Obtaining other sources of revenue: FCM, FNDR and other funds

Beyond the revenues they generate, and the earmarked grants for education and health that are trending upward (Asociación Chilena de Municipalidades, 2012), municipalities have two other primary funding sources capitalised by the central level: the Common Municipal Fund (*Fondo Común Municipal*/FCM) and the National Regional Development Fund (*Fondo Nacional para el Desarrollo Regional*/FNDR).

The FCM works as a horizontal equalisation fund, partially compensating for imbalances. It is funded by property taxes, municipal licenses, vehicular circulation permits and vehicle transfer fees. The central government also makes two contributions to the Fund: *i)* property taxes collected from non-exempt government properties; *ii)* a fixed amount paid annually in CLP and defined by law to be the equivalent of 218 000 UTM.[7] The contributions made to the FCM, both central and local, do not appear strongly linked to a mechanism that fixes participatory contribution levels in a consistent fashion, providing little stability for planning and forecasting beyond the immediate budget cycle. Contribution levels are linked to what is approved in the government's budget, thus they can undergo a significant change from year to year. This instability is compounded by the government's authority to adjust the Fund's value (usually upward) in an ad hoc manner during a given budget cycle. Ultimately, the FCM transfers cannot compensate for income and revenue disparities across municipalities, as these are too large. They are generally used to cover municipal operating (i.e. administrative) costs, though the intention is that they also cover newly ascribed competences, since these are often not accompanied by increased resources. As a result, large municipal income disparities persist. Even after FCM transfers, the per capita income of wealthier municipalities in the Santiago Metropolitan Region is, for example, six times that of the poorer ones (Valenzuela and Rojas, 2012). Horizontal equalisation will need to be better addressed if inter- and intra-urban imbalances are to be smoothed out and urban outcomes improved.

The FNDR is a regional-level fund originally established for regional development investments. Municipal governments can apply to the GORE for a portion of these funds through a competitive process, presenting their projects to the GORE and the Regional Council. This can put local versus regional or national development priorities at odds: a municipality may not receive funds for a needed project because its development objectives and/or sector priorities are not aligned with those of the disbursers. This not only highlights divergent central and sub-national objectives, but also signals low autonomy for fiscal management at the local level. In addition, because of fiscal shortfalls, municipalities often apply for and receive FNDR funds to cover needs unrelated to regional or local development projects (e.g. funds are received to cover the cost of maintenance projects).

There are two significant shortcomings associated with the FNDR: *i)* while it is established as the primary funding source for long-term and comprehensive regional development initiatives, the monies can also be allocated to municipal petitions; *ii)* it has become a main source of municipal financing, since own-source revenues are inadequate (OECD, 2009c).

In addition to the FCM and FNDR, there are other competitive, sector-associated funds to which municipalities with insufficient own resources can apply. For example, municipalities needing to invest in public spaces can request funds from the Public Spaces Improvement Fund (*Fondo de Mejoramiento de Espacios Públicos*/FMEP) managed by MINVU. Like the FNDR, these funds are highly valuable, but funding mechanisms could be

considered that can incentivise and support meeting comprehensive development needs rather than strictly sectoral ones. Finally, competition for limited funds risks creating a disincentive for horizontal co-operation at the municipal level, and can jeopardise service delivery outcomes, especially in poorer municipalities.

Chile's municipalities are not permitted to acquire debt without authorisation from Congress. This further impacts the fiscal autonomy of urban areas, and can have negative consequences for growth and development. Greater fiscal autonomy can facilitate raising additional revenues for goods and services that enhance the area's attractiveness to businesses and residents, improving competitiveness and quality of life. Fiscal autonomy can also drop when municipalities perceive a restriction in their capacity to act, even if there is a legal framework in place that indicates otherwise (Bird and Slack, 2008). For example, all municipalities are given the opportunity to grant concessions for service provision or to obtain a form of credit through a recent programme sponsored by SUBDERE (see Box 3.2). However, it is the wealthier municipalities, generally those in a metropolitan area, that are best positioned to finance investments through private concessions or programmes such as that of SUBDERE. Not only does this discrepancy in capacity perpetuate disparities among Chile's functional urban areas, it can highlight disparities between the municipalities forming the metropolitan area, unless mechanisms are in place to help smooth out the horizontal imbalances.

Box 3.2. **SUBDERE's Credit Programme**

In 2011 SUBDERE launched a pilot programme permitting municipalities to obtain a form of credit in order to implement a proposed capital investment project. The municipalities however, must demonstrate that the credit can be repaid in five years through their own source revenue. To assess the repayment capacity of the municipalities, SUBDERE designed a Risk Assessment System for Municipalities (*Sistema de Clasificación de Riesgo/SISCLAR*). This limits the number of municipalities that can take advantage of this more flexible funding opportunity, given that few have an excess of own revenues, and few can predict their revenue stream, given their dependence on central-level annual budgets. In 2012, the fund had USD 22 million available for this type of operation; so far, only a small number of Chile's municipalities have taken advantage of this funding opportunity.

Source: OECD (2012), interviews with key officials in Chile; Valenzuela, J.P, and E. Rojas (2012), "Urban Governance in Chile", background paper prepared for the OECD, Public Governance and Territorial Development Directorate, unpublished.

In summary, the consequences of Chile's current municipal funding methods have compounded the challenges municipalities face, particularly with respect to growth and development. It is not easy for them to undertake medium- or long-term urban development programmes, since their funding for capital investment is subject to annual budget allocations. Investment planning for Chilean municipalities is mostly restricted to the preparation of specific projects, following the procedures of the National Investment System (*Sistema Nacional de Inversiones*/SNI) and submitted for financing to whichever fund is available on a given year. Funds are thus allocated on a project-by-project basis via an open competition among municipalities, and not thought of in a strategic manner, based on programmes. The lack of own resources even for recurrent expenditures seriously undermines the capacity of the municipalities to undertake preventive maintenance of their infrastructure and facilities.

Postponed maintenance is compensated with sporadic investments for the rehabilitation and "improvement" of facilities, as allowed under the rules of the SNI and the sector funds available from the central government. This problem is evident in the widespread state of disrepair of municipal public spaces, sidewalks and local roads. Municipalities with better technical capacities to formulate projects tend to capture more investment resources than institutionally weak ones. The municipal finance mechanisms are generating a growing imbalance of income and expenditures on key services. For example, charges collected for waste management, together with the property tax, finance only 36% of the cost of solid waste collection and disposal (Valenzuela and Rojas, 2012).

When considering urban, and especially metropolitan, financing mechanisms in Chile, mechanisms to assist municipalities and regions improve competitiveness should be strongly considered. This means ensuring sufficient capacity to finance key spending needs; access to resources if current spending levels are too low; a well-developed local taxation system with a basket of taxes comprising own-source revenue; and appropriate equalisation schemes.

Service delivery and matching competence to capacity

Capacity and the capacity gap is a key concern for the local level, and one of the main reasons why the central government is reluctant to move further in decentralisation. A capacity gap can arise when there is a lack of human, knowledge or infrastructural resources available to carry out tasks, regardless of the level of government (Charbit, 2011). It is often clearly evident when evaluating the public services delivered by municipalities. In Chile, as in many countries, the capacity gap is experienced unevenly among municipalities: there is a wide disparity between the resource and technical capacity of municipalities to administer, deliver services and manage their territory. This translates into disparities not only between urban areas, but within urban areas, especially those comprised of more than one municipality.

To date, public service delivery in Chile has focused on extending the coverage of services, seen for example in the case of public transportation, infrastructure and housing. Addressing the capacity gap and improving quality is the next step, and they are intrinsically linked. In Chile the capacity and resource gap between urban municipalities is large. Small and peripheral cities have difficulty providing high-quality services and could face equivalent difficulty in meeting urban development quality standards, in great part due to competence allocation.

Competence allocation

Competence allocation among Chile's municipalities is homogeneous: i.e. all municipalities, regardless of their size, are responsible for delivering the same set of public services. Given the disparities in municipal capacity throughout the territory, this renders uniform service delivery unrealistic and often impossible.

Responsibility for service provision is shared between the public and the private sector. For analytical purposes, the 79 public service activities that are performed in Chile's cities can be divided into three main groups according to the development challenges they address: wealth and employment; social equity; and environmental sustainability of urban development (see Annex 3.A.2) (Valenzuela and Rojas, 2012). The bulk of responsibilities for creating wealth and urban employment are in the hands of the private sector, while most social equity and environment/sustainability competences are ascribed to municipalities.

Chile's private sector is considered a critical partner for the provision of services and policy implementation. Private corporations provide almost all network-based urban services, including telecommunications, electricity, gas, water and sewage, which are financed by tariffs and charges levied on individual users. Chile is unique in that private operators, under concessions or Programme Contracts with the central government, provide – and often finance – most of the infrastructure supporting public service production. Regulation of private providers is in the hands of the central government, with minor local-level involvement. The centralised management of these affairs takes advantage of economies of scale but also leads to homogeneous regulations that often do not adapt well to the varied ecological, economic and social circumstances of Chile's urban areas (Valenzuela and Rojas, 2012). The concession areas, terms and conditions are dictated by national entities under national legislation and managed by the private entities, leaving municipalities as observers in the process, a significant handicap in their capacity to manage the development of their territories. This relationship between the central level and the private sector is mirrored at the local level: some municipal authorities allow private companies to exploit the subsoil or portions of public spaces on the basis of concessions to provide paid underground parking or recreational facilities, for example. The municipalities benefit from privately financed improvements in the public spaces (street paving, lighting and furniture, and park facilities) and the private providers obtain benefits from the rental of space or user charges (Valenzuela and Rojas, 2012).

The concession system has contributed to a significant improvement in Chile's infrastructure and in access to basic public services, particularly for rural and remote areas. Despite these successes at a national level, it can also be a factor in behind inter- and intra-urban segregation when evaluated at a municipal level. Local authorities have the technical ability to enter into concession agreements with the private sector, for example, providing public parking garages. The actual capacity of municipalities to enter into such agreements, however, varies, and tends to be more common among wealthier municipalities. Thus, in a metropolitan area public services in adjacent municipalities may vary widely in type, variety and quality, in part due to concession agreements (Valenzuela and Rojas, 2012).

Table 3.2 summarises the competence distribution across the various urban actors, showing that municipalities are involved in approximately 55% of all service responsibilities, with a somewhat heavier emphasis on those having a strong urban dimension (i.e. environment and sustainability). This does not properly align with the financial and capacity dimension explored earlier.

Table 3.2. **Service competence summary for urban actors**

Service category	Total services within category	Central-level involvement	Regional-level involvement	Local-level involvement	Private sector involvement
Wealth and employment	27	20	10	14	14
Social equity	22	18	4	14	15
Environment and sustainability	30	22	14	16	7
Total	79	60	28	44	36

The misalignment between the resources available and the competences ascribed in a homogenous fashion across the territory will need to be considered, as it creates horizontal inequalities in the types, level and quality of services provided, further entrenching spatial segregation even within an urban area. Managing the situation depends on the source of the

capacity constraint. If it is due to severe resource shortfalls, then consideration will need to be given to increasing sub-national level resources and autonomy in their management. If it is due to capacity gaps (i.e. in human, knowledge or infrastructure resources) there are a number of ways that capacity can be built. Some countries actively pursue building scale at the local level through forms of voluntary co-operation or integration (mergers). Another option is to transfer select high-cost competences "up" to higher levels of government. This has been carried out, for example, with hospital care in Norway (Charbit and Michalun, 2009). Finally, some countries have considered creating different categories or "tiers" of municipalities; ascribing competences based on a municipality's "level", with smaller municipalities having fewer high-cost responsibilities than larger ones (see Box 3.3).

Box 3.3. **Ascribing competences according to municipal tier: Luxembourg's proposal**

Luxembourg designed an innovative approach to matching capacity to competence, aligning service bundles to fiscal ability. It proposed to define three categories of municipalities: a Basic Level comprised of rural communes with 3 000-3 500 inhabitants, which would provide basic public services only; an Intermediate Level of communes with more than 3 500 inhabitants, which would be responsible for basic public services as well as intermediate public services; and a Higher Level, which would be comprised of the City of Luxembourg and Esch/Alzette "Nordstad" (Ettelbrück and Diekirch), and which are responsible for basic public services, intermediate public services and advanced public services (see table below).

Commune typology under the proposed Integrated Concept of Territorialand Administrative Reform in the Grand Duchy of Luxembourg

Classification level	Name	Public services provided	Number of communes within the classification level
Higher level	Advanced-level Centres of Development and Attraction (CDA)[1] Mid-level CDA	Excellent quality, high-standard public services 1. Basic public services 2. Intermediate public services 3. Advanced public services: – Judicial services; – Full health services (hospitals, retirement homes, etc.) – General, vocational, continuing and advanced training establishments (high schools or vocational training schools) – Regional emergency response centres – Cultural, sports and leisure facilities	3 (1 advanced and 2 mid-level)
Intermediate level	Regional CDA Suburban communes	1. Basic public services 2. Intermediate public services: – Health centre – Schools for post primary education	28
Basic level	Rural communes with a population of 3 000 to 3 500	1. Basic public services: – Territorial and citizen services – Pre-school and primary education – Early learning – Out-of-school facilities	86 (approx. 75%)

1. Centres of Development and Attraction (CDA) were part of Luxembourg's territorial and administrative reform, which introduced the concept of "development poles" differentiated by region. Each of the six functional Planning Regions would have one or more urban centres known as CDAs, of which there are three types at the national level: Regional (12 in total), Midsized (2), and Superior (1, Luxembourg City). A CDA consists of urban centres or localities where the degree of facilities and services, whether public or private, is sufficient to fulfil a significant supply function.

Source: OECD (2008), *OECD Territorial Reviews: Luxembourg 2007*, OECD Publishing, Paris, doi: *10.1787/9789264038585-en*.

Recommendations for enhancing sub-national capacity in Chile

- **Build financial/fiscal management and autonomy:**
  - Enhance own-source revenue-raising capacity at the regional and local levels. Evidence suggesting that metropolitan areas with greater control over their finances tend to be more successful than those areas with less control is likely to hold true for regional and non-metropolitan local authorities as well.
  - Link sub-national development programming (strategies and plans) to the central-level budget to facilitate strategic planning and long-term programming capacity.
  - Establish mechanisms that can facilitate sub-national investment funding, for example through multi-annual budgeting practices; this can also help balance the present project-based approach.
  - Reform the sub-national tax regime, including property taxes and other taxes, in order to solve the present shortfalls; eliminate unnecessary exemptions and allow flexibility to determine tax rates, update tax bases and impose temporary surcharges for value capture and financing of special projects.
  - Re-evaluate the allocation mechanisms associated with the FNDR, identifying means to ensure that funds for regional development are reaching their intended purpose. This can mean splitting the FNDR into two segments, with one fund strictly dedicated to meeting regional development objectives, and the other assisting municipalities when they face shortfalls. Significantly however, the system should be reformed so these shortfalls are better managed.
  - Address horizontal imbalances through formula-based block grants or transfers from the central government that effectively are part of the municipalities' own resources rather than the present earmarked grants.
  - Improve access of capable municipalities to long-term financing for major urban development programmes and offer incentives for their use. An incremental approach to such mechanisms can be built on the basis of the current credit programme available through SUBDERE, allowing a gradual move to debt acquisition in local markets through banks and bond issues regulated by effective risk-assessment procedures and ratings.
- **Better align resource capacity with competence allocation:**
  - Introduce mechanisms to address the misalignment between resources and ascribed competences at the local level. These can include creating incentives for horizontal co-operation in service delivery; transferring select competences to a higher level of government; create different categories or "tiers" of municipalities and ascribing competences based on the municipality's "level", with smaller authorities having fewer high-cost responsibilities than larger ones.

Fragmentation in the urban governance framework

Fragmentation is common in urban governance structures, but its impact can vary depending on its degree and the co-ordination mechanisms in place to manage it. In Chile, administrative and institutional fragmentation is evident:

- Approximately 40% of Chile's urban areas are a composite of more than one municipality (see Chapter 1). Managing such fragmentation requires a territorially appropriate framework and the capacity to help reconcile possible differences in development objectives, capacity and capability, and socio-economic disparities.

- The fragmentation of urban management responsibilities across various actors (often with their own policy approach) and the lack of a co-ordinating body leads to task overlap and negatively impacts accountability and transparency.
- The sectoral approach taken by line ministries and SEREMI in designing and implementing urban programming is consistent with a hierarchical governance structure such as Chile's. However, it inhibits the development of an integrated, multi-stakeholder, "whole-of-city" approach based on shared urban objectives and priorities, characteristics more often associated with forms of network governance.

The combined result of this administrative and institutional fragmentation is a lack of coherence among urban plans and associated projects; poor policy outcomes, e.g. more acute social segregation among and within urban areas; poor transparency and misplaced accountability for services.

Administrative fragmentation at the urban level

In Chile, administrative fragmentation is creating fissures in the administration of functional urban areas, particularly in metropolitan areas. Each municipality within a metropolitan area, but also in functional urban areas comprised of more than one municipality (e.g. Chillán, Coquimbo/La Serena, Quillota, Temuco, etc.) is administered independently, without a mechanism to consider the single economic and productive unit that they create. This results in low policy and service integration over a functional area stemming from differences in objectives, capacity and constraints. It also minimises the ability to realise efficiencies and synergies obtained through co-operation and the building of scale. The variance in administrative and financial capacity of municipal authorities is accentuated, contributing to intra-urban disparities, including social segregation, pockets of higher crime rates, lower educational outcomes, etc. Urban planning becomes even more of a challenge, especially in a metropolitan context, since administrative fragmentation affects the overall co-ordination and management of urban public services (e.g. public transport). In addition, this can lead to policy outcomes focused in a specific geographic area with little spill-over effect to benefit the broader urban community.

The impact of administrative fragmentation on public service delivery can be mitigated by promoting horizontal co-operation among local governments. For example, three municipalities in the Santiago metropolitan region – Vitacura, Las Condes and Lo Barnechea – are taking advantage of the recently passed legislation permitting municipalities to legally associate for the purpose of co-operation in a specific project. These municipalities are sharing resources, and working together with the relevant ministries and private concessionaries to develop a surface tramway. Such joint action is more the exception than the norm, as most municipalities lack the capacity to do so. In Chile, as in many countries, municipalities are unaccustomed and/or reluctant to co-operate as a means to build capacity in administration and service delivery. In Chile's case, this is compounded by few systemic incentives to do so, despite its recognised value for building scale and capacity. France has used an incentive mechanism for municipal co-operation based on an equalisation scheme as a means to address this challenge (see Box 3.4).

Institutional fragmentation at the central level

Institutional fragmentation at the central government level arises when ministries act within their area of expertise without co-ordinating policy initiatives or interventions with other ministries that share competences, and without consultation of sub-national needs.

Box 3.4. **France and the *Dotation de Solidarité Communautaire***

In France, the creation of supra-municipal bodies includes a provision for an intra-metropolitan equalisation scheme, the *Dotation de Solidarité Communautaire*. By providing additional means for municipalities that want to co-operate with each other, the intra-metropolitan equalisation scheme provides incentives for reaching an optimal level of service delivery. The advantages of tax-base equalisation are that public services that are consumed by residents in the entire urban area also share in the costs, that firms and people will be less likely to move from one area of the metropolitan region to another for purely tax reasons, and that all municipalities are put on a more equal footing to pay for public services. The disadvantages are that tax-base equalisation grants might be allocated based on political rather than economic grounds, may give municipalities less of an incentive to develop, since the wealthier they get the less they receive in grants, and may separate the costs and benefits of local public services, making it difficult for citizens to make informed public decisions.

Source: OECD (2006), *Competitive Cities in the Global Economy*, OECD Publishing, Paris, doi: *10.1787/9789264027091-en.*

This can lead to policy incoherence, responsibility overlap and opacity in accountability. With respect to urbanism in Chile, institutional fragmentation is strong and evident in at least three dimensions: *i)* between MINVU, MTT and MOP, which do not actively co-ordinate their urban programming; *ii)* within individual ministries; *iii)* at the local level, with respect to the execution of competences.

The current urban planning instruments, particularly the General Law of Urban Development and Construction and its associated Ordinance, are insufficient to ensure policy coherence. As a result, the main ministries involved in urban policy often have opposing or uncoordinated approaches. For example, the social housing policy of MINVU, driven by land prices and budgetary restrictions, has historically promoted the location of low-income families at the periphery of large cities,[8] contributing to urban expansion. Meanwhile, transport policy has been focused on developing a centrally oriented public transport system. As a consequence, poor neighbourhoods in large cities like Santiago – the communities that most need an efficient public transport system – have become increasingly isolated (Garretón, 2012; Livert and Gaínza, 2011).

Even when looking at a single policy area, such as transport, similar fragmentation among institutions is evident. The approaches of such institutions as the Secretariat for Transportation Planning (SECTRA, a technical agency of the Ministry of Transportation and Telecommunications) or CONAMA (replaced by the Ministry of Environment in 2010), has been traditionally focused on demand management, with public transport as a priority (Zegras and Gakenheimer, 2000). Meanwhile, MOP has tended to prioritise infrastructure expansion. In the past, the conflicts between MOP and SECTRA in transportation matters were such that MOP undertook the development and application of its own travel forecasting exercises in parallel to those of SECTRA. There are instances where the ability to co-ordinate and synchronise work on inter-municipal roads, a MOP competence, with those of municipal streets, a SERVIU competence, has also been complicated as well (Waissbluth, 2006).

Co-ordinating urban development efforts within a ministry or between a ministry and its regional representative can also be a challenge. The MINVU's SEREMI are in charge of

planning housing policies in each of the regions, while the MINVU's SERVIU are in charge of executing these policies. The SEREMI represent the housing minister in the region, and are responsible for developing the Inter-municipal and Metropolitan Regulating Plans (PRI and PRM) as well as for planning the region's housing budget. In addition, the SEREMI are responsible for supervising the implementation of housing policies by the SERVIU. However, the directors of both entities have the same administrative rank. In addition, while the SEREMI are entirely reliant on the MINVU for resources, the SERVIU are funded by the MINVU and also have access to resources from the National Fund for Regional Development (FNDR). This can create inter-institutional competition, territorialism and competence overlap, and compromises the effectiveness of policy implementation. Fluid co-ordination between both institutions depends to a great extent on the personal relationship between the regional directors rather than formally established co-ordination mechanisms.

The impact of institutional fragmentation due to weak central co-ordination is often played out at the sub-national level, bringing with it responsibility overlap and confusion with respect to accountability, i.e. who is responsible for what, who is accountable, and to whom a citizen may complain about a given municipal problem. This is clearly illustrated by transport policies in urban areas. Three main actors intervene in transport infrastructure, construction and maintenance. The MOP is responsible for managing urban highways (*vías expresas*), major road accesses to the city and the infrastructure concession programme, which includes several urban road projects. Its responsibility also includes bridges, tunnels and airports. The MINVU (through its regional implementing arm, SERVIU), normally builds and repairs most of the urban road network[9] (*vías troncales* and *vías colectoras*), except minor connecting roads (*vías de servicio* and *vías locales*),[10] which are generally managed and maintained by municipalities (with occasional intervention by the MINVU). This fragmentation in road development, management and maintenance often makes it complicated to efficiently link urban highways with the urban road network. Moreover, the ambiguous division of labour between the municipalities and MINVU with respect to roads, and the overall lack of financial resources of Chilean municipalities, result in inefficiency and a lack of co-ordination. This can lead to accountability problems, and unclear lines of responsibility for building or repairing urban roads.

Table 3.3 briefly outlines the various institutions involved in urban planning and management, using transport policy as a basis. The MTT is in charge of transportation operations, including granting bus route concessions, street sign standards and vehicle circulation bans. Prior to being allocated funds, a project must pass the technical and economic analysis of the Ministry of Social Development. Municipal transit and urban directorates also intervene in the approval process, as do state-owned companies directly involved in transportation provision (e.g. Metro Santiago and Metro Valparaíso). Beyond transport policies, other institutions in closely related areas, such as land use and environment, play a role as well.

This institutional fragmentation is compounded by the lack of an overall urban programming system able to guide and to generate complementarities between the different actors involved in urban development. The sectoral logic of the different ministries and institutions, the co-ordination deficiencies among them, and the lack of an urban governance framework at the "whole-of-city" level, makes generating territorial coherence and synergies between the different policies and actors involved in urban-related policies extremely complex (OECD, 2009c; Ministerio de Obras Publicas, 2010).

Table 3.3. **Public institutions intervening in urban planning and management**

The case of public transportation

Sector	Area of intervention	Institution
Transportation	Infrastructure, construction and maintenance	MINVU (SERVIU), MOP, municipalities
	Planning	MINVU, MOP, SECTRA, MTT SEREMI, Ministry of Social Development SEREMI (SERPLAC); municipalities
	Operations	MTT SEREMI; municipalities; Traffic Control Operating Unit; UOTC (in Santiago only); Metro Santiago; Metro Valparaíso
Land use	Planning	MINVU; MINVU SEREMI ; SERPLAC, municipalities
	Development	SERVIU; municipalities
Environment	Planning	Ministry of Environment (ME); ME SEREMI
	Enforcement	ME; Intendencias; Environmental Evaluation Service (SEA)

Source: Adapted from Zegras, C. and R. Gakenheimer (2000), "Urban Growth Management for Mobility: The Case of the Santiago, Chile Metropolitan Region", report prepared for the Lincoln Institute of Land Policy and the MIT Cooperative Mobility Program.

Managing a system of this nature requires a high degree of co-ordination capacity and communication, to ensure that information is exchanged properly and in a timely fashion. Chile's urban governance and policy debate is calling for a more integrated approach to urbanism as a means to improve policy outcomes, whether in effectiveness, equity, sustainability or overall quality of life. Achieving a more integrated approach will require an urban governance architecture that is sufficiently flexible to adapt to Chile's various types of urban areas: metropolitan, composite (i.e. made up of more than one municipality) and single. There is no one "right" model, and it is recommended that Chile avoid a "one-size-fits-all" or homogeneous approach to manage its heterogeneous set of functional urban areas.

Considering institutional urban and metropolitan governance models

Chile acknowledges that its urban governance architecture is out of date: territorial administrative structures and urban planning frameworks date to the 1970s; the last urban development policy was enacted in 1979, amended in 1985 and repealed in 2000; resource capacity has not kept up with changing and rising demands by citizens and businesses. It is becoming increasingly difficult to implement effective policy in a top-down, unilateral fashion, and there is an urgent need for a metropolitan governance framework.

Through its recent legislative changes, Chile is considering institutional approaches to strengthen its urban governance architecture. Meeting Chile's metropolitan and urban challenges in light of administrative and institutional fragmentation will require higher degrees of vertical and horizontal co-ordination and co-operation than currently practiced. For this to occur, a stronger institutional structure is needed at the urban functional level. Such structures can range in form from "relatively soft" to "relatively hard" (see Box 3.5). Informal approaches, as featured in relatively soft models (already practiced to some extent in Chile, and explored later in this section), may not be sufficiently effective to overcome the country's urban administrative and institutional fragmentation challenges and should be considered complementary to more formalised options. Taking an institutional approach could provide the appropriate platforms and involve the relevant stakeholders necessary to address and manage such urban development and quality of life issues as congestion, pollution, housing, public transportation and long-term sustainability.

Box 3.5. **A spectrum of metropolitan and urban governance models**

The discussion of how to better manage metropolitan regions revolves principally around a spectrum of governance models that range from relatively "soft" to relatively "hard" in terms of the scope of the reform they imply.

1. *Relatively "soft"* – at one end of the spectrum, are informal co-ordination bodies such as platforms, associations or strategic planning partnerships, often relying on existing networks of relevant actors, without necessarily following the logic of territorial boundaries.
2. *Mid-position* – in the middle of the spectrum are a wide range of usually voluntary co-operative arrangements through inter-municipal joint authorities. Examples include sectoral or multi-sectoral agencies whose main functions generally cover transport, urban planning or economic development (sometimes on an ad hoc basis).
3. *Relatively "hard"* – at this end of the spectrum are functional models in which governance structures are re-shaped to fit or to approximate the functional economic area of the metropolitan region. Examples include municipal amalgamation (mergers), and the creation of a metropolitan government.

In addition to these different categories are purely fiscal arrangements, such as equalisation mechanisms and tax-base sharing, whose main purpose is to deal with fiscal disparities and territorial spill-over within the area as well as public-private partnerships and contract services. Depending on the amount of funds involved, they might be referred to as either hard or soft forms of co-operation.

Source: Adapted from OECD (2006), *Competitive Cities in the Global Economy*, OECD Publishing, Paris, doi: *10.1787/9789264027091-en*.

This section explores three possible types of institutionally based urban governance models applicable to Chile's urban areas: *i*) supra-municipal arrangements (relatively hard); *ii*) inter-municipal arrangements (mid-position); and *iii*) a reinforced regional framework. These models are not mutually exclusive, and in Chile's case, consideration should be given to a heterogeneous approach where such models are applied according to the structure of the functional urban area: large metropolitan (i.e. Santiago), metropolitan (i.e. Valparaíso, Concepción), composite (i.e. formed of more than one municipality, such as Chillán, Coquimbo-La Serena, Temuco), or single municipality (e.g. Antofagasta, Puerto Montt, Punta Arenas).

Supra-municipal arrangements

Supra-municipal arrangements are geared towards a new institutional tier, independent of local municipalities. Supra-municipal arrangements applied at metropolitan levels may be effective in overcoming problems of fragmentation, as they can coalesce various components of urban governance – i.e. the political and administrative structure, financial structure, service delivery, transparency and accountability – into one institutional framework (Lefèvre, 2008). They offer greater flexibility than municipal mergers (the other relatively "hard" arrangement for creating a single administrative area), as they can be adapted to cover an entire functional area as the area grows, and can more easily permit individual municipalities to maintain their own identities.

Metropolitan authorities are an example of a supra-municipal arrangement, and those of London, Stuttgart and Portland, Oregon are among the best known (see Box 3.6). This form of functional metropolitan governance model has some basic characteristics (OECD, 2006):

1. It is based on governance at a functional economic area level.
2. It assumes some decision-making power at the metropolitan-region level that is distinct and autonomous from either central, larger regional or local government.
3. It is built around cross-sectoral competencies (i.e. not restricted to a specific sector or service) and competence in areas that have a metropolitan logic, such as planning, transport, investment promotion and water supply.
4. It assumes some logical predominance of functional area provision of goods and services over provision according to administrative boundaries. This assumption is based on arguments about the economies of scale (in terms of procurement, maintenance, operation, etc.) generated by larger, unified service delivery areas, better equalisation of costs across the entire metropolitan region, and more effective strategic planning and integration of sectoral policies.

Box 3.6. **Examples of metropolitan governmental authorities**

Founded in 1994, the **Stuttgart Regional Association** represents 179 municipalities or 5 counties covering the metropolitan area of Stuttgart in the German *Land* of Baden-Württemburg, with around 2.6 million people and a surface area of approximately 3 600 km^2. The legal framework of the association was established through a provincial law passed in 1993. The association's assembly is directly elected through a general ballot. The association's main responsibilities are regional spatial planning, transport infrastructure and operation, and regional economic development. The association is funded by municipal contributions (54%) and inter-governmental conditional grants from the *Land* of Baden-Württemburg (46%). The municipal funds consist of a general contribution (11%) and an earmarked contribution for public transport (35%). Both contributions are negotiated annually and then split between the municipalities according to tax-raising capacity and structural factors. The association has no taxing power and does not levy user fees. These powers remain within the exclusive authority of either the municipalities or the *Land*. Most expenditure (85% of the associations' budget of around EUR 260 million) goes to funding regional express trains and the regional transport body that manages buses and tramways.

Some years after the Greater London Council was abolished in 1986, a new **Greater London Authority** (GLA) was established in 2000. Unlike any previous local or regional government in the United Kingdom, it is made up of a directly elected mayor – the Mayor of London, who is elected by a single constituency of 7.3 million people – and a separately elected assembly, the London Assembly. When fully staffed, there are about 490 staff to help the mayor and assembly in their duties. There is a clear separation of powers within the GLA between the mayor, whose executive role requires making decisions on behalf of the GLA, and the assembly, which has an oversight role and is responsible for appointing GLA staff. The mayor is London's spokesperson and leads the preparation of statutory strategies on transport, spatial development, economic development and the environment. S/he also sets budgets for the GLA, Transport for London, the London Development Agency, the Metropolitan Police and London's fire services. The assembly

Box 3.6. **Examples of metropolitan governmental authorities** *(cont.)*

scrutinises the mayor's activities, questioning the mayor about her/his decisions. The assembly is also able to investigate other issues of importance to Londoners, publish its findings and recommendations and make proposals to the mayor. The GLA's competences include a number of existing government programmes, such as police, fire, transport and economic development. These four key functional responsibilities are in the hands of boards: Metropolitan Police Authority, London Fire and Emergency Planning Authority, Transport for London and London Development Agency. Other functions include environment, culture, media and sports, public health and inward investment. The GLA has no taxing power. Its budget amounted to approximately GBP 3.6 billion in 2012-13, and most of the cost of the GLA itself is met by a central government grant, with a small contribution from London council taxpayers.

The **Metropolitan Service District**, usually known as Metro Portland, is a government for the Portland metropolitan area in Oregon, and the only directly elected regional government in the United States. Metro Portland serves more than 1.3 million residents in Clackamas, Multnomah and Washington counties, and the 25 cities in the Portland, Oregon, metropolitan area. Metro Portland was created by voters to join the Columbia Region Association of Governments (CRAG) and the Metropolitan Planning Commission in a May 1970 election. Metro Portland in its current form went into operation on 1 January 1979. It is governed by a council president elected region-wide and six commissioners who are elected by district, and has an elected region-wide auditor. Each elected official serves a four-year term. The council appoints a chief operating officer and an attorney. Metro Portland receives 14% of its USD 200 million budget by levying a property tax, but more than 50% of its budget comes from fees and charges levied on metropolitan-wide operated firms (e.g. solid waste disposal plan, the zoo, the Convention Centre, the Expos Centre and the Portland Centre for Art Performances). Metro Portland performs the following functions: *i)* provides land-use planning and is responsible for maintaining the Portland-area urban growth boundary, a legal boundary that separates urban from rural land, designed to reduce urban sprawl; it co-ordinates with the cities and counties in the area to ensure a 20-year supply of developable land; *ii)* serves as the metropolitan planning organisation for the area, responsible for the planning of the region's transportation system; *iii)* manages several park facilities, handles waste disposal and maintains landfills and recycling transfer stations.

Source: OECD (2006), *Competitive Cities in the Global Economy*, OECD Publishing, Paris, doi: *10.1787/9789264027091-en*; Greater London Authority (2012), *Greater London Authority Consolidated and Component Budget 2012-2013*, Greater London Authority, London.

Such a model can help enhance metropolitan-wide planning capacity, generate policy coherence and improve service delivery across municipal boundaries, thereby making it easier for metropolitan areas to meet urban and national cross-sector policy objectives.

Supra-municipal arrangements, such as a metropolitan authority, also face some obstacles to implementation that need to be considered and addressed in order to better ensure their long-term success. These include (Lefèvre, 2008):

- **Development via a top-down process.** Supra-municipal or "integrated" models are generally constructed and imposed by a State-driven process. They are also often homogeneously applied and lack a consultative process with local actors and authorities.

- **Ambiguity.** Ambiguity arises between levels of government in several areas, including autonomy, since a supra-municipal institution depends on the central and local levels; institutional capacity; financial resources; adequate competences; territory, when there is misalignment between the administrative territory and functional urban area.
- **Legal and political weakness.** Supra-municipal authorities may be faced with very strong municipalities within their jurisdiction, and thus, they, together with smaller or weaker municipalities in the functional area, may face a form of disequilibrium – particularly when the stronger municipalities occupy a higher number of seats in management and decision-making bodies.
- **Lack of legitimacy.** This can arise when a metropolitan area does not have its own "identity" and lacks a defined territory around which political and instructional structures can form or operate. The issue of legitimacy is likely to be the largest obstacle.

A supra-municipal institution for Chile's functional metropolitan areas would need to overcome many of the obstacles outlined above. Since Chilean urban actors across the spectrum agree that change is necessary, this offers a strong opportunity to combine the customary top-down approach taken in Chile with greater bottom-up activity, incorporating a dynamic stakeholder consultation process. This is particularly important. A supra-municipal entity in Chile could enjoy functional legitimacy stemming from a top-down mandate and competence allocation. However, unless this top-down approach is complemented with a bottom-up, consultative process, the new institution could face resistance and suffer from political weakness *vis-à-vis* the metropolitan area's stronger, wealthier municipalities, which are accustomed to working on their own or negotiating directly with the central government and concessionaries. A strong consultation and bottom-up dimension to institutional design and implementation will help build legitimacy. Without the legitimacy conferred by *all* levels of government, the model may not be as strong as it needs to be (see Box 3.7). This is particularly important in the case of GORE, where a question of ambiguity is likely to arise. Attention will also need to be paid to its dealings with the individual municipal authorities. This is significant, since their reported tendency is to

Box 3.7. **Characteristics of supra-municipal arrangements**

According to L.J. Sharpe, a metropolitan government model embodies some or all of the characteristics noted below. Those that embody all of them tend to be classified as "strong" (e.g. in the *Comunidad Autónoma de Madrid* and Metropolitan District of Quito), and those that reflect only a few are classified as "weak" (e.g. in the Greater London Authority and the Metropolitan District of Portland). These classifications should not be considered a reflection on the arrangement's degree of success, however.

- political legitimacy of the metropolitan authority through direct elections;
- jurisdictional territory matching the functional territory of the metropolis;
- independent financing resources, notably through their own budget;
- relevant responsibilities and competences;
- adequate staffing to elaborate and implement relevant policies and actions.

Source: Lefèvre, C. (2008), "Democratic Governability of Metropolitan Areas: International Experiences and Lessons for Latin American Cities", in E. Rojas, J.R. Cuadrado-Roura and J.M. Fernández Güell (eds.), *Governing the Metropolis: Principles and Cases,* Inter-American Development Bank, Washington, DC, and David Rockefeller Center for Latin American Studies, Harvard University, Cambridge, Massachusetts.

favour a Lord Mayor approach to metropolitan management rather than a metropolitan authority.[11] Consideration by all affected parties would also have to be given to the composition, structure, formation and leadership of a supra-municipal management body (e.g. a metropolitan council), including the relative weight of the members.

Considering a supra-municipal model in Chile

A supra-municipal arrangement for Chile's metropolitan areas could provide an institutional, "whole-of-city" approach with respect to urbanism. The recent legislative reforms introduce the administrative framework and potential financing mechanisms for a metropolitan authority. Such an institution could be the locus of horizontal and vertical co-ordination efforts, and as such, could help overcome the challenges associated with administrative fragmentation. Provided with sufficient autonomy, it would also have a strong chance of mitigating the impact of institutional fragmentation by setting metropolitan area development strategies, prioritising plans and promoting coherence in the implementation of urban initiatives.

The challenge that Chile faces is the application of this framework. First, the co-ordinating council outlined in the legislation will need to be appropriately representative of the various municipalities comprising the metropolitan area. Chile could design this from the top down and establish the council's composition and attributes through legislation. It could also take an approach that combines the requirements of legislation with a need for greater flexibility and reflection of local nuances: metropolitan regional councils could be legislatively required, but their composition, form of election, term limits for council members and so on could be defined together with the affected municipalities. To help further institutionalise the details of the arrangement, a metropolitan area constitutional charter might be established as well (see Box 3.8). It is conceivable that this be done in conjunction with regional governments, and brokered (rather than led) by the central level. This would make it easier to ensure that the council and its composition are tailored to the reality of the specific metropolitan area. In addition, it would be likely to have greater political legitimacy with local and regional authorities. This would mean that each metropolitan co-ordinating council might have a slightly different composition it does not mean that their fundamental responsibilities must or would differ.

Competence allocation and authority is another potential challenge. Like the composition of the co-ordinating council, the attribution of fundamental competences and responsibilities could be established legislatively; or an appropriate mechanism could be identified that makes room for additional competences to be added either at the institution's establishment or over time (e.g. a metropolitan area constitutional charter), building flexibility into the model as well as promoting local relevance. It will be important that competences are very clearly ascribed, that they do not overlap with those of other levels of government, and that councils enjoy managerial autonomy. They will need the capacity and space to execute their competences as appropriate for the metropolitan area, and to be sure they are not superseded or supplanted by higher or lower levels of government.

A final challenge will be financial, fiscal and administrative management. There is evidence that metropolitan institutional structures that can generate own-source revenue (and have control over their finances) tend to flourish, while those that are held in check by their funders face greater difficulties (Bird and Slack, 2008). For a metropolitan or other regional area authority to be successful, it must enjoy a degree of financial/fiscal (and managerial) autonomy. The Metropolitan Investment Fund (FIM)

Box 3.8. **Constitutional Charters for metropolitan and other urban areas**

Constitutional charters for metropolitan areas can help clearly and precisely define the metropolitan area, functions and powers, form government, ordinances, ethics and codes. At the same time, they allow for flexibility in metropolitan form and adjustments over time. These charters are established by the metropolitan area and thus can vary from place to place, though there is a logical tendency to focus on establishing the roles, responsibilities and competences associated with metropolitan actors and institutions.

In the state of Tennessee (US), the citizens of Memphis and Shelby County decided to establish a new form of metropolitan government. The **Memphis Shelby County Metropolitan Government Charter,** approved in 2010, sets out general provisions (e.g. the name, powers, terms of office for metropolitan officials), and then clearly elaborates the structure, composition and competences of its legislative (council), executive (mayor) and judiciary (courts) branches. It also defines the roles and responsibilities for metropolitan constitutional county officers, and metropolitan government agencies. It calls for the creation of a human resource system and outlines the management of financial mechanisms details (budget, taxation and bonds). The charter makes provisions for certain annexations (e.g. for urban services, but only with citizen approval), articulates a code of ethics and establishes a basis for amendment and review of the charter. It also gives consideration to the transition mechanisms and timing necessary to ensure a smooth shift to its new form of metropolitan government.

When establishing its metropolitan area service district (Metro) in 1992, Portland, Oregon also developed a metropolitan area charter. "**The Metro Charter**" establishes the names and boundaries of the metropolitan area, the functions and powers of the area, finance, form of government, officers, commissions and employees, elections and reapportionment, ordinances and other provisions. With respect to functions and powers, the charter explicitly establishes Metro's competences and responsibilities, as well as the scope and/or composition of some of them, including long-term regional planning and articulating a future vision; regional framework plans and their composition; prioritisation and funding regional planning activities; and protecting the liveability of neighbourhoods. It also sets out mechanisms to assume additional functions, and makes provisions for the relationship or interaction with other levels of government. Financial management details are covered, as is the form and composition of government (Metro Council, Metro President) and the provision of a Metro Auditor. Like the Memphis Shelby County Charter, the Metro Charter also takes into consideration a government transition period.

At a supra-national level, the **European Urban Charter** was established originally in 1992 and updated in 2008 by the Congress of Local and Regional Authorities of the Council of Europe. The Charter sets out the rights and responsibilities of urban residents and of the European local elected representatives to their urban constituency. The Charter's various chapters cover such issues as transport and mobility; the physical form of cities; housing, sport and leisure in urban areas; multi-cultural integration; health; citizen participation, urban management and planning; economic development in cities. Unlike the metropolitan area constitutional charters explored above, which establish the functional mechanisms for metropolitan areas, the European Urban Charter is a document to guide urban policy makers by highlighting a core set of urban values at the supra-national level.

Source: Memphis Shelby County Metropolitan Government (2010), *Summary: Memphis Shelby County Metropolitan Government Charter*, *www.memphislibrary.org/ftsbc/Charter_Summary.pdf*, accessed 4 November 2012; Metro Portland (2000), *The Metro Charter*, *www.oregonmetro.gov/index.cfm/go/by.web/id/629/print/true*, accessed 4 November 2012; Council of Europe (2002), *European Urban Charter,* Congress of Local and Regional Authorities; *http://sustainable-cities.eu/upload/pdf_files/URBAN_CHARTER_EN.pdf*, accessed 1 November 2012; Council of Europe (2008), *European Urban Charter II*, Congress of Local and Regional Authorities, Strasbourg, France, *https://wcd.coe.int/ViewDoc.jsp?id=1302971&Site=*, accessed 1 November 2012.

provided for in the legislative reforms establishes a fund for a metropolitan area. However, consideration should be given to distinguishing it as a fund for a metropolitan authority, or it could run into the same risks as the FNDR. These include being used as a stop-gap measure by metropolitan municipalities to make up for resource shortfalls and enjoying little to no financial forecasting visibility, which tends to perpetuate a project-based disbursement logic rather than enhancing capacity locally to meet long-term metropolitan development needs. In sum, the risk is that the metropolitan authority will lack a predictable funding base, and/or have little autonomy for financial and fiscal management. Some means to complement funds received from the FIM with own-source revenue (i.e. generated by the metropolitan area) will be critical. The government will also need to establish a mechanism that ensures equitable disbursement of FIM funds among metropolitan authorities, and which properly considers the resource requirements (administrative and operational) of metropolitan authorities. While such authorities should have autonomy over their administration and operations, questions concerning their cost and management must be resolved by all parties involved.

It is worth mentioning that a metropolitan model can often increase the power of the metropolitan areas in their relationship with the central government and internationally, which can be highly positive for the region. For instance, since its creation, the Stuttgart Regional Association has been able to activate subsidies for regional development projects totalling EUR 155 million (OECD, 2006). At the same time, this can create tension with higher levels of government. In addition, the model calls for both central and local-level actors to give up some of their competences. While this is not a sufficient reason to discard the option, it does call for mechanisms to minimise ambiguity, as noted earlier, particularly in the case of Santiago, given that it is both a metropolitan region and the seat of national government.

A supra-municipal arrangement is a strong possibility for Chile's metropolitan areas. However, it is not the only option, and the model is not appropriate for urban areas throughout the territory. Chile's urban areas are diverse in size and composition (core versus hinterland structures, composite versus single municipal administrations). For these other types of urban areas, different arrangements are needed. Multi-model or heterogeneous situations in territorial governance are not uncommon in OECD countries and may also be highly appropriate for Chile.

Inter-municipal arrangements

Inter-municipal institutional arrangements depend on existing entities for their resources and organisation (Lefèvre, 2008). They are more common than supra-municipal ones, and are based on obligatory and/or voluntary co-operation among the municipalities comprising a functional urban area. When successful, they can be effective at managing the impact of administrative fragmentation, particularly for service delivery. Depending on their structure and competence attribution, they may also help address the challenges associated with institutional fragmentation. Inter-municipal arrangements are used in OECD countries to build scale for the delivery of services. Their success, however, requires effective horizontal and vertical networks among urban actors (Klink, 2008). This arrangement is more flexible than that of a supra-municipal model and is as applicable to metropolitan areas as to urban municipalities within a region. Inter-municipal arrangements generally take the form of joint authorities and can fall into roughly three categories: *i*) "metropolitan-wide" (or "city-wide"); *ii*) "infra-metropolitan"; *iii*) sector or single-purpose (Lefèvre, 2008; OECD, 2006). Box 3.9 provides examples of each of these arrangements.

Box 3.9. **Examples of inter-municipal joint authorities**

"Metropolitan-wide" joint authorities

France's *Communautés d'agglomération* and *Communautés urbaines* are good examples of metropolitan-wide inter-municipal joint authorities. In the late 1990s, the government decided to recognise the concept of agglomeration to clarify the institutional framework and accommodate a proliferation of agreements and actors. With the introduction of three laws (the Law on Spatial Planning and Sustainable Development or LOADDT, the Law on Strengthening and Simplifying Inter-municipal Co-operation, and the Law on Urban Solidarity and Development or SRU), the government developed a mechanism to encourage the creation of *communautés d'agglomération* and *communautés urbaines*. They are found throughout the country in approximately 150 urban areas, and have incrementally built their role in the administration of large cities. *Communautés d'agglomération* apply to urban areas of between 50 000 and 500 000 residents, while *Communautés urbaines* apply to areas of more than 500 000 inhabitants. Both are overseen by indirectly elected councils, on which sit representatives of the municipalities in the urban area concerned. Generally, the President of the Council is the mayor of the central city. Both types of authorities are responsible for area-wide competences, including public transport, environment, social housing, planning, economic development, culture, sewage and waste management. To ensure resource capacity and the means to carry out most of their responsibilities, the *communautés* enjoy their own tax revenues from the establishment of a common business tax. In addition, they receive some financial assistance member municipalities as well as from the State through an increase of the Operating Block Grant (*Dotation Global de Fonctionnement*).

In **Canada**, the *Communauté Métropolitaine of Montreal* (CMM) was established in 2001. It extends over 64 municipalities and has a planning, co-ordinating and financing role. It is managed by a Council comprised of representatives of the Montreal City Council, which includes the mayors and representatives of the other municipalities in the *Communauté*, and is chaired by the mayor of the amalgamated city of Montreal. The CMM is responsible for economic development, strategic and land-use planning, culture, social housing, solid waste disposal and metropolitan infrastructure. It has no direct resources. Its funding comes from member municipalities and the province of Quebec, with the latter contributing a majority share (approximately 75%). The CMM has been particularly active in promoting an economic development strategy for the whole metropolitan area, including the creation of a regional fund, the production of a strategic vision and the elaboration of a cluster strategy, as well as lobbying towards higher levels of governments to get more funding for municipal infrastructure. It provides a rather modest tax-base growth sharing mechanism. This programme is used to finance small development projects throughout the CMM, and thus would only marginally improve fiscal equity among municipalities.

Canada's *Greater Vancouver Regional District* (GVRD) is a voluntary organisation that has achieved striking successes in the Vancouver metropolitan region to deal with such challenges as rapid growth and underinvestment in infrastructure. The GVRD is a partnership between the over 20 municipalities that make up the Greater Vancouver metropolitan area, which has formal responsibility in providing metropolitan-wide services such as drinking water, sewage treatment, recycling and garbage disposal, as well as regional planning and environment protection. It can also choose to take on other roles on a voluntary basis. The GVRD's Board of Directors is comprised of mayors and councillors who serve on members' local councils, on a representation by population basis. The budget of GVRD is fairly small (CAD 191 per capita in 2002 compared to CAD 1 135 per capita for the lower-tier municipalities combined). The largest expenditures of the GVRD are for water and sewers (42% of total expenditures in 2002), capital expenditures (23%) and solid waste management (16%). User fees account for 80% of GVRD revenues, followed by property taxes (almost 8%), and other investment income (almost 5%). A separate regional authority is responsible for transit.

Box 3.9. **Examples of inter-municipal joint authorities** *(cont.)*

"Infra-metropolitan" joint authorities

São Paulo's ABC Region is an inter-municipal consortium of seven municipalities (2.4 million inhabitants) within the Greater ABC Region. It is responsible for co-ordinating strategic planning and economic development policies at the ABC regional level.

In **Milan**, the Association for the Development of the North Milan Area (ASNM) was voluntarily established in 1996 among four municipalities (about 4 million people) to undertake the economic and social transformation of northern Milan. Its Council is composed of representatives from the four municipalities, the province of Milan, and the Chamber of Commerce. The mayor of the largest municipality acts as Council Chair. When established, the ASNM's ascribed responsibilities related primarily to urban regeneration. Over time, its activities have expanded to include strategic planning. New responsibilities however are "delegated" by the member municipalities and can be withdrawn. The ASNM has no own resources – it is funded by its member municipalities and by state, regional, provincial and European Union grants.

Sectoral joint authorities

In **Germany**, transit federations are found in almost all large urban areas and involve participation of the central municipality, the metropolitan district (*Kreise*) and the *Länder*. They concentrate on planning and managing public transportation, which includes setting fares, administering subsidies, deciding service levels and managing the public and private transit operators. Some transit federations administer parking systems and are involved in land-use planning with the authority to oppose building permits or land settlements that would require overly complex or costly public transport development.

Source: Lefèvre, C. (2008), "Democratic Governability of Metropolitan Areas: International Experiences and Lessons for Latin American Cities", in E. Rojas, J.R. Cuadrado-Roura and J.M. Fernández Güell (eds.), *Governing the Metropolis: Principles and Cases*, Inter-American Development Bank, Washington, DC, and David Rockefeller Center for Latin American Studies, Harvard University, Cambridge, Massachusetts; OECD (2006), *Competitive Cities in the Global Economy*, OECD Publishing, Paris, doi: *10.1787/9789264027091-en*.

Metropolitan-wide or city-wide joint authorities are the most comprehensive form of inter-municipal arrangement and have been described as "minimal" government restructuring.[12] Their jurisdiction often parallels functional urban boundaries, increasing the possibility of success for managing administrative fragmentation. In addition, they often perform a large variety of responsibilities, including planning and co-ordination. This model can develop organically and over time, for example with the support of legislation promoting inter-municipal co-operation, or their development can be fostered by central government incentive structures. For instance, in Canada, the Montreal Community of Montreal (CMM) was created by an upper level of government, while in Vancouver, the Greater Vancouver Regional District came about through voluntary co-operation. Sometimes, as in France, incentives from upper levels of governments were instrumental, as in the case of the *Communautés d'agglomération* and *Communautés urbaines*. In addition, metropolitan-wide joint authorities tend to have their own administrative and financial resources, and enjoy sufficient funding for their operation and management. Some receive grants from upper levels of government and/or fees from members' local governments, and can even levy their own taxes. In some cases, not only can they deliver economies of scale in specific policy areas, but can also equalise the sharing of service costs across the metropolitan region and allow for a more harmonious distribution of resources.

This degree of redistribution, however, is not as systematic as in heavier governance models, such as metropolitan authorities (supra-municipal arrangements) (OECD, 2006; Lefèvre, 2008).

"Infra-metropolitan" joint-authorities can also be considered a form of "minimal government restructuring" (OECD, 2006). They too are formed by inter-municipal co-operation and can deliver on a variety of responsibilities. Such co-operation, however, covers only over a portion of the urban area. The result is co-operation that varies with respect to the devolved competence, funding mechanisms and other responsibilities. While these joint authorities can be highly successful, they are less adapted to overcoming administrative and institutional fragmentation over an entire urban area. They may also be less likely to have an impact on overall urban policy outcomes, and such concerns as socio-spatial segregation (Lefèvre, 2008).

Sectoral or single-purpose joint authorities promote horizontal co-operation in one particular sector, though these bodies sometimes have the potential to administer other policy areas (Lefèvre, 2008). Their aim is to increase service co-ordination and build economies of scale. Single-purpose authorities may provide similar municipal services to several municipalities or manage metropolitan-wide services with significant externalities. This form of co-operation is common in countries where local autonomy is strong, such as in the United States and Germany. Public governance in US metropolitan regions, for instance, is notable for a profusion of regional special districts that tend to focus on single purposes (e.g. providing environmental protection, cultural facilities and transport). Many are funded through special tax measures as well as fees and charges. In Sweden, municipalities co-operate through a variety of mechanisms, such as joint ownerships whereby two or more municipalities or county councils form a joint board to handle a given operation, such as managing a school or a health care centre. Finland has implemented single-purpose joint authorities in health care, specifically for hospitals, as a means to build scale and manage costs. Public transport and urban planning are also likely to be under the domain of this type of authority, due to their metropolitan scope. The special-purpose district has a specific advantage, i.e. since spill-over boundaries differ for each service, they can be addressed on an individual basis. The main disadvantages of a single-purpose authority are that it raises the problem of co-ordination between several sectoral agencies and increases the risk of constituencies emerging to defend sectoral interests. It can also limit possible economies of scope among the different services provided. The independence of the different bodies does not allow for trade-offs between various types of expenditures. This creates a complex policy environment which reduces political accountability, as, in general, there is no direct link between the expenditure decisions made at the district/agency level and the local councils that are usually responsible for collecting taxes to fund it. While this inter-municipal form of collaboration might be successful in achieving co-ordination and efficiencies for specific services, it is not suitable for achieving sustainable region-wide co-ordination (OECD, 2006). By its nature, such an arrangement is not able to promote an integrated approach to urban development and management. Nor would it help overcome the fragmentation problems facing urban governance in Chile: in fact, it might accentuate them.

In the case of inter-municipal joint authorities, there is no superimposition of a new umbrella of government, as seen with the supra-municipal arrangement. Instead, representatives are taken from existing localities and recast in a common structure. Thus, they are able to avoid the "grindstone effect" of being squeezed between competing jurisdictions. In addition, they do not suffer the tendency towards territorial stagnation

that is common to consolidated metropolitan areas, as cities can join the body without disrupting activities or needing to readjust the scale of the area. Another advantage of joint authorities is that they preserve local autonomy, diversity and the distinct identity of their member municipalities. The positive benefits of such joint authorities depend on their capacity to integrate different functions. Political and popular legitimacy can be an issue, however. In the first case, legitimacy may be diluted, as indirectly elected boards often administer joint authorities. In the second case, it can become an issue when the institution takes on increasing responsibilities and fiscal revenues. In addition, problems may arise for policy implementation when the municipalities are not bound to respect the decisions. In Vancouver, cases have been reported indicating difficulties in implementing the master plan. The French *Communautés d'agglomération* and *Communautés urbaines* are more efficient in this respect, because participating municipalities are obliged to implement the decisions taken at the metropolitan level (OECD, 2006).

Considering inter-municipal arrangements in Chile

In considering urban governance models for Chile, a form of inter-municipal arrangement may be highly appropriate for many of its urban areas, particularly those that are exhibit metropolitan characteristics and challenges and which are not yet classified as such (e.g. La Serena/Coquimbo and Temuco). Joint authorities could help overcome administrative fragmentation where it exists, manage the impact of institutional fragmentation and provide a structure for the delivery of public services.

An area-wide construct, i.e. a "city-wide" or "metropolitan-wide" joint authority, might best suit the needs of many Chilean functional urban areas. It can cover a wide range of services, providing these with equivalent standards, and helping to overcome the socio-spatial segregation associated with fragmentation and intra-urban capacity gaps.

Infra-metropolitan joint authorities covering only a segment of the functional urban area are another alternative, possibly less effective for Chile. They have a narrower scope, and may thus be easier to establish, both in terms of the number of municipalities co-operating and the responsibilities attributed for oversight and implementation. They present a weaker option in this case, however, as only "like" or peer municipalities may choose to co-operate, thereby compounding rather than mitigating problems of social or spatial segregation. These problems might be avoided if infra-metropolitan authorities are mandated to provide certain services (e.g. waste management and health care) and mechanisms are in place to ensure that municipalities of different capacities co-operate. However, an excessive proliferation of joint authorities – with different municipalities forming a variety of alliances for a variety of services – can compound the existing problems of overlap and accountability in urban management.

Chile's experience with joint-municipal authorities has not been highly successful to date, for at least two reasons. First, municipalities may choose not to co-operate with their neighbours for political or historical reasons. Second, and perhaps more significantly, co-operation is at present voluntary. Experience among OECD countries shows that unless there are strong incentives or sanctions (generally financial) linked to voluntary co-operation, municipalities are less likely to enter into such arrangements. Promoting voluntary joint municipal authorities may be unrealistic in Chile's case, as its municipalities are not accustomed to co-operating with each other for administrative purposes, development planning (e.g. strategic planning, economic development planning) or service delivery, and they currently have little incentive to do so.

Although the current "city-wide" inter-municipal joint authorities have not been uniformly successful, the model should not be discarded. The government may wish to consider promoting obligatory, city-wide multi-purpose (i.e. not limited to only one activity) joint authorities. Chile's Organic Law for the Constitution of Municipalities (*Ley Organíca Constitucional de Municipalidades/Ley 18.695)* establishes the right of municipalities to co-operate in order to address common problems or make better use of resources. The law permits municipalities to establish associations for a variety of purposes, including providing common services; executing public works linked to local development; strengthening management/administrative instruments; implementing programmes for environmental protection, tourism, health or other reasons as appropriate to the municipalities; training of municipal staff; and co-ordinating with national or international institutions to improve municipal administration (Government of Chile, 1988). A legal framework for such an entity could be considered to be already in place. These associations have so far been limited to one activity (e.g. providing services such as waste collection, or building a tramway) rather than serving as a framework to deliver a broad range of urban services, provide infrastructure and manage the diverse demands of an urban area. The institutional dimension of municipal associations may need to be better defined and developed, including their administrative and operational structure, competence attribution and financing. A city-wide inter-municipal joint authority would provide and manage competences and services for the area's municipalities, in such areas as economic development, land-use planning, culture, social housing and waste anagement. What makes such inter-municipal authorities significantly different from a metropolitan authority is that their resources and organisation depend on the municipalities themselves.

If properly established, city-wide inter-municipal joint authorities could provide a solid institutional option for "quasi-metropolitan" areas, as well as for medium- and small-sized functional urban areas that are comprised of more than one municipality. By establishing a single co-ordinating entity for the management, planning and service delivery necessary within the urban area, they can help overcome institutional fragmentation, promote greater policy coherence and build economies of scale.

Evaluating the municipality-based models

Table 3.4 summaries the main characteristics of the models explored thus far: supra-municipal (metropolitan government model), metropolitan- or city-wide joint authorities, infra-municipal joint authorities and sectoral (single-purpose) joint authorities.

A stylised comparison of types of services delivered by metropolitan regions with supra-municipal versus inter-municipal governance structures reveals that one model is not necessarily better than another when it comes to improved urban-service outcomes (see Table 3.5). Much depends on the institutional structure and relationships already active in service delivery. What is clear, however, is that in areas with incomplete structures, e.g. in Santiago, Buenos Aires and São Paulo, service delivery capacity is significantly reduced (Klink, 2008).

Moving forward, at a metropolitan level, Chile may wish to introduce a supra-municipal arrangement for one or more of its functional metropolitan areas and incentivise city-wide inter-municipal joint authorities for other urban areas. It could do so all at once, or it could chose a more gradual approach, building the models for one large

Table 3.4. **Institutional modes of metropolitan governance**

Type of metropolitan arrangement	Territorial match with metropolitan area	Own resources	Multi-purpose	Degree of political legitimacy	Examples
Supra-municipal	Yes	Yes	Yes	Direct	Greater London Council
Metropolitan-wide/ city-wide	Yes	Yes	Yes	Indirect	French C.U. and C.A.
		No	Yes	Indirect	CMM
Infra-municipal	No	No	Yes	Indirect	ASNM
					São Paulo ABC
Sectoral	Yes	No	No	Indirect	German transit federations

Source: Lefèvre, C. (2008), "Democratic Governability of Metropolitan Areas: International experiences and lessons for Latin American cities", in E. Rojas, J.R. Cuadrado-Roura and J.M. Fernández Güell (eds.),*Governing the Metropolis: Principles and Cases*, Inter-American Development Bank, Washington, DC, and David Rockefeller Center for Latin American Studies, Harvard University, Cambridge, Massachusetts.

Table 3.5. **Functions delivered/co-ordinated by metropolitan regions**

Case		Function							
		Economic development	Transport	(Strategic) planning and land use	Environment (including solid waste)	Social services	Culture	(Crime prevention)	Police/ disaster management
Supra-municipal	Portland	X	X	X	X				
	Greater London Authority	X	X	X	X	X	X	X	X
	Indian MDAs		X	X	X	X			(X)
	Manila MDA		X	X	X	X			X
	Caracas		X	X	X	X		X	X
	Quito	X		X	X	X			X
Inter-municipal	Bologna		X	X	X	X			
	Marseille	X	X	X	X	X	X	X	
Incomplete	São Paulo	X			X				
	Buenos Aires				X	X			
	Santiago								

Note: Involvement is either defined as delivery or co-ordination/supervision/evaluation/mentoring. The main functions are those provided directly by the metropolitan region or regional authority. For example, in São Paulo, transportation, planning and water and sanitation networks are provided by state companies for the metropolitan area. In Santiago, there is no metropolitan-wide service delivery capacity.
Source: Klink, J. (2008), "Recent Perspectives on Metropolitan Organization, Functions and Governance", in E. Rojas, J.R. Cuadrado-Roura and J.M. Fernández Güell (eds.), *Governing the Metropolis: Principles and Cases,* Inter-American Development Bank, Washington, DC, and David Rockefeller Center for Latin American Studies, Harvard University, Cambridge, Massachusetts.

metropolitan area as an experiment, and then use the lessons learned to decide whether such a model is appropriate for its other metropolitan regions. City-wide inter-municipal joint authorities could be approached in the same manner.

Regional arrangements

Until now, the discussion has focused on creating new institutional entities for managing metropolitan and urban governance in Chile as a means to address fragmentation and its impact on urban outcomes. Chile may also need to consider reinforcing existing institutions such as regional governments, and complement action taken at the local level with action at the regional level. Such an approach could also provide a mechanism to manage the impact of institutional fragmentation, poor alignment between resources and competences, and low capacity (administrative, financial,

infrastructure) of functional urban areas composed of a single municipality. It could also provide a suitable governance framework for those municipalities that are not yet metropolitan, but face metropolitan challenges, regardless of whether they are composite authorities (i.e. formed of multiple municipalities) or single authorities.

Should a regional approach be taken, legitimacy challenges at the regional level would need to be addressed: *Intendentes* change frequently; ascribed competences are few; and there is little fiscal and financial visibility. These challenges are not insurmountable, although overcoming them will require more concentrated action on the part of the central government and greater capacity by GORE. It could mean making institutional adjustments (e.g. streamlining) at the regional level, in order to reduce fragmentation and build more cohesive programmes that address regional needs and ministerial priorities in a balanced fashion.

Chile may wish to reconsider the role of GORE in urban and metropolitan governance. An effective regional framework could be founded on a strong two-tier model in which GORE are more directly responsible for urban management and development, as well as for planning and undertaking major infrastructure and service delivery in their region in accordance with national and regional strategic plans. In such a structure, the upper tier (i.e. the regional government) would focus on the providing region-wide services that benefit the whole territory, are associated with both positive externalities and some redistribution, and which demonstrate economies of scale. Lower tiers (i.e. urban areas) would concentrate on local services that provide local benefits and may be more in line with their actual resource capacity (see Table 3.6) (Bird and Slack, 2008).

Table 3.6. **Allocation of expenditure responsibilities in a two-tier model**

Function	Upper tier	Lower tier	Justification
Welfare assistance	X		Income redistribution; externalities
Child care services	X		Income redistribution; externalities
Social housing	X		Income redistribution; externalities; economies of scale
Public health	X		Income redistribution; externalities; economies of scale
Ambulance	X		Income redistribution; externalities
Roads and bridges	X	X	Local versus regional needs
Public transport	X		Externalities; economies of scale
Street lighting	X	X	No externalities
Sidewalks	X	X	No externalities
Water system	X		Economies of scale
Sewer system	X		Economies of scale
Garbage collection	X		Economies of scale; externalities
Garbage disposal	X		Economies of scale; externalities
Police protection	X		Externalities; economies of scale
Fire suppression	X	X	Local responsiveness; economies of scale for specialised services
Fire prevention/training	X		Economies of scale
Local land-use planning	X	X	Local access; responsiveness
Regional land-use planning	X		Externalities
Economic development	X		Externalities
Parks and recreation	X	X	Local responsiveness
Libraries	X	X	Local responsiveness

Source: Bird, R. and E. Slack (2008), "Fiscal Aspects of Metropolitan Governance", in E. Rojas, J.R. Cuadrado-Roura and J.M. Fernández Güell (eds.), *Metropolitan Governance: Principles and Cases*, Inter-American Development Bank, Washington, DC, and David Rockefeller Center for Latin American Studies, Harvard University, Cambridge, Massachusetts.

Such a move would require significant capacity-building and careful consideration of administrative organisation, competence allocation and resource provision and management; but it could also provide a structure with legitimacy and applicability to metropolitan areas as well as medium and small urban ones. This possibility does not eliminate the need for relevant urban-level arrangements (e.g. supra-municipal or joint authorities) able to address administrative fragmentation. It can however, provide a means to better align resources with responsibilities, improve accountability and strengthen urban outcomes across the territory.

Administrative organisation

Strengthening the capacity of Chile's regional governments to partner with both central- and local-level authorities in urban development and management requires adjustments in the administrative organisation of these entities. Structurally, the components already exist in each region: an executive figure embodied by the *Intendente*; a Regional Council, which once elected could be considered more directly representative of the population; an established regional public administration; a network of SEREMI that implement sector-oriented policy and programme initiatives.

Among the adjustments necessary would be a mechanism to limit the high turnover that currently exists among *Intendentes*. Governance grows stronger with stability, and executive stability is lacking in Chile's GORE. While it is not necessary and in fact not desirable that *Intendente* remain in office indefinitely, consideration must be given to building temporal stability within the institution by setting and following a framework for time in office. In many countries this is accomplished by direct elections of the regional executive and established term limits. In addition, there is a need to strengthen the capacity of *Intendentes* to prioritise and co-ordinate SEREMI activity and initiatives.

The accountability of SEREMI would also need to be considered. It is entirely appropriate for line ministries to elaborate sectoral strategies and objectives, and for these to be regionally implemented by competent bodies. However, the current dual-reporting system for SEREMI – to ministries and *Intendentes* – may be generating inefficiencies and reducing programme effectiveness across the territory. This is due in part to regional replication of central-level sectoralism. In a renewed accountability system, Chile would need to address this dichotomy, and clearly establish lines of responsibility and accountability. Ideally, SEREMI priorities should be better able to consistently align with those of regional and local authorities in order to design and implement sectoral policy consistent with the region's development objectives.

Competence allocation

As highlighted in Table 3.2, GORE are involved in a minority of service provision categories, with greatest activity in matters relating to environment and sustainability. It is conceivable that in a regional framework for urban governance, GORE would play a larger role in ensuring the provision of services in almost all categories and subcategories of urban-related responsibilities (see Table 3.6), some of which would be transferred down from the central level and others transferred up from the local. For example, GORE could take the lead in ensuring the delivery of essential utility services and infrastructure (electricity, water, gas), education and major community services, regional-level environmental management, approval of major development projects, and preparing urban and metropolitan planning strategies with urban authorities.

This formula does not preclude the continued use of concessions to fund infrastructure or service provision, nor does it leave municipalities without responsibility to their communities. Municipal responsibilities could still span the service competence categories outlined in Table 3.A1.2, but they would be refocused on a narrower band of activities (e.g. local roads, elements of public health, welfare services, small-scale infrastructure), as well as planning responsibilities such as preparing and implementing local strategic and land-use plans, and controlling building and development. This could help better align competence allocation with resource capacity. A redistribution of competences should not preclude local authorities with greater capacity from delivering additional services. At the same time, such competence reallocation should be undertaken so that municipalities at all capacity levels can deliver at least basic, quality public services and thus begin to address socio-spatial segregation.

Resource provision and management

An urban governance framework that rests on the capacity of GORE to manage urban areas and ensure service provision, as well as one based on municipal-level institutional arrangements (supra-municipal or inter-municipal), would demand an increase in sub-national level financial capacity, for example by opening the possibility of raising own-revenue sources, or by increasing transfers by the central government (particularly if the government shifts down some of its competences). It would also require a shift to a financing logic that supports programme-driven initiatives rather than individual project initiatives.

A two-tier model with a stronger regional level could also facilitate redistribution. Given the weak redistribution mechanisms currently in place in Chile (as evidenced by persistent inter- and intra-region and urban inequalities) tax and spending policies may need to be revisited in order to finance the upper tier. Such systems could be designed so that GORE are able to generate their own sources of revenue in addition to receiving central government block grants. Financial and fiscal management ought to reflect spending priorities driven by territorial strategies and needs, and thus would likely mean greater revenue- generating and spending autonomy for GORE and/or any other institutional arrangement (e.g. supra-municipal body or joint-authorities) as appropriate.

Regional-level urban development agencies or councils

Regional-level urban agencies or councils could complement any of the institutional arrangements explored. Such entities could to help guide urban policy design and implementation and support GORE in managing and meeting their urban competences, as regional governments remain responsible for broader regional policy as well. These types of organisations are successfully used in Australia and France, for instance (see Box 3.10).

Agencies benefit from flexible structures (e.g. associations) and can bring together diverse stakeholders concerned with regional development through their administrative councils. France introduced urbanism agencies progressively, starting in a few cities or large territories. Today, they form part of a national network that serves as an interlocutor for reforms that impact development and urbanisation. They also permit an exchange of expertise between regions and build their capacity to address complex subjects. The network formed by such agencies could be an interesting resource for the SUBDERE as the co-ordinator of regional development and regional development policy.

Box 3.10. **Central and sub-national supporting bodies for urban development and management**

At the national level, **Australia**'s Council of Australian Governments (COAG) is the peak body for inter-government relations. Its members are the Prime Minister, State and Territory Premiers and Chief Ministers, and the President of the Australian Local Government Association. The Prime Minister chairs COAG. The Council's role is to promote policy reforms that are of national significance or which need co-ordinated action by all Australian governments. COAG is also supported by the COAG Reform Council, established to monitor progress with and advise on, national reform agendas including those implemented at the sub-national level. Under COAG sit a number of ministerial councils, which cover specific functional areas of inter-government interest, as well as task forces and advisory committees.

At a metropolitan regional level, the Western Australian Planning Commission provides the governance structure for the metropolitan region. The commission has 13 members in addition to its executive chair. Six of these 13 are the chief executives of the key planning, transport, water, environment, housing and state development departments. Others represent local government, Indigenous interests and expertise in relevant disciplines. The presence of department heads ensures that the commission has a significant role in policy development and in the planning of state services and infrastructure. It also plays an important role in inter-agency negotiation and co-ordination. The commission operates with a system of 17 committees, and generally involves members from inside and outside government, as well as representatives of interest groups and industry. This permits a diversity of views to be taken into consideration, and helps maintain community confidence in the commission.

France's *agences d'urbanisme* are statutory associations, bringing together municipalities, the central government and relevant actors in urban development and planning. They monitor urban development, participate urban planning and development policies, study urbanism and methods to promote territorial coherence, and prepare agglomeration projects with an eye on promoting coherence between related public policies. These associations also provide a forum for debate and mediation between territorial actors, and serve as centres of expertise on urban and territorial matters.

In 2012, France had 53 such agencies assembled under the National Federation of Urban Agencies (*la Fédération nationale des agences d'urbanisme*/FNAU), dedicated to reinforcing the network of the various agencies, gathering and disseminating member experiences, and forming a link between the central government, municipal associations and urban development actors. Each agency unites the municipalities, region, department, central government, government deconcentrated services, chambers of commerce, universities, ports and public establishments. They are run by an administrative council that collectively decides on the programme of work, and are supported by a technical committee that ensures implementation and follow-up. The agencies are financed through member fees and subventions, with communes paying a fee linked to the number of their inhabitants.

Until now, the central government has favoured the establishment of such agencies in the urban sphere, but the FNAU stresses that the challenges of planning and sustainable development concerns the whole territory. Thus it is recommending that there be at least one urbanism agency per *département* (France has 96), and suggests that the agencies progressively put their competences in the service of all communes in the *département* rather than focusing only on large cities/metropolitan areas.

Source: Council of Australian Governments (COAG) (2012), "About COAG", *www.coag.gov.au*, accessed 20 August 2012; Sansom, G., J. Dawkins and S. Tan (2012), *The Australian Model of Metropolitan Governance: Insights from Perth and South East Queensland*, UTS: Centre for Local Government, University of Technology, Sydney, Australia; Fédération nationale des Agences d'urbanisme, *www.fnau.org*; Jarlier, P. (2012), "Rapport au Sénat Français sur l'Ingénierie Publique en Matière d'Urbanisme", *www.projetdeterritoire.com/index.php/Nos-thematiques/Conduite-de-projet-Ingenierie/Rapport-sur-l-ingenierie-publique-en-matiere-d-urbanisme*.

Chile has experimented with regional agencies in the past, for example through the Regional Productive Development Agencies. However, these were focused on specific sectors or policy areas with urban implications, such as innovation, rather than urbanism in general. A regional-level urban agency could provide the cross-sectoral critical analysis necessary to support evidence-based policy making, and support integrated strategic development planning at the regional level. Furthermore, it could help ensure a broadly participative process that includes public and private sector actors, from the various government levels, businesses, civil society organisations and academia, and make use of "neutral" (i.e. technical) instruments divorced from ministerial activities. It could also help develop and frame projects in a manner that is coherent with regional planning, while promoting a broad-based perspective. Such activity could be particularly useful for building planning capacity in weaker or smaller urban areas. As it considers urban governance structures, Chile may wish to also consider an experiment or pilot of an urbanism agency, rolling it out gradually, for example first in Santiago, and/or perhaps Valparaíso and/or Concepción.

Success factors for institutional urban governance models

Should Chile wish to pursue any of the institutional arrangements explored, particularly those for "new" institutions, success will depend on a number of factors, including autonomy, institutional legitimacy and stakeholder voice.

The effectiveness of any institution will depend on its competence allocation and the structure of its financial and administrative resources provision. It will also depend greatly on the degree of autonomy it enjoys with respect to its resources and resource management, whether central-level transfers, own-source revenues, municipal contributions or a combination of them. Without decision-making authority over resources, general authority over urban development and management will be held back.

Success will also depend on the capacity of key urban ministries and municipalities to relinquish their competences to organising bodies (e.g. a supra-municipal institution or a joint authority or GORE). This will require striking a solid equilibrium between the new institution's authority and activities with the authority of central government entities and member municipalities. Line ministries in Chile play a powerful, direct and indirect, role in urbanism and urban management. For any institutionally based model to succeed, these ministries will need to be able to make the transition from a role in which they direct and control, to one in which they guide and co-ordinate. While establishing effective urban governance structures can require transferring competences, building autonomy and shifting day-to-day power, this does not mean that the national government will fade into the background. Instead, the opportunity is created for the national level to focus on ensuring a more coherent approach to urbanism among central-level institutions – and in their relationship to sub-national institutions – through establishing the laws and regulations required for urban governance and acting as a mediator (Lefèvre, 2008).

If a top-down approach is taken in establishing the appropriate institutional model(s), a bottom-up component should also be included as a means to build legitimacy. Particularly in the case of "new" institutional structures, the governance structure of a metropolitan or urban authority (e.g. a council, its members and their selection process) as well as its responsibilities, financing mechanisms and degree of management autonomy, ought to be designed in conjunction with the relevant local authorities. The objectives and expectations for such a body need to be clearly articulated and agreed upon by all parties

concerned. This would include actors at all levels of government (central, regional and local), as well as from the private sector, in light of its important role in service delivery and policy implementation. Appropriate and equitable representation on the governing bodies of urban-wide arrangements (i.e. supra-municipal or inter-municipal) is necessary. In France, for example, each municipality – regardless of size – is guaranteed a direct or indirect presence on the boards of inter-municipal joint authorities.[13] In Italy, the province has the opportunity to represent small municipalities (Lefèvre, 2008). Given the intra-urban disparities that exist in some of Chile's larger functional urban areas, mechanisms of inclusiveness will need to be built into the administrative and financing structures, to avoid marginalising smaller or less-endowed municipalities. This may be particularly challenging, given the wide disparities that exist at an intra-urban level, and the fact that wealthier municipalities are capable – in terms of resources – of striking out on their own. Chile may need to develop mechanisms, whether sanctions, or incentives/disincentives, that will prevent wealthy municipalities from withdrawing from the arrangements.

Any of the institutional arrangements explored must be accepted by all levels of government. For example, a supra-municipal approach can leave higher levels of government (e.g. central or regional) feeling threatened, particularly if the metropolitan authority has significant weight in terms of population and economic productivity. One of the arguments made against a Santiago metropolitan authority, for example, is the challenge that it could pose to the central and regional level governments. Some countries have managed this by establishing the metropolitan authority as an intermediary tier. In Italy, when a metropolitan area approximately matches the perimeter of an existing province, the province automatically becomes the metropolitan authority, with its responsibilities, staff and resources established by law. A similar approach was taken by the Netherlands (Lefèvre, 2008). Ensuring municipal support for adjustments to urban governance structures is also critical. Not only should local authorities be consulted, once an urban governance framework is established, mechanisms are necessary to ensure that no municipality is marginalised in the governance process. This is particularly important in functional urban areas where there are wide variations in municipal capacity.

Among the arguments against forming large territorial units for urban governance, such as a metropolitan authority, is the loss of subsidiarity and an increased distance between citizens and policy makers. Citizen participation has been low in the past, and Chile's civil society is now beginning to gain strength in urban matters. At the regional level, Chile is beginning to see how citizen participation can benefit urban initiatives and to include them more actively. While citizen engagement may not be as direct in building a governance structure, citizens need to be engaged with their community if urban policy is to be successful (see Box 3.11).

When constructing a city-wide governance structure, consideration should also be given to reducing the distance between government and citizens and their neighbourhoods, for example through voluntary or mandatory local councils. Voluntary councils are found in Europe, for example in Amsterdam and Bologna, as well as in Canada and the United States. In France, a Government Act (*Loi sur la démocratie de proximité)* passed in 2000 required that neighbourhood or local councils serving as consultative bodies be established in all municipalities of more than 80 000 inhabitants (Lefèvre, 2008). This "democratic distance" has also been managed by permitting citizens to directly elect the representatives or at least the chair of the urban area's co-ordinating body. Citizens in the metropolitan areas of Bogotá and Quito directly elect the president of the metropolitan

Box 3.11. **Community involvement in Chile's *Recuperación Barrios* Programme: Valparaíso**

In 2006, the Ministry of Housing and Urbanism (MINVU) launched its nationwide *Recuperación de Barrios Programme*, aimed at recovering disadvantaged neighbourhoods. Programme implementation requires management plans to be submitted by the relevant communities. MINVU's Valparaíso SEREMI noticed that in the communities where results were poor, no inclusive *ex ante* planning had been undertaken by community leaders. Those communities where results were strong had established plans that included *ex ante* participation among stakeholders (i.e. representatives from the community, the municipal administration and the MINVU/SEREMI) who came together to identify the problems to address and develop a list of priorities. SEREMI has since solicited citizen engagement in other initiatives.

Source: Ministry of Housing and Urbanism/SEREMI (2012), OECD interview, June 2012, Valparaíso, Chile.

district. In Italy, the council president and its members are directly elected (Lefèvre, 2008). Direct participation of citizens in the urban governance architecture can help build political and social legitimacy.

In revitalising the urban governance architecture, Chile will need to ensure that this dimension is not overlooked, particularly if it wishes to ensure ownership of the institutions in public, private and civil society. This is especially important in Chile, where establishing urban programmes without sufficient cross-sectoral co-ordination and local stakeholder involvement has given municipalities little incentive to oversee their implementation or supervise their effectiveness (Valenzuela and Rojas, 2012). Strengthening stakeholder voice in urban matters is not incompatible with a role for the national government in urban governance. In fact, it becomes a critical player in ensuring legitimacy and co-operation within regional and municipal arrangements.

Complementing institutional arrangements with "soft" governance mechanisms

Using mechanisms associated with the "soft" governance model (see Box 3.5) to promote co-ordination among Chile's municipalities could provide a strong complement to any formalised institutional approach. These "soft" instruments can help address the problems that arise from fragmentation, but they are most effective when the co-ordination of urban actors, as well as their co-operation and collaboration (see Box 3.12), is ensured.

Box 3.12. **Co-ordination, co-operation, collaboration: A definition of terms**

- **Co-ordination:** Joint or shared information ensured by information flows among organisations. "Co-ordination" implies a particular architecture in the relationship between organisations (either *centralised* or *peer-to-peer* and *direct* or *indirect*), but not how the information is used.
- **Co-operation:** Joint intent on the part of individual organisations. "Co-operation" implies joint action, but does not address the organisations' relationships with one another.
- **Collaboration:** Co-operation (joint intent) together with direct peer-to-peer communications among organisations. "Collaboration" implies both joint action and a structured relationship between organisations.

Source: OECD (2005), *e-Government for Better Government*, OECD Publishing, Paris, doi: *10.1787/9789264018341-en*.

Chile has some "soft-governance" mechanisms in place, but they are under-utilised and on their own insufficient to overcome the fragmentation confronting urban development and management. Among these mechanisms are municipal associations, incentive mechanisms from the central government level, inter-ministerial committees and contractual programmes. Performance measurement and indicator systems are also in place, but may be failing to reflect regional and local needs and challenges, given the top-down approach to indicator selection (OECD, 2009c). If strengthened, the existing mechanisms could complement and reinforce co-ordination in a more formal urban governance arrangement.

Municipal associations

In many countries, municipal associations represent the interests of municipal authorities and are often the spokespersons for municipal interests before the national government. They are critical partners in helping to align interests and timing horizontally and vertically, particularly in implementing public policy. In addition, they can serve as forums to promote communication and dialogue and help build capacity and share good practices, especially among their members (Charbit and Michalun, 2009).

The Chilean Association of Municipalities (*Asociación Chilena de Municipalidades*) represents the interests of its membership before the central government as well as other public and private organisations. Its aim is to build capacity among its members, while also promoting greater autonomy and decentralisation (see Box 3.13). Given the strong centralisation of the Chilean multi-level governance relations, the association's strength at the local level seems more to lie in capacity-building rather than engaging with central-level administrative bodies as a dialoguing partner.

Incentive mechanisms to promote co-operation at the local level

Building horizontal co-operation can help overcome administrative fragmentation at the local level, while also addressing limited capacity for service delivery. Often, however, municipalities are reluctant to co-operate with their neighbours, and will not do so unless motivated. Chile's municipalities are no different, and tend to co-operate rarely. (Some of the smaller urban areas in Chile are faced with a form of mandatory co-operation for large-scale services, such as waste management.) To overcome this reluctance, some countries build co-operation by granting central aid on the condition of municipal co-operation and by making the aid essential for the municipalities to function properly; or by providing incentives through subsidies, as seen in France's *Établissements publics de coopération intercommunale* (EPCIs) (see Box 3.14).

Inter-ministerial bodies can promote co-operation at the national level

Greater co-ordination among key actors – political, civil servant and external stakeholders – could help address institutional fragmentation at the central level. One way to achieve this is through inter-ministerial committees. Such a mechanism could help ensure that the proper policy actors are in place to promote an integrated policy approach to urban development and service delivery. These bodies, however, will only be truly effective if leadership for cross-sectoral policy with an urban impact is clearly established, including decision-making authority and co-ordination responsibility, with collective responsibility maintained for shared outcomes.

Box 3.13. **The Association of Chilean Municipalities**

Established in 1993, the Association of Chilean Municipalities (*Asociación Chilena de Municipalidades*) is national-level body bringing together 342 of Chile's 345 local authorities (membership is voluntary).

The association's mission is to represent Chile's municipalities before public and private entities, whether regional, national or international, and to support its members both politically and technically in advancing democracy, decentralisation and the modernisation and improvement of municipal management. Among its objectives is to strengthen municipal capacity both among elected officials and municipal civil servants, and to promote the execution of common development strategies among municipalities.

It also aims to strengthen co-operation with the central level for pressing municipal concerns. For example, the association has been active in working with MINVU to finalise an agreement on resolving the issue of *campamentos* – mostly urban settlements without regularised land/property rights, where at least one of three basic services (electricity, potable water and sewer systems) are lacking, and where the dwellings are agglomerated and contiguous. Currently, there are approximately 650 *campamentos* in Chile (representing over 27 000 families), with the majority in Valparaíso, Bio-Bío and the metropolitan region of Santiago.

The association includes technical commissions made up of mayors and municipal council members that explore specific areas in municipal management, such as housing, health, education, finance and the environment. It also places strong emphasis on building capacity among mayors, municipal council members and municipal administrators (civil servants) who participate in a variety of seminars, courses, workshops and fora. Among the various topics covered in these events are: managing school violence, public safety at the local level, preparing and evaluating investment initiatives corresponding to public funds, as well as information and training on legislative and regulatory updates.

In addition, there are regional chapters and associations of municipalities where regional municipalities have organised to work on specific topics relevant to their territories. Each region has a branch of the association, with its own technical commissions, replicating the national-level structure.

Source: OECD interviews; Asociación Chilena de Municipalidades (2012), "Capacitación 2012: seminarios, congresos y talleres"; "ACHM se reúne con secretaría ejecutiva de campamentos del MINVU", ACHM, Santiago *www.munitel.cl*, accessed 16 August 2012.

Chile uses inter-ministerial co-ordinating bodies, but historically these have been weak, lacking permanent staff, institutional support or resources to carry out their complex mandate (Rufián Lizana, 2009). The present government, however, has established working groups as a means to promote cross-sectoral coherence in key areas, including the Institutional and Political Committee, the Economic Development Committee and the Committee on Social Development. Inter-ministerial bodies are also set up to respond to extreme circumstances. For example, the Inter-ministerial Committee on Infrastructure, City and Territory (*Comité Inter-ministerial de Infraestructura, Ciudad y Territorio*/CICYT) focused on co-ordinating reconstruction efforts after the 2010 earthquake (see Box 3.15).

Box 3.14. **Municipal co-operation: The case of France and EPCIs**

France is characterised by voluntary co-operation at the local level. It has more than 36 000 communes (the basic unit of local governance). Although France has resisted municipal mergers, the need for local co-operation is clear. The approximately 19 000 inter-communal structures (including 2 525 EPCI and other forms of syndicates) are aimed specifically at facilitating horizontal co-operation.

The current system of inter-communal structures was first established in 1992 and reformed in 1999, such that there are now three main types of supra-communal structures: communities of communes (groupings of small rural communes), "agglomeration" communities (groups of 50 000 inhabitants subject to a single business tax), and the urban communities (groupings of 500 000 inhabitants or more). "Single-purpose inter-communal associations" ("syndicates") first established in 1890 and multi-purpose syndicates that date back to 1959 are also still in existence.

Each grouping of communes constitutes a "public establishment for inter-communal co-operation" (EPCI). The EPCIs assume limited, specialised and exclusive powers transferred to them by member communes. Unlike the communes themselves, the EPCI is not governed by elected officials but by delegates of municipal councils. This essentially shifts power away from elected officials to civil servants in the areas of competence ceded by the municipalities. Although the EPCI are created by the communes directly, there are two notable roles for the central government. First, EPCIs must be approved by the state in order to exist legally. Second, to encourage municipalities to form an EPCI, the central government provides a basic grant plus an "inter-communality grant" to those communes that accept a single business tax, which is established to preclude competition on tax rates among participating municipalities in order to attract business. EPCIs draw on two sources of financial resources: budgetary contributions from member communes (for the syndicates) and/or their own tax revenues (for the EPCIs).

There are some indications that inter-communal co-operation has yielded gains in efficiency. On the one hand, some out-dated governance structure disappeared after the 1999 reforms, and communes tend to collaborate in areas such as public works, which are likely to exhibit economies of scale. On the other hand, growth in inter-communal spending has not been accompanied by a decline in communal spending, transfers of personnel from communes to communities are associated with a rise in payroll costs and local tax increases, and the presence of communal and inter-communal governance structure results in overlaps and extra costs. Overall, however, measuring the efficiency and effectiveness of municipal co-operation is difficult in France, as there is no culture or institutional structure for evaluation of public policies in this respect.

Source: Charbit and Michalun (2009), "Mind the Gaps: Managing Mutual Dependence in Relations among Levels of Government", *OECD Working Papers on Public Governance,* No. 14, OECD Publishing, Paris, doi: 10.1787/221253707200; (the complete source originates from the workshop presentation by France): OECD (2006), *OECD Territorial Reviews: France 2006*, OECD Publishing, Paris, doi: *10.1787/9789264022669-en,* extract submitted for the workshop, OECD, Paris; Hernu, P., "Co-operation between Municipalities in France: The Search for Greater Effectiveness of Public Action at the Local Level", *Chambre régionale des comptes du Nord-Pas-de-Calais* (submitted for the workshop) and Cour des Comptes (2005), *L'intercommunalité en France,* rapport au Président *de la République, www.comptes.fr/cour-des-comptes/publications/rapports/intercommunalite/rapport.pdf*, accessed November 2012.

Box 3.15. **The Inter-ministerial Committee on Infrastructure, City and Territory (CICYT)**

The Inter-ministerial Committee on Infrastructure, City and Territory (*Comité Inter-ministerial de Infraestructura, Ciudad y Territorio*/CICYT) is led by the Presidential General Secretariat (*Secretaría General de la Presidencia*/SEGPRES) and gathers several ministries involved in urban matters, including the MINVU, MOP and MTT. CICYT was created to ensure a co-ordinated approach to the government's reconstruction plan after the February 2010 earthquake. While it remains active, its role and functionality beyond reconstruction activities has been very limited. This committee has its roots in the Inter-ministerial Committee for Urban Development and Land Management created in 1996, and in the Inter-ministerial Committee City and Territory (COMICYT) launched in 2000 by the President of the Republic, to promote inter-sectoral co-ordination at the ministerial level on issues of urban and territorial development.

The rapid response to reconstruction by all key urban ministries indicates that such inter-ministerial co-ordinating bodies can be highly effective. The government should consider reactivating, strengthening and expanding the role, support and functionality of CICYT beyond the reconstruction agenda to broader urban matters, as it could facilitate inter-sectoral co-ordination on urban development issues.

Contractual arrangements

Contracts are another common way governments establish and promote co-ordination among institutions. These are often used to help manage interdependencies and solve institutional weaknesses. (Charbit and Michalun, 2009). In Chile, contracts are most frequently established between the central government and private companies to construct, manage and maintain infrastructure and services through the Concession Programme described in Chapter 2 (see Box 2.14). Like the central government, some local governments – generally those with greatest administrative and financial capacity – will also contract with private companies for such services as parking garages and public light-rail services (tramways). Concessions are effectively used to provide public services with minimal public expenditure, and can also be considered a means to help the business community grow.

Contract Plans (*Convenios de Programación*/CP) are used extensively by the Ministry of Public Works (*Ministerio de Obras* Públicas/MOP), the CICYT, and the Ministry of Health (*Ministerio de Salud*/MINSAL) but are limited as a co-ordinating mechanism. These contracts can be used for infrastructure, and to implement other social and economic programmes requiring the involvement of different sectors and levels of government. The Ministry of Health adopted a policy to plan and implement investment in primary, secondary and tertiary health infrastructure using CPs. This makes them a good tool for co-ordinating multi-annual activities involving different actors in urban areas. Their widespread use remains limited, however. CPs are voluntary but binding and thus far, many ministries and central government entities have been reluctant to enter into this type of contract. They use CPs mostly to leverage regional resources for activities already in their sectoral plans. GORE are also able to enter into CPs, and will tend to do so for financing regional-level projects and as a means to realise Regional Development Strategies. In addition, the CPs provide a mechanism for GORE and sectoral bodies to agree on investment and

co-financing priorities. Chile has been using contracts through its CPs, but since these have not been taken up by many ministries and central governments entities, despite their ability to help prioritise investment, it may be necessary to offer an incentive for their use.

City contracts could provide an alternative or complement to CPs. These contracts can help assign clear roles for the different institutions that participate in urban development and management over a precise territory and could help in further addressing fragmentation issues (see Box 3.16).

Box 3.16. **Contractual arrangements in urban areas in France and Western Canada**

The **French City *Contracts*** (*contrats de ville*) are a tool to enhance collaboration between municipalities and the central government. They were introduced in 1993 to foster cross-sectoral collaboration for urban policy. City contracts run for a period of several years, usually seven, and serve as development programmes for distressed urban areas at the scale of the city or larger urban communities. More than 1 300 areas and 6 million inhabitants benefit from actions launched under 247 *contrats de ville*. External stakeholders are involved in the process as well, including housing and transportation agencies, various civil society organisations and NGOs. In a 2005 report, the French Senate recognised that the city contracts had contributed to facilitate horizontal collaboration at the local level – and notably to involve civil society in the decision-making process concerning urban issues.* However, the Senate also criticised in its report the complexity of the contracts and their lack of readability. The report also states that the contracts have reached only 50% of their objectives and recommended simplifying the procedure.

In the **western provinces of Canada** the federal government has participated in ***Urban Development Agreements*** specifically conceived for cities, along with the participation of the provinces. In *Winnipeg*, a five-year tripartite commitment of CAD 75 million was implemented through seven programmes in the areas of community development and security, labour force development, and strategic and sectoral investments. The *Edmonton Economic Development Initiative* (EEDI) was signed in September 1995 and designed to support the long-term sustainable economic development of the city, e.g. through support for the Edmonton Capital Region Innovation Centre, the Edmonton Waste Management Centre, and the Edmonton Competitiveness Strategy. The first *Vancouver Agreement* was signed for a five-year period in 2000 and renewed in 2005 until 2010. The scope of the Vancouver agreement was broad, having three main components: health and safety (including primary health care, substance abuse, policing and justice), economic and social development (including housing), and community capacity-building. Its main objective was to promote co-operation between the three levels of government to address local issues of poverty, homelessness, substance abuse, safety and economic revitalisation, concentrating on Vancouver's Downtown Eastside. While the Vancouver Agreement was unfunded, it makes use of existing mandates, authorities and programmes to fund initiatives. There was agreement by each party to use funding available from existing federal, provincial and municipal programmes to finance projects and programmes and to strategically focus a portion of those expenditures on agreed-upon activities.

* Quoted in OECD (2006), *OECD Territorial Reviews: France 2006*, OECD Publishing, Paris, doi: *10.1787/9789264022669-en*.

Source: Adapted from OECD (2006), *Competitive Cities in the Global Economy*, OECD Publishing, Paris, doi: *10.1787/9789264027091-en*; Vancouver Agreement (n.d.), "The Agreement", *www.vancouveragreement.ca/the-agreement*, accessed 4 February 2012.

Chile may also wish to consider more actively using the existing Programming Agreements (*Acuerdos de Programación*/AP) for national-level initiatives to be implemented at the local level. Currently, such initiatives are voluntary and do not integrate an incentive mechanism for collaboration. As binding contracts between one or more regions, ministries, municipalities or private institutions (see Box 3.17), Programming Agreements could give urban plans, such as the *Ciudades Modelos* project described in Chapter 2, a basis to facilitate project implementation and ensure that mechanisms for collaboration are implemented.

Box 3.17. **Programming Agreements in Chile**

Programming agreements are formal agreements between one or more regional governments and one or more national ministries, detailing measures and procedures to be undertaken in projects of common interest over a specified period of time. These agreements can also include other public or private national, regional or local institutions. For the resources to be made available, the agreements have to respect the following stages: *i)* formulation of the idea: to identify projects that address regional problems effectively in the context of the regional development strategy; *ii)* the signing of a protocol of purpose that initiates negotiations between the parties; *iii)* deciding on projects and programmes: project decision making, pre-investment studies if they do not exist, technical units for the investigation's monitoring and results; *iv)* drafting the programming agreement: defining rights and responsibilities of the parties involved; and *v)* presentation of the agreement to the Regional Council for approval and signature. Projects are carried out using the resources of both line ministries and regional governments (grants from the National Fund for Regional Development). These agreements offer a useful legal framework for co-ordinating regional and national priorities and responsibilities. So far, they have been mostly used for shared planning and financing of large infrastructure projects.

Source: OECD (2009), *OECD Territorial Reviews: Chile 2009*, OECD Publishing, Paris, doi: *10.1787/9789264060791-en*.

Performance measurement and indicators

Indicator systems can help promote learning and orient stakeholders towards results, thereby addressing information asymmetries that arise between levels of government, promoting good management practices and developing capacity. They are also effective tools for stakeholder accountability at all levels of government by improving transparency. When carefully coupled with specific incentive mechanisms and realistic targets, indicators can stimulate and focus actors' efforts in critical areas (OECD, 2009a).

Performance measurement is highly useful for monitoring public service provision and capacity. This has been one of the benefits Norwegian municipalities have gleaned from Norway's KOSTRA system, which publishes the data results electronically, within a month of receipt from the municipalities (see Box 3.18) (OECD, 2009a). Australia undertakes a review of government service provision in order to compare the performance of government services and share service reforms that have been implemented or are under consideration. In addition, the review outlines agreed upon national performance standards for government services and analyses service provision reform. Among the services covered in the review are care of the elderly, child services, emergency management, health and housing (Commonwealth of Australia, 2012).

Box 3.18. **Norway's performance indicators system (KOSTRA)**

The Norwegian KOSTRA system is an OECD-area best practice. Used for performance monitoring of local services, it is an electronic reporting system for municipalities and counties. It can publish input and output indicators on local public services and finances and provide online publication of municipal priorities, productivity and needs. KOSTRA integrates information from local government accounts, service statistics and population statistics. It includes indicators of production, service coverage, needs, quality and efficiency. The information is easily accessible via the Internet and facilitates detailed comparison of the performance of local governments. The information is frequently used by local governments themselves and by the media and researchers. Although individual local governments could use KOSTRA more efficiently (e.g. by systematic benchmarking), the system has helped facilitate comparisons of municipalities, thereby promoting "bench-learning" or "bench-marketing".

Source: OECD (2010), *OECD Territorial Reviews: Sweden 2010*, OECD Publishing, Paris, doi: *10.1787/9789264081888-en*.

Investing in performance measurement can help urban authorities at the local, regional and national levels carry out their competences more effectively. Performance measurement systems can be helpful to ensure the performance of individual authorities (regional and local) in meeting strategic objectives. Chile has implemented a number of indicator-based performance management programmes, such as the Management Improvement Programme (PMG) and the Municipal Services Accreditation System. These both include monitoring and certification processes and the use of indicators and training programmes to support municipal and regional governments in improving their capacity and responsiveness to government administration. In addition, Chile keeps an extensive database of municipal statistics (*Sistema nacional de información municipal*, *www.sinim.cl*) (see Box 3.19).

Despite Chile's various indicator systems, and data collection by individual ministries, it is not clear whether and how the information is relayed to the sub-national level and/or used by the central level to improve service performance and policy outcomes. Such information can be important when contracts are negotiated or co-operative partnerships are established, since performance information can help the parties understand each other's capacity level, and optimise co-ordination based on capacity in terms of resources and skill (Charbit and Michalun, 2009). In addition, Chile's current systems take advantage of the central-level capacity to gather information from many sources and facilitate its sharing among central and sub-national authorities. However, an exclusively top-down approach to indicator selection may fail to reflect regional and local needs and challenges, and a strategy imposed by the centre in the absence of consultation may undermine the engagement and participation of sub-national actors in the process. Vertical collaboration can be a good way to increase the usefulness of indicator systems, and participatory arrangements can make the system more effective (OECD, 2009a).

Effective performance measurement will become increasingly important as the country moves into the implementation stage of a new urban policy, as well as for the various regional and urban plans and programmes, as such systems can help identify what works and what needs adjustment.

Box 3.19. **Main performance indicator initiatives in Chile**

The **Management Improvement Programme (PMG)** is a system for ensuring the efficient allocation and use of public resources in public administration. The government has adopted the concept of results-based budgeting and gives a performance bonus to public institutions based on achieving several performance indicators. A horizontal area under the PMG is the Electronic Government System, which aims to promote the use of information and communication technologies by: improving and simplifying the information and services offered by the state to the public; improving and simplifying institutional support processes; and creating technological solutions for enhancing transparency and community participation.

SUBDERE has developed the **Municipal Services Accreditation System** with the Chilean Association of Municipalities and *Chile Calidad* (the National Centre for Productivity and Quality). It consists of a set of procedures and methods to support, guide and encourage municipalities to undertake continuous performance improvement. Its multi-step certification process starts when a municipality enrols voluntarily in the programme. While the main goal of this monitoring and evaluation programme is to certify governance processes that meet high standards of quality control, it also provides essential decision-making support to municipal actors responsible for public service provision

The **National System of Municipal Indicators (SINIM)** provides over 150 standardised indicators for each of the municipalities in Chile. This SUBDERE initiative offers accessible information to the general public through its website (www.sinim.cl). Its data make it possible to compare the performance of all Chilean municipalities and help the different stakeholders to make informed decisions. The system offers information dating from 2001 onward.

Source: OECD (2009), *OECD Territorial Reviews: Chile 2009*, OECD Publishing, Paris, doi: *10.1787/9789264060791-en*.

Recommendations for institutionally based urban and metropolitan governance models in Chile

- **Consider a supra-municipal institutional approach for metropolitan areas.** This can take the form of a metropolitan authority, for example, based on existing legislation, or a metropolitan regional government.
  - Ensure that management bodies (e.g. metropolitan councils) appropriately represent the various municipalities in the metropolitan area and that management responsibilities and competence allocation reflect local concerns.
  - Ensure that the institution enjoys appropriate levels of financial/fiscal autonomy or control, and that mechanisms are in place to fund long-term development needs. This includes capacity to generate and manage own-source revenue; equitable disbursement of central-level funds; and a financial logic that supports comprehensive programming rather than project-based activities.
- **Consider "city-wide" multi-purpose joint authorities** for metropolitan areas where a supra-municipal approach is not appropriate or desired, and for medium and small urban areas, particularly those facing administrative fragmentation and/or other challenges more typical of metropolitan areas.
  - Reconsider the institutional dimension of municipal associative capacity. Complement existing legislation facilitating voluntary single-purpose associations among municipalities with an institutionally driven approach; one that defines and develops administrative and operational structures, competence allocation (e.g., economic development, land-use planning, culture, social housing, waste management, etc.) and financing for multi-purpose joint authorities.

Recommendations for institutionally based urban and metropolitan governance models in Chile *(cont.)*

- **Boost the role of regional governments (GORE)** to anchor municipal-level urban governance models and to support the resource constraints of urban areas, especially medium-sized and small ones.
  - Increase GORE responsibility for urban development and management in their territories, focusing on providing region-wide services that benefit the whole territory, are associated with positive externalities and some redistribution, and which demonstrate economies of scale.
  - Establish regional-level urban agencies or councils that can help guide urban policy design and implementation, and support urban authorities in managing and meeting their urban competences.
- **Build institutional legitimacy by complementing a top-down approach with a bottom-up consultative process** in order to build legitimacy with the relevant sub-national authorities (i.e. municipal and regional), civil society organisations, the private sector and citizens.
- **Establish appropriate and agreed-upon mechanisms of inclusiveness** in administrative and financing structures, to avoid marginalising smaller or less affluent municipalities. This can include developing mechanisms to prevent wealthy municipalities from blocking or withdrawing from any arrangement.
- **Complement institutional governance structures with "soft-governance" tools** to improve and strengthen horizontal and vertical co-operation among and within levels of government.
  - Strengthen and/or reintroduce inter-ministerial committees, for example the Inter-ministerial Committee on City and Territory, to facilitate cross-sectoral co-operation and promote policy coherence.
  - Establish city contracts as a complement to existing contract mechanisms. Assign clear roles and responsibilities to the different institutions participating in urban development within a precise territory, as a means to help improve co-ordination, accountability and measurable results for sector- or cross-sector- based policy initiatives.

Reinforcing strategic planning frameworks and capacity

An integrated approach to urbanism in Chile requires a coherent strategic framework that can guide the public and private, national, regional and local actors involved in the urban development process. Without such a framework, it will be difficult for any urban governance model to attain even the modest level of integration necessary to support more effective urban policy outcomes. With this in mind, Chile will need to consider establishing a vision-based strategic framework for urbanism and mechanisms to align national urbanism objectives with sectoral and cross-sector strategies and policy initiatives intended to promote them.

Establishing a vision-based strategic framework for urbanism

Chile's national administration follows a Programme of Government (*Programa de Gobierno*) adopted by each incoming executive (Presidential) administration, based on the winning candidate's campaign platform. This is used to guide government activity for the four-year presidential term. It serves as the basis for the government's strategic objectives, which are associated with concrete and actionable initiatives, and on which the President reports back to citizens annually. Long-term, cross-sectoral strategies are currently set in

some key areas such as innovation, energy and climate change. Historically, however, Chile's governments have worked without an overall, long-term strategy for national development. Such a strategy would help set common national objectives and anchor sectoral and cross-sectoral policy initiatives, including urban development.

The Government Programme for 2010-2014 includes measures intended to improve the quality of life and cities in Chile. It also highlights actionable areas with urban impact, i.e. employment, health, housing and measures to combat poverty. Despite this commitment, associated potential initiatives have not coalesced under the umbrella of a long-term strategic vision for urban form in the next 10, 15 or 25 years, spelling out how Chile wishes its cities to grow and be organised spatially. Such a vision and an accompanying strategy would be a fundamental benchmark for urban development policy and programming. In a hierarchical structure such as Chile's, such a framework could become a beacon for policy makers, who often rely heavily on the central level for direction.

While there is no doubt that improving quality of life in cities is a government priority, making a significant difference in this area is a medium- and long-term prospect. Chile's urban development and planning practices emphasise short-term activity, with few or no visible links to a broader strategic direction or strategic planning framework. Given that SUBDERE is developing a new territorial development strategy and MINVU is defining a new national urban policy, Chile is in a unique position to ensure strong and coherent links between these related areas. The challenge will be to develop a national urban policy that is: *i)* reflective of how Chile as a country envisions its urban landscape in the next 10 to 25 years; *ii)* anchored in a national region development strategy; *iii)* fully integrated among the various components associated with urbanism (e.g. housing, transportation, land use, environmental sustainability, culture and recreation, economic growth and competitiveness and citizen well-being); *iv)* implemented independently of electoral cycles.

Building a vision is not a solitary task – a single individual, a single ministry cannot and should not undertake such an endeavour alone. It is a collaborative effort among a diverse set of stakeholders, ranging from the central government to individual citizens. Part of the "vision process" requires gathering information and building evidence bases as a means to inform policy makers of present and future needs. A clear illustration of this was a successful national-level exercise undertaken by Australia (see Box 3.20). This type of activity is equally important and applicable within a narrower context, such as urbanism.

Ensuring sustainability for Chile's National Urban Development Policy

The Ministry of Housing and Urbanism (MINVU) is spearheading the design of a new National Urban Policy for Chile (PNDU) (see Chapter 2), and five key urban priorities have been established: *i)* governance and institutions; *ii)* economic development; *iii)* social integration (overcoming inequalities); *iv)* preserving patrimony and identity; *v)* environmental sustainability (see Box 3.21). MINVU is taking positive steps to ensure that a strong national urban policy is being developed. Given the challenges explored earlier in this chapter concerning strategic and institutional co-ordination in urban development, care should be taken to ensure that a territorial perspective is maintained and that ways to ensure long-term stakeholder participation are considered.

Box 3.20. **Australia 2020 Summit**

In April 2008, the Australian government convened the *Australia 2020 Summit* to foster a national conversation on Australia's long-term future. The Summit aimed to harness the best ideas for building a modern Australia ready for the challenges of the 21st century. It brought together 1 000 participants from across the country to think about long-term challenges confronting Australia's future, and requiring responses at the national level that would not be limited to the span of the usual electoral cycle. The Summit, held in Canberra, generated more than 900 ideas over two days. Participants, drawn from business, academia, community and industrial organisations and the media, debated and developed long-term options for Australia cross ten critical areas: productivity (education, skills, science and innovation); the economy; sustainability (e.g. population, climate change, water); directions for rural industries and communities; a long-term national health strategy; strengthening communities (e.g. social inclusion); indigenous populations; culture (e.g. art, film, design); governance; security and prosperity.

The Department of the Prime Minister and Cabinet provided the secretariat for the Summit and was responsible for co-ordinating the development of the Summit report and the Australian government's response to the Summit, as well as the implementation of the policies and programmes generated.

Source: OECD (2010), *Finland: Working Together to Sustain Success*, OECD Public Governance Reviews, OECD Publishing, Paris, doi: *10.1787/9789264086081-en*.

Box 3.21. **Formulating a new National Urban Development Policy in Chile**

In January 2012, Chile began putting in place the process for developing its new National Urban Development Policy. Co-ordinated by MINVU, the policy's design is divided into three distinct stages:

- Stage One: Undertaken by MINVU and its SEREMI, the first stage focused on establishing a conceptual framework, identifying diagnostic elements and compiling relevant past experiences (e.g. from the urban policies of 1979 and 1985 and other more recent initiatives), and studying international practice cases from seven countries (Australia, Brazil. Colombia, Germany, South Africa, the United Kingdom and the state of Maryland in the United States). These various elements nourish a set of foundational publications for the urban policy.
- Stage Two: The Presidential Advisory Commission, subcommissions and the Inter-ministerial roundtable were established in the second stage, with the aim of preparing a preliminary draft policy. The stage will be completed when the commission approves the draft policy document. Regional workshops undertaken to introduce the diagnostic elements and listen to the regional level's concerns with respect to urbanism, are also part of this stage.
- Stage Three: This stage will include a national-level discussion of the preliminary document in a series of workshops held throughout the country. Information gathered through these workshops will be used to fine-tune the policy, which will then be sent to the President to be implemented and promulgated (expected between the first and second quarters of 2013).

Source: Ministry of Housing and Urbanism (2012), unpublished document provided to OECD.

Consideration of urban development and policy in Chile must be viewed comprehensively, as part of a more general plan for its territory and the role of urban centres in their regions. Urban development and its supporting policy should not be separated from the issue of regional development. These territorial dynamics ought to be considered together in developing a coherent perspective for Chile's overall territorial development and a long-term strategy.

While the PNDU is being developed through an internal and external consultative process, it is important that such a process be institutionalised as the policy is implemented. This can facilitate adjustments and build greater coherence in urban-related sectoral policy initiatives in the short and longer terms. It can also help ensure the commitment of key internal and external stakeholders. Moving forward, it may be valuable to establish a mechanism for ongoing dialogue and consultation with urban stakeholders, particularly residents, not only to evaluate the effectiveness of the established policy, but also to help policy and decision makers identify trends and shifts in urban preferences and values. Australia, New Zealand and Colombia offer examples for such an approach (see Box 3.22).

Box 3.22. **Using consultation mechanisms for greater strategic insight**

In December 2010, the **Australian government**, through the Department for Transport and Infrastructure, released a discussion paper on national urban policy as an information-gathering step in preparation for the design and release of its first national urban policy. This paper was preceded by a report on the state of Australian cities. The discussion paper – "Our Cities: Building a Productive, Sustainable and Liveable Future" – explained why a national urban policy was necessary, and set out the government's thinking on a national approach to urban development, as well as the challenges that needed to be addressed. The paper solicited the opinions of citizens on the issues and opportunities facing Australian cities, as a means to guide government policy in its goal of promoting more productive, sustainable and liveable cities. Questions covered a broad range of issues, including aspiration and vision (e.g. What should Australian cities look like in 2030 or even 2050?); productivity (e.g. What is the most significant transport issue affecting your city?); sustainability (e.g. how to best support more efficient use of resources such as water, energy and food); liveability (e.g. thoughts on more compact development, such as using a variety of building types rather than expanding on urban fringes); improving governance and planning (e.g. What could governments do to improve planning and management of cities?). Citizens were given three months to respond electronically or in writing to a series of 28 such open-ended queries.

In 2008, **New Zealand**'s Sustainable Development Unit put forth a discussion document – *Building Sustainable Urban Communities* – for citizen feedback. This document clearly and succinctly explained the concept and importance of sustainable urban communities for meeting New Zealand's sustainable development goals, and invited citizens to reflect and comment on a series of general and specific questions. These questions ranged from identifying barriers and implementation difficulties, to providing ideas, options and issues surrounding the role of government, improving co-ordination and integration, funding. Citizens were given the option to either send written responses to the Development Unit or to respond electronically. They were given a deadline for feedback and clearly told how their input would be used.

Box 3.22. **Using consultation mechanisms for greater strategic insight** *(cont.)*

While mayor of **Bogotá, Colombia,** Antanas Mockus Sivickas established the Observatory of Urban Culture (*Observatorio de Cultura Urbana*) in order to analyse and evaluate municipal institutions and programmes through a multi-disciplinary approach. The objective was then to use such information to make better-informed decisions, for example when constructing Bogotá's development plan (*plan de desarrollo)*. The Observatory undertook short-, medium- and long-term research projects, including developing polls and questionnaires to obtain citizens' views on policies and actions of the administration, creating and managing a database and establishing a documentation centre. With successive mayors, the scope of the Observatory's activities has been adjusted to meet changing needs, and its name changed to reflect them. It is now called the Observatory of Cultures. Under the current administration of Gustavo Petro (2012-2015), the Observatory aims to build knowledge bases covering the cultura subjects of the city. Research focusing on the design, formulation and monitoring of programmes, projects and activities articulated in Bogotá's development plan are prioritised. Since 2001, the Observatory has undertaken a thorough biennial survey of the city – the Biennial Survey of Cultures (*Encuesta Bienal de Culturas*) – focusing on the cultural transformations of Bogotá's residents in two areas: culture, recreation and sports, and how the capital city's residents relate to the district state and other citizens. The survey feeds indicators and analysis on the city's diversity and multi-culturalism.

Source: Commonwealth of Australia (2010), "Our Cities: Building a Productive, Sustainable and Liveable Future", discussion paper, Canberra, Australia; Urbanalyst (2010), "Australian Government Releases Discussion Paper on National Urban Policy", *www.urbanalyst.com/in-the-news/australia/342-australian-government-releases-discussion-paper-on-national-urban-policy.html*, accessed 20 August 2012; Sustainable Development Unit (2008), "Building Sustainable Urban Communities", discussion document, Ministry of Internal Affairs, Government of New Zealand, Auckland, New Zealand; Montezuma, R. (2005), "The Transformation of Bogotá, Colombia, 1995-2000: Investing in Citizenship and Urban Mobility", *Global Urban Development*, Vol. 1, No. 1; Secretaría Distrital de Cultural Recreación y Deporte (2012), "Observatorio de Culturas", Bogotá, Colombia, *www.culturarecreacionydeporte.gov.co/observatorio/acercade.html*, accessed 20 August 2012.

Aligning urbanism objectives and strategies with policies and programmes

Once strategic objectives have been set through a national-level urban policy (e.g. social integration, sustainable communities, governance, urban or metropolitan competitiveness), strategic planning becomes essential as an operational framework to manage complex growth processes, a multiplicity of stakeholders and uncertainty. This is highly relevant in a metropolitan context, and particularly in light of the role metropolitan areas play in national economic productivity and socio-economic development.

For strategic planning to be successful, it requires clear direction on the part of the central government. It also requires strong bottom-up involvement as a means of building ownership between public administrations at the central and sub-national levels, the private sector, civil society organisations and citizens (Cuadrado-Roura and Güell, 2008). Strategic plans provide a framework for action and responsibility that help relevant actors proceed. When lines of responsibility are clear, strategic planning can reinforce and clarify accountability, both of inputs and results. This can also reinforce social capital, increasingly recognised as an important factor in competitiveness and success. Finally, strategic planning builds *ex ante co*-operation mechanisms between relevant stakeholders (Cuadrado-Roura and Güell, 2008).

Broadly speaking, strategic planning often covers four different areas in a metropolitan and general urban development context: *i*) reinforcing competitiveness; *ii*) improving services, including service supply; *iii*) attracting demand for goods and services produced in the urban area; *iv*) managing and co-ordinating the area's development process (Cuadrado-Roura and Güell, 2008). Bilbao's successful strategic plan for rehabilitation illustrates not only how these areas can all be covered, but how the process can include broad stakeholder participation and input. The team behind *Creo Antofagasta* in northern Chile is embarking on an exercise embracing these four aspects, to develop a strategic plan to improve the quality of life for residents and ensure the city's long-term sustainability (see Box 3.23).

Box 3.23. **Approaches to strategic planning for metropolitan and urban development**

The **Metropolitan region of Bilbao** has a population of 1 million, 50% of whom live in the central city. In an effort to revitalise the metropolitan region, the municipality, the provincial government, the Basque government and private sector partners founded the Association Bilbao Metrópli 30. The association has 130 members from both public and private spheres, and drew up the Strategic Plan for the Rehabilitation of Metropolitan Bilbao (1989-1992). Over time, the results of the Rehabilitation Plan include: an unemployment rate that fell from 25% in 1995 to 10% in 2003; an increase in the number of hotels, from 28 in 1992 to 45 in 2002; an increase in airport passengers from 2 million in 1997 to 2.8 million in 2003. Diverse urban projects were completed, including the Guggenheim Museum, the Eskalduna Conference and Concert Centre, a new airport terminal, a river clean-up and the rehabilitation of the waterfront.

Creo Antofagasta was established to develop and launch an integrated master plan for a sustainable **Antofagasta, Chile**. It is governed by a public/private multi-stakeholder body led by the region's *Intendente* and the city's mayor. Its Executive Secretariat oversees the development of an integrated master (strategic) plan focused on three developmental areas: social/cultural, the built environment and the economy. The aim is to improve public services and infrastructure, and to build a common vision for Antofagasta's urban development, while also supporting the region's Development Strategy (EDR) and the municipality's PLADECO. The plan's design and implementation counts on broad-based and active stakeholder support, including representatives from the Regional Government (particularly the GORE planning division), various SEREMI (from MINVU, Finance, Environment, MTT and MOP), local government and civil society.

Source: Klink, J. (2008), "Recent Perspectives on Metropolitan Organization, Functions and Governance", in E. Rojas, J.R. Cuadrado-Roura and J.M. Fernández Güell (eds.), *Governing the Metropolis: Principles and Cases,* Inter-American Development Bank, Washington, DC, and David Rockefeller Center for Latin American Studies, Harvard University, Cambridge, Massachusetts; Plan Creo Antofagasta (2012), "Plan Maestro Integrado Antofagasta Sostenible", presentation prepared for the second meeting of the Comité Publico-Privado, 12 April 2012.

For any strategic planning initiative to be effective, stewardship[14] and co-ordination are critical. Regardless of the level at which this occurs, the organisation(s) responsible for stewardship and co-ordination must have the political legitimacy and executive authority, as well as the planning capacity, to ensure that the strategy is implemented. This can and probably ought to be a central-level initiative. For example, in order to ensure that its National Urban Policy aims are met, the Australian government has committed to help support improvements in strategic planning and share best practices among its capital cities (this will eventually extend to cities of 100 000 residents). In addition, the Council of

Australian Governments (COAG) agreed to reforms ensuring that cities are prepared to meet future challenges. To this effect, nine criteria were established to help guide cities in their strategic planning (see Box 3.24) (Commonwealth of Australia, 2011). Significantly, these criteria focus on strategic plans (e.g. for infrastructure planning and economic development) rather than on statutory planning, which is more narrowly focused on development plans, zoning and approval processes and which are better managed at the local level.

Box 3.24. **National objectives and criteria for future strategic planning of Australia's capital cities**

Nine national criteria for capital city strategic plans were established in order to support meeting the objectives set out in Australia's first National Urban Policy. The criteria aim to ensure that Australia's cities have robust, transparent and long-term planning systems in place to manage population and economic growth, address climate change, improve housing affordability and tackle congestion.

Objective: To ensure Australian cities are globally competitive, productive, sustainable, liveable, socially inclusive and well placed to meet future challenges and growth.

Criteria: Capital city strategic-planning systems should:

1. Be integrated across:
   - *i)* Functions, including land-use and transport planning, economic and infrastructure development, environmental assessment and urban development.
   - *ii)* Government agencies.
2. Provide for a consistent hierarchy of future-oriented and publicly available plans, including:
   - *i)* Long-term (15 to 30 years) integrated strategic plans.
   - *ii)* Medium-term (5 to 15 years) prioritised infrastructure and land-use plans.
   - *iii)* Near-term prioritised infrastructure project pipeline, backed by appropriately detailed project plans.
3. Provide for nationally significant economic infrastructure (both new and upgraded) including:
   - *i)* Transport corridors.
   - *ii)* International gateways.
   - *iii)* Intermodal connections.
   - *iv)* Major communications and utilities infrastructure.
   - *v)* Reservation of appropriate lands to support future expansion.
4. Address nationally significant policy issues, including:
   - *i)* Population growth and demographic change.
   - *ii)* Productivity and global competitiveness.
   - *iii)* Climate change and migration.
   - *iv)* Efficient development and use of existing and new infrastructure and other public assets.
   - *v)* Connectivity of residents to jobs and businesses to markets.
   - *vi)* Development of major urban corridors.
   - *vii)* Social inclusion.
   - *viii)* Health, liveability and community well-being.
   - *ix)* Housing affordability.
   - *x)* Matters of national environmental significance.

Box 3.24. **National objectives and criteria for future strategic planning of Australia's capital cities** *(cont.)*

5. Consider and strengthen the networks between capital cities and major regional centres, and other important domestic and international connections.
6. Provide for planned, sequenced and evidence-based land release and an appropriate balance of infill and greenfield development.
7. Clearly identify priorities for investment and policy effort by governments, and provide an effective framework for private-sector investment and innovation.
8. Encourage world-class urban design and architecture.
9. Provide effective implementation arrangements and supporting mechanisms, including:
   - *i)* Clear accountabilities, timelines and appropriate performance measures.
   - *ii)* Co-ordination between all three levels of government, with opportunities for Australian government and local government input, and linked, streamlined and efficient approval processes, including under the Australian government's *Environmental Protection and Biodiversity Conservation Act 1999*.
   - *iii)* Evaluation and review cycles that support the need for balance between flexibility and certainty, including trigger points that identify the need for change in policy settings.
   - *iv)* Appropriate consultation and engagement with external stakeholders, experts and the wider community.

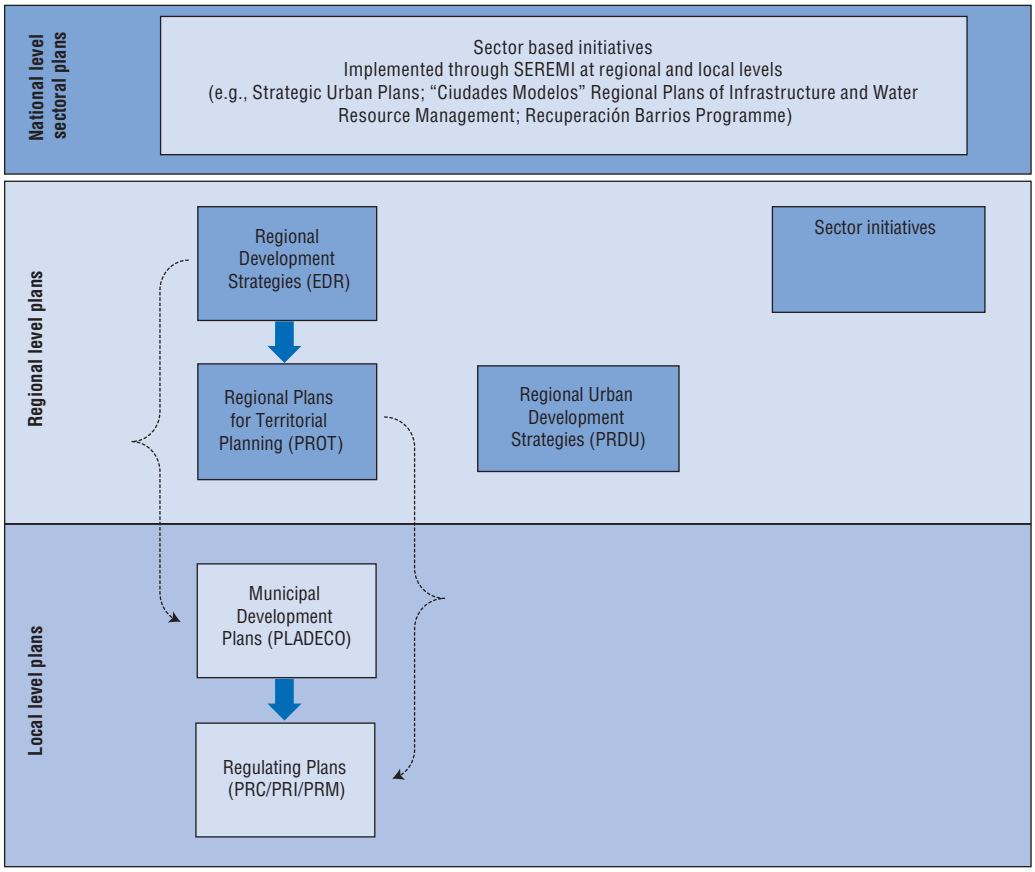
Source: Commonwealth of Australia (2011), *Our Cities, Our Future: A National Urban Policy for a Productive, Sustainable and Liveable Future,* Department of Infrastructure and Transport, Canberra, Australia.

Obstacles to strategic planning and urban programming at the sub-national level

There is room for stronger comprehensive strategic planning in Chile's approach to urbanism. At present, urban development and planning are not aligned with a broader strategic perspective, fostering a project-based approach to urban programming activity rather than one that is strategically directed. While it has been successful in developing individual sector initiatives with urban impact, particularly in housing, public transport and infrastructure, Chile has not managed to create coherence in the overall urban development and management process. Initiatives at the national level are defined and pursued by sector, yet these do not have a clear link to government priorities, higher-level government objectives or national strategies for territorial development. Nor do there appear to be links between the sector-based initiatives developed at the central level with the various initiatives at the sub-national levels. This makes it very difficult to determine if national objectives in urbanism are being met. At the regional and local levels, there is potential for greater coherence, as the links between land-use tools (e.g. PROT and Regulating Plans) and management or development instruments (e.g. ERD and PLADECO) are still weak (see Figure 3.5).

The lack of coherence and solid linkages between levels and plans leaves urban priorities siloed for several reasons. First, a national-level strategy that could help co-ordinate the various policies and begin to ensure coherence is still missing. One challenge moving forward will be to ensure that sector initiatives and statutory plans (e.g. Regulating Plans), and management/development plans (e.g. PLADECO or ERD) are linked to a broader urban strategy as a means to ensure that urban strategic objectives are met, and thus support regional and national urban development objectives. Depending on its final design

Figure 3.5. **Current urban programming hierarchy in Chile**

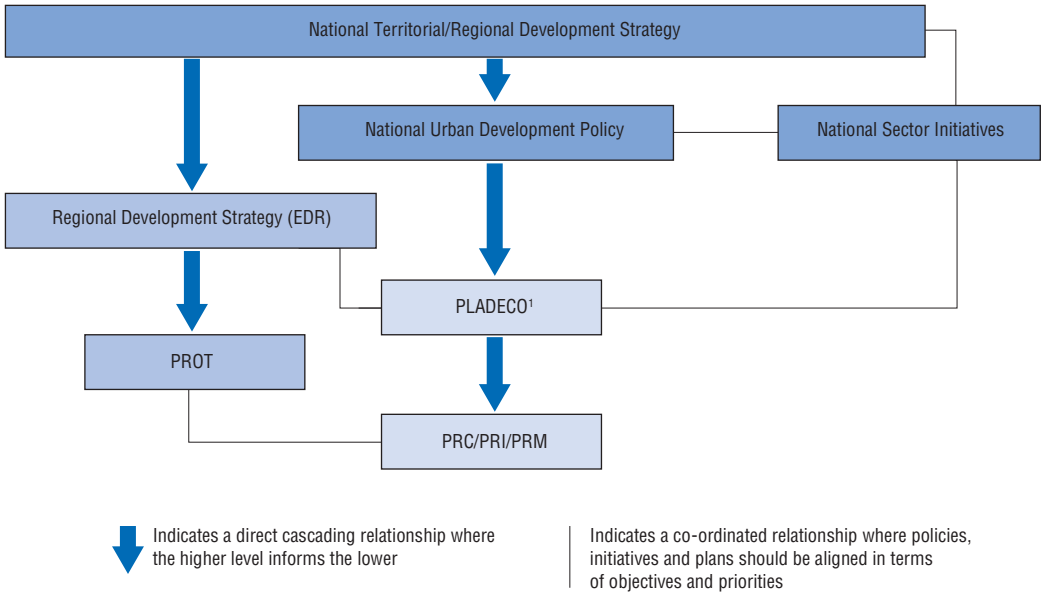


Note: PROT are designed to support the realisation of ERD and cascade down from them. Because PROT and PRDU are both being used at present, this is not yet the case in all regions, though PRDU are being phased out and gradually replaced by PROT. Regulating Plans (PR) are intended to devolve from the PLADECO, but their relationship has not yet been fully elaborated, given that many Regulating Plans were in place before the introduction of the PLADECO. This issue will be resolved as new PR are elaborated. ERD should help to guide municipalities in the formulation of their PLADECO, and PROT inform the design of PRs.

and implementation mechanisms, the new National Urban Development Policy could help overcome this challenge by providing an anchor from which lower-level strategies and plans can devolve. Such an approach would be reinforced if the national urban policy also cascaded down directly from a national regional development strategy (see Figure 3.6).

Funding mechanisms are a second element that prevent a more comprehensive and strategic approach to urban development. The low level of financial and fiscal autonomy of sub-national governments limits the capacity of actors at this level to act upon and reinforce their strategies and priorities. Urban development initiatives undergo an extensive approval process and are subsequently authorised for funding. This leads to the creation of project portfolios (*carteras*), creating a set of projects that will then be prioritised for implementation. This process impedes strategic prioritisation and can lead to delays in implementing specific activities. Since the sub-national level has little autonomy in revenue raising and spending, once approval is given, then the funding is sought, leaving a waiting period between approval and implementation. The investment process in Chile follows a sectoral logic, challenging the financing of integrated, cross-sectoral programmes or initiatives. The various projects comprising an integrated initiative are at risk of being

Figure 3.6. **Building a more coherent urban programming hierarchy**



1. PLADECO are only developed by urban municipalities.

evaluated independently of a master plan, which can lead to fragmented or staggered project implementation. Thus, the system is not well suited to the approval or funding of a comprehensive and strategic development proposal.

A lack of multi-annual and sub-national budgeting also undercuts a strategic approach to urban development and management. Regions and municipalities depend on budget allocations at the national level, which are determined annually. This will affect the availability of funds for national-level integrated plans, as well as the other sub-national financing mechanisms discussed earlier in the chapter, specifically the National Regional Development Fund (FNDR) and the Common Municipal Fund (FCM). Currently, funds for each of the national-level integrated plans are granted to competitively selected municipalities by the ministry responsible, through their regional SEREMI. Regional development strategies are unfunded, but applications can be made to fund specific projects through the National Regional Development Fund (FNDR) and central-level grants. Neither PLADECO nor the Regulating Plans are associated with a central- or sub-national-level budget line, and thus depend on the funds annually available through own-source revenue, the FNDR, the Common Municipal Fund (FCM), concessions, etc.

Finally, low participation in Chile's urban planning instruments by sub-national actors also prevents a more co-ordinated and comprehensive approach. National strategies and policies are mostly designed from a top-down perspective, without considering regional or local strategies, priorities or realities. The result is that sub-national governments sometimes learn about projects to be implemented by a national public agency in their region only when the projects have already been planned and are about to be launched (OECD, 2009c). Sub-national actors are often more focused on approving plans and models already decided upon at the national level than actively participating in their definition. This affects the capacity not only to provide a coherent framework for developing urban strategies, but can discourage sub-national authorities from fully committing to a policy, due to a lack of "ownership".

The lack of a national strategy for territorial and urban development, low financial and fiscal autonomy at the sub-national level, and low participation in sub-national planning by relevant actors has made it difficult to implement strategic urban policies and to move beyond a project-based focus.

Recommendations for building a strategic vision for territorial development and urban form in Chile

- **Develop a long-term strategic vision for urban form.** This should help inform and guide national, sectoral, regional and local policies and programmes in the next 10, 15 or 25 years.
- **Ensure comprehensive strategic plans for urban matters at all levels of government** to help build urban programming that is strategically directed rather than project-driven by sector.
- **Build capacity through the central level for sub-national strategic planning,** using national-level objectives and criteria to guide regional and local authorities in reaching urban policy objectives and managing urban challenges such as population growth, housing and pollution.
- **Inform urban policy and programming with broad evidence bases** and devise consultation mechanisms that can be set up on an ongoing basis to help policy and decision makers identify trends and shifts in urban preferences.

Conclusions

There is no "best" model for urban governance or metropolitan governance. The appropriate course of action with respect to urban governance architecture should be driven by the objectives at hand. Among the pressing goals for urban development in Chile is to ensure urban sustainability and continue to improve the quality of life for urban residents. Concretely, this means overcoming the obstacles posed by administrative and institutional fragmentation in order to ensure better policy outcomes in such areas as land use, housing, transportation and the environment. Given that these are cross-sectoral concerns and ought not to be considered independently of larger territorial development objectives, it is essential to understand the strategic goals for urban development and management as part of a territorial development strategy and national urban policy. The institutional form would then follow as being the most appropriate means to meet the goals.

That said, scholars and experts are concluding that a strong regional-level structure that can cover the entire urban area is important. Given the interdependencies and externalities that influence many cities, especially metropolises, a regional framework can help address regional-level problems, including fiscal and service inequalities between municipalities, poor co-ordination and co-operation in urban service provision. It can also promote regional economic competitiveness, social cohesion and the fiscal viability of the urban areas. Such structures are also best situated to take advantage of place-based competitive advantages and contribute to national economic growth (Bird and Slack, 2008).

Chile could pursue a homogeneous approach to urban governance, with a single framework applied throughout the territory, or it could boldly experiment with a heterogeneous approach that may be more appropriate to the diversity of its urban areas and their capacity to realise urban development and management goals. It might consider

an approach that combines the various governance models analysed. Stronger GORE could provide an anchor for municipal arrangements, ranging from a super-municipal experiment in Santiago, for example, to joint inter-municipal bodies in other urban areas where appropriate. Consideration will have to be given to the constitutional, statutory and regulatory structures that would make any such change possible, and some reflection on current levels of centralisation will be necessary.

Chile is well positioned to revitalise its urban governance architecture. It has the foundations in place to establish a much-needed metropolitan governance framework, as well as establishing mechanisms that can help medium-sized and small urban areas meet a variety of challenges. Ensuring success can take time, may require some experimentation and will rest on the central government's capacity to build a partnership with sub-national levels of government. It may find it necessary to trade its traditional role of directing and controlling urban policy for a new approach in which it guides and co-ordinates urban-oriented policy to ensure an integrated approach to urban development and management. Success will also depend on the capacity of the sub-national level to meet the challenge of greater autonomy in financial and policy management. Finally, all parties involved will need to sharpen their strategic focus, and identify ways to combine successful project-based sectoral initiatives with long-term, cross-sectoral strategic programming. Adopting such an approach and a "whole-of-city" vision for evaluating and solving urban challenges can enhance urban development and urban residents' quality of life.

Notes

1. For urban and metropolitan areas as well as for municipalities that are not part of an urban or metropolitan area but are statutorily obligated to submit a Regulating Plan.
2. The exact figures are 16.1% in 2010 and 16.3% for 2011. These figures are brut. The net figures for these same years are 11.8% and 11.7% respectively.
3. *Reforma Constitucional en Materia de Gobierno y Administración Regional – Ley 20.390*.
4. Article 109 of the Law states that a metropolitan area is understood as the territorial extension formed by two or more population centres united by built-up areas and which share the use of different infrastructure elements and urban public services. The definition itself is clear, but leaves open the question of actual size, particularly in terms of population.
5. At the time of writing, it is estimated at between 6%-8%.
6. The provision of primary and secondary education and primary health are partly financed on a per pupil/per patient grant by the central government. However, this grant is complemented by a municipality's own resources.
7. *Unidades Tributarias Mensuales* (UTM) is a legally established indicator corresponding to a specific sum of currency (*pesos*), and which is permanently updated based on the consumer price index. It is used as a tax measure index, and its value changes slightly every month.
8. The Law of Urban Development and Construction states that it is allowed to build social housing outside the urban boundaries.
9. Municipalities could implement this construction, but given local government's general lack of financial resources, the work is undertaken by MINVU.
10. The *Ordenanza General de Urbanísmo y Construcciones* provides a complete description of the classification and characteristics of the different urban roads.
11. OECD interviews with subnational government officials, Santiago, Chile, June 2012.
12. Sharpe (1995), quoted in Bird and Slack (2004), from OECD, 2006.
13. Indirect representation is undertaken through a rotation system, whereby a few small municipalities represent all others for a year or two, and then the responsibility shifts (Lefèvre, 2008).

14. Stewardship refers to an institution's ability – in its sphere of influence – to guide and co-ordinate policy as a means to ensure improved co-ordination, co-operation and collaboration among government entities and policies.

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ANNEX 3.A1

Table 3.A1.1. **Government and main attributions of Chile's sub-national administrative units**

Sub-national administrative unit	Government body and main attributions
Regions (15)	***i)* Government of the Region – central government line** *Intendente:* The direct representative of the President of the Republic in each of the 15 regions. The *Intendente* is appointed by the President and holds office at the President's discretion. The *Intendente* directs the Regional Government according to guidelines provided directly by the President. ***ii)* The regional government (GORE) – deconcentrated government line** *Intendente:* Acts as the executive head of the regional government and presides over the Regional Council. *Regional Council (Consejo Regional – CORE):* Supervises the *Intendente*'s duties and approves regional plans. **Primary functions of the regional government** – Designs programmes and policies for regional development and productivity. – Approves the regional development plan. – Defines and makes investment decisions regarding the use of resources from regionally designated public investment funds, especially from the National Fund for Regional Development (FNDR). – Advises municipalities. – Builds and administers the paving of sidewalks and roads in rural areas. – Executes various tasks related to land management, human settlements and infrastructure equipment. ***iii)* Other entities of public administration located in regions** *Ministerial Regional Secretaries (SEREMI):* Regional representatives of national-level line ministries, responsible for co-ordinating their sectoral public services.
Provinces (52)	***i)* Provincial government and responsibilities** *Governor:* Appointed by the President, and serves as deconcentrated representative of the *Intendente* in the provincial territory. *Provincial Economic Council:* Serves as an advisory institution to the provincial governor, who heads the Council. **Primary functions of the provincial government** – Supervises public services provided in the provincial territory. – Maintains public order and safety.
Municipalities (345)	**Municipal government structure** *Mayor (alcalde):* Highest municipal authority and chair of the Municipal Council; popularly elected every four years. *Municipal Council*: Advises, regulates and supervises the mayor's performance. The Council is responsible for ensuring the effective participation of the local community. Council members are popularly elected every four years. *Economic and Social Council*: A municipal entity composed of civil society representatives, aimed at ensuring their participation. **Primary functions of municipal governments** – *Exclusive functions:* Develop, approve and modify the communal zoning plan (*Plan Regulador Comunal*); promote local development; enforce all transport measures; implement provisions for construction, planning and urban regulation. – *Functions shared with other levels of government:* Public health; primary and secondary education; culture; work/skills-training; economic development; tourism; traffic regulations; social housing development; sanitary infrastructure; citizen safety.

Source: Adapted from OECD (2009), *OECD Territorial Reviews: Chile 2009*, OECD Publishing, doi: *10.1787/9789264060791-en*.

Table 3.A1.2. **Allocation of urban-related responsibilities across levels of government in Chile**

Main function	Area	Sub-area	Institutions with competences in the area			
			Central level	Regional government	Municipality	Private sector
Wealth and employment	Transportation	Public transportation	X	X	X	X (operators)
		Motorways	X			X (concessionaires)
		Trunk roads		X	X	
		Local roads		X	X	
		Traffic control	X		X	
		Airports	X			X (concessionaires)
		Ports	X			X (concessionaires)
	Industrial land	Logistical areas		X	X	
		Industrial parks			X	
		Enterprise zones		X (RAD)	X	
	Energy	Electricity	X (regulation)	X (a)		X (concessionaires)
		Gas	X (regulation)			X
		Petrol	X (regulation)			X
	Communications	Post				X
		Telephones	X (regulation)			X
		Internet services	X (regulation)			X
	Public utilities	Water	X (regulation)		X (a)	X (concessionaires)
		Sewage	X (regulation)		X (a)	X (concessionaires)
	Regulation of economic activities	Patents			X	
		Consumer protection	X		X	
	Economic promotion	Development of economic clusters	X	X (RAD)		
		Agencies of productive co-ordination and innovation services	X	X (RAD)		
		Promotion and financing economic services	X			
	Employment	Regulation	X			
		Promotion and financing emergency plans	X	X (RAD)	X	
		Formal training	X		X	X
	Tourism	Tourism	X	X	X	X
Social equity	Education	Nursery	X		X	X
		Preschool, primary, secondary, education for special and adult groups	X (regulation and financing)	X (a)	X (b)	X
		Tertiary	X			X
		Culture	X	X	X	X
		Public libraries	X		X	
	Health	Primary	X (regulation and financing)	X (a)	X	X
		Hospitals (secondary and tertiary levels)	X	X (a)		X

Table 3.A1.2. **Allocation of urban-related responsibilities across levels of government in Chile** *(cont.)*

Main function	Area	Sub-area	Institutions with competences in the area			
			Central level	Regional government	Municipality	Private sector
Social equity	Public health	Cemeteries			X	X
		Abattoirs				X
		Markets			X	
		Street vendors			X	
	Housing	Social housing	X		X	X
		Access to new houses	X		X (administrative issues)	X
		Neighbourhood development	X		X	
	Welfare services	Income equalisation	X			
		Unemployment protection	X			X
		Child protection	X		X	
		Social assistance	X		X	
		Support for disabled persons	X			X
	Justice	Jails/prisons	X			X (concessionaires)
		Protection services for children	X		X	X
		Rehabilitation services	X			X
Environment/ sustainability	Urban development planning	Regional territorial planning	X	X		
		Metropolitan planning	X	X		
		Local planning	X	X	X	
		Development control	X		X	
	Parks	Regional	X	X (a)		
		Metropolitan	X			
		Local	X	X (a)	X	X
		Protection areas	X			
		Forestation	X			
	Drainage	Construction	X			
		Operation and maintenance	X			
	Domestic solid waste	Collection			X	
		Final disposal		X (a)	X (b)	
	Industrial and hazardous wastes	Collection			X	
		Final disposal		X (a)	X (b)	
	Domestic and industrial liquid waste	Collection and final disposal	X (regulation)			X
	Public spaces	Construction and maintenance of public squares		X (a)	X	
		Recreation and sport facilities	X	X (a)	X	X
		Public lighting	X (regulation)		X	
		Signage			X	
		Urban nomenclature	X (regulation)		X	
	Fire protection	Prevention		X (a)	X	X (voluntary fire brigades)
		Hazard control		X (a)		X (voluntary fire brigades)

Table 3.A1.2. **Allocation of urban-related responsibilities across levels of government in Chile** *(cont.)*

Main function	Area	Sub-area	Institutions with competences in the area			
			Central level	Regional government	Municipality	Private sector
Environment/ sustainability	Emergency services	Managing disasters	X	X	X	
		Prevention strategies	X	X	X	
	Supervision	New buildings	X			X
		Quality of services at buildings	X			
		Noxious smells	X			
	Urban security	Prevention	X	X (a)	X	X
		Police	X			

Note: The Regional Government does not distinguish between functions carried out by the GORE and those carried out by SEREMI; RAD: Regional Agencies of Development; *a)* subsidies for infrastructure and equipment; *b)* the local entity responsible could be an individual municipality or an association. For example, the Congress is analysing legislation to enable association of municipalities for educational services administration.

Source: OECD, various sources; Valenzuela, J.P, and E. Rojas (2012), "Urban Governance in Chile", background paper prepared for the OECD, Public Governance and Territorial Development Directorate, unpublished.

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