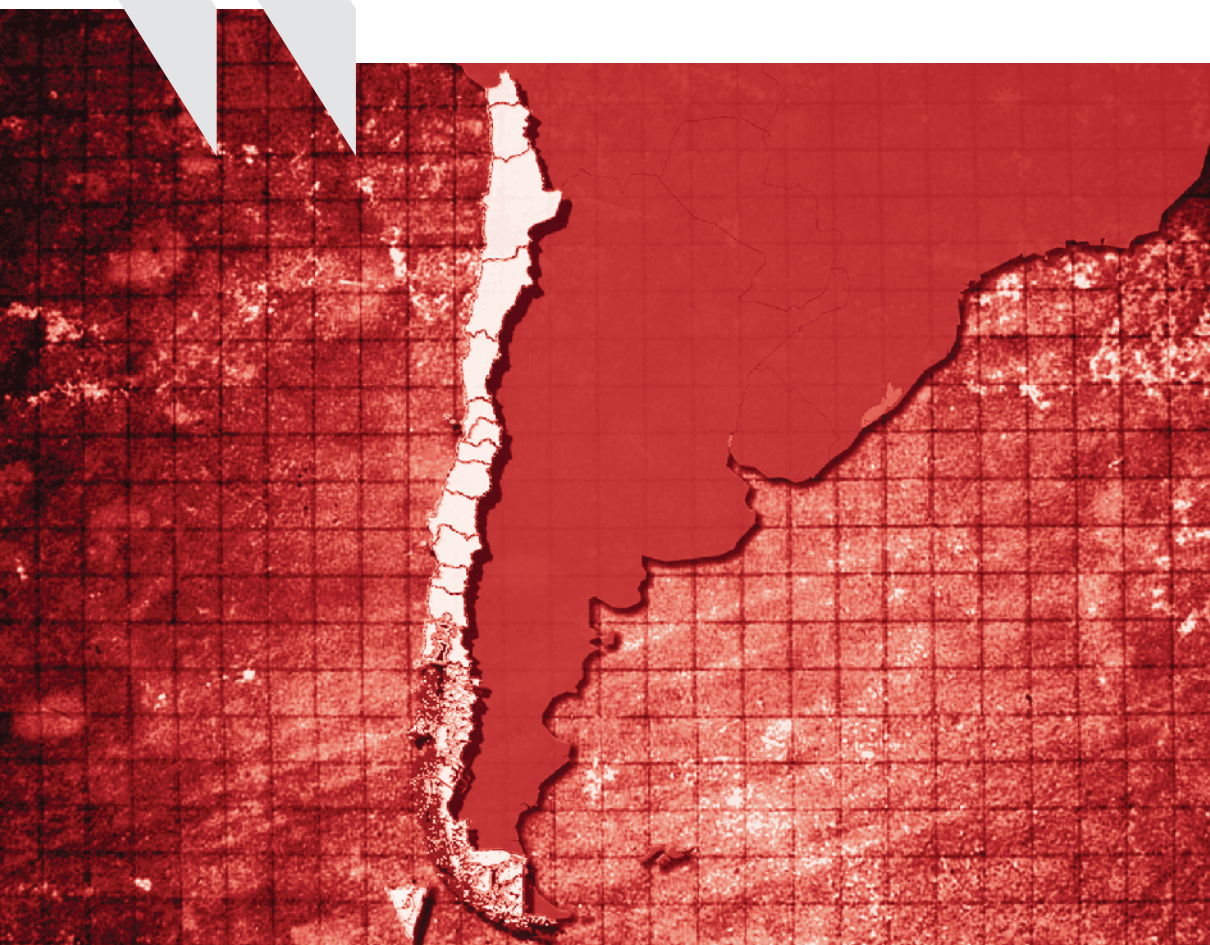




OECD Territorial Reviews

CHILE



OECD Territorial Reviews

Chile



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Foreword

At the beginning of this new millennium, regional economies are confronting momentous changes. The globalisation of trade and economic activity is increasingly testing their ability to adapt and maintain their competitive edge. There is a tendency for income and performance gaps to widen between and within regions, and the cost of maintaining social cohesion is increasing. On the other hand rapid technological change and greater use of knowledge are offering new opportunities for local and regional development but demand further investment from enterprises, reorganisation of labour and production, more advanced skills and environmental improvements.

Amid this change and turbulence, regions continue to follow very different paths. Some regions are doing well and are driving growth. Others are less successful at capturing trade and additional economic activities. Many territories with poor links to the sources of growth and prosperity, are finding it difficult to keep up with the general trend.

At the same time central governments are no longer the sole provider of territorial policy. The vertical distribution of power between the different tiers of government needs to be reassessed as well as the decentralisation of resources and competences in order to better respond to the different opportunities and demands of the different regions and improve policy efficiency. In that context public authorities need to weigh up current challenges, evaluate the strategies pursued in recent years and define new options.

Responding to a need to study and spread innovative territorial development strategies and governance in a more systematic way, in 1999 the OECD created the Territorial Development Policy Committee (TDPC) as a unique forum for international exchange and debate. The TDPC has developed a number of activities, among which are a series of national reviews. These studies, such as this one, follow a standard methodology and a common conceptual framework, allowing countries to share their experiences and disseminate information on good practices. This series is intended to produce a synthesis that will formulate and diffuse horizontal policy recommendations.

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Ms. Doranne Lecercle edited the final manuscript and Ms. Sophia Katsira and Ms. Jeanette Dubois prepared the Review for publication.

Country Profile of Chile

- **Area (sq Kilometers):** 756 946
- **Population:** 16.6 million people (2007 official estimate).
- **Form of state:** unitary republic with a presidential regime and a democratic, multiparty political system.
- **Political system:** The Chilean State is split into three independent branches: the Executive, headed by the President of the Republic; the Judicial, with its highest tribunal, the Supreme Court; and the Legislative, which has a Chamber of Deputies (or House of Representatives) and a Senate. The President is directly elected to one four-year term.

Economic Trends (2006)

- **GDP** (at current prices and current exchange rate; USD billion): 145.8.
- **GDP per Head** (USD at PPP): 13 042.
- **Unemployment rate** (% of labour force): 7.7%.
- **Trade in goods and services** (as a percentage of GDP): 64.46%.

Public Finance (2006)

- **General Government Budget Balance** (% of GDP): 7.9.
- **General Government Revenue** (% of GDP): 27.9.
- **General Government Expenditure** (% of GDP): 20.0.

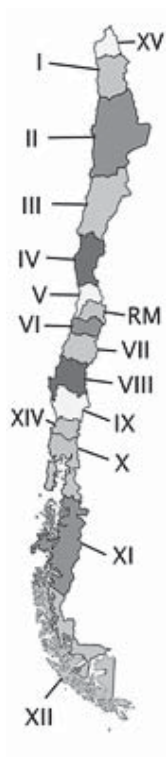
Living Standards (2006)

- **Life expectancy at Birth:** 78.4.
- **Income Inequality** (Gini Coefficient): 54.
- **Poverty incidence** (national poverty line): 13.7.

Territorial and Institutional Framework of Chile

- Chile has a three-tier government system: 15 regions; 52 provinces; and 345 municipalities.
- Administrative authority at regional level is directed by an intendant (*Intendente*) as a head of the regional executive appointed by the President, and a regional council (*consejo regional*) indirectly elected by municipal councilmen. Each province is headed by a Governor, appointed by the President and directly reporting to the regional Intendant. Municipalities are governed by a mayor (*alcalde*), who heads the local administration, and a municipal council (*concejo municipal*), with decision-making, regulatory and supervisory functions. Both the mayor and the council are directly elected by citizens for four-year terms.

Chile's Regions



N°	Region	Capital city
I	Tarapacá	Iquique
II	Antofagasta	Antofagasta
III	Atacama	Copiapó
IV	Coquimbo	La Serena
V	Valparaíso	Valparaíso
RM	Metropolitan Region	Santiago
VI	O'Higgins	Rancagua
VII	Maule	Talca
VIII	Bío-Bío	Concepción
IX	Araucanía	Temuco
X	Los Lagos	Puerto Montt
XI	Aysén del General Carlos Ibáñez del Campo	Coyhaique
XII	Magallanes y la Antártica Chilena	Punta Arenas
XIV	Los Ríos	Valdivia
XV	Arica-Parinacota	Arica

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List of Acronyms and Abbreviations

ACOA	Atlantic Canada Opportunities Agency
ARI	Preliminary draft on regional investment
BOT	Build-operate-transfer concession
CAD	Canadian Dollar
CASEN	National Household Survey
CLP	Chilean peso
CONAF	National Forest Corporation
CNE	National Commission for Energy
CNIC	The National Innovation Council for Competitiveness
CO	Carbon Monoxide
CONICYT	National Commission for Scientific and Technological Research
CORFO	Chilean Economic Development Agency
CONADI	Corporation for Indigenous Development
CORE	Regional Council
DIPRES	National Budgetary Secretary
EDT	Strategy for Territorial Economic Development of the Ministry of Agriculture
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
FCM	Inter-municipal Common Fund
FDI	Foreign Direct Investment
FIA	Agrarian Innovation Fund
FIC	Innovation for Competitiveness Fund
FNDR	National Fund for Regional Development
FOSIS	Social and Solidarity Investment Fund
GDP	Gross Domestic Product
GERD	Gross Domestic Expenditure on Research and Development
GORE	Regional Government
GT	Territorial Management Programme
IDB	Inter-American Development Bank
ICT	Information and Communications Technologies
IDR	Regionally defined investments
IFOP	Institute for Fishing Development
IMF	International Monetary Fund

INE	National Statistics Institute
INIA	National Institute of Agricultural Research
INDAP	Agricultural Development Institute
IT	Information technology
Km.	Kilometres
Mat.	Mathematics
MIDEPLAN	Ministry of Planning and Cooperation
MINVU	Ministry of Housing and Urban Planning
MSME	Micro, small and medium-sized enterprises
Mw	Megawatt
NGO	Non Governmental Organisation
ODEPA	Office of Agricultural Policies and Studies
OECD	Organisation for Economic Cooperation and Development
pc	Per capita
PISA	OECD Programme for International Student Assessment
PM2.5	Particle Pollution (Particles less than 2.5 micrometers in diameter)
PM10	Particle Pollution (Particles less than 10 micrometers in diameter)
PMC	Program for improved competitiveness
PMG	Management Improvement Programme
PPP	Purchasing Power Parity
PROCHILE	Chilean Export Development Agency
PROPIR	Public programme for regional investment
PTI	Corfo's Integrated Territorial Program
R&D	Research and Development
RDA	Regional Development Agency
RHEIs	Research and higher education institutions
S&T	Science and Technology
SENCE	National Service of Training and Employment
SERCOTEC	Technical Cooperation Service
SEREMI	Ministerial Regional Secretariats
SERPLAC	Regional offices of Mideplan
SERVIU	Urban and Housing Service
SHOA	Hydrography and Oceanography Service of the Chilean Navy
SII	Internal Revenue Service
RICYT	Network on Science and Technology Indicators (Ibero-American and Inter-American)
SAG	Agriculture and Livestock Service
SIMCE	System for Measuring Educational Quality
SENCE	National Training and Employment Service
SMEs	Small and medium-sized enterprises
SINIM	National System of Municipal Indicators
SNI	National Investment System

SUBDERE	Sub-secretariat for Regional and Administrative Development of Chile
SUBTEL	Sub-secretariat of Telecommunications
TFP	Total factor productivity
TL2	Territorial Level 2
TL3	Territorial Level 3
UF	Chilean Unit of Account
UNCTAD	United Nations Conference on Trade and Development
USD	United States Dollar
VET	Vocational Education and training

Assessment and Recommendations

Chile has achieved strong economic growth and institutional stability

During the past two decades Chile's GDP per capita has risen strongly. Between 1988 and 1997, Chile grew at an average annual rate of 7.9%. In 1998 growth slowed to 3.2% and in 1999 the economy contracted (-0.8%). Then, from 2000 to 2003, growth returned, and in 2004 and 2005, real GDP rose sharply by 6.2 and 6.3%, respectively. Macroeconomic stability has been a key factor of growth. Balanced fiscal accounts have been complemented by low inflation, an open trade regime and favourable legislation for foreign direct investment (FDI). The opening of the economy has centred mainly on resource-based sectors, primarily copper mining and sub-products and the agro-food sector. A series of trade reforms along with favourable international conditions, such as high copper prices, raised the ratio of exports to imports to GDP from 45.7% in 1976-84 to 60.3% in 1995-2002. At the same time, the strength and reliability of Chile's institutions have also had a favourable effect on growth. The quality of institutions and the stability of Chile's regulatory framework are comparable to those of OECD countries. As a result of this situation, Chile has been among the most successful countries in reducing poverty levels worldwide: in 1990 almost 40% of Chilean population lived in poverty; in 2006 the poverty rate was 13.7%.

Yet, as in other countries, the Chilean economic outlook changed with the world economic crisis, emphasising the importance of maximising the impact of public investment in productivity growth

The overall Chilean economic outlook changed drastically during the last quarter of 2008 with the world economic crisis. The exchange rate has depreciated significantly in nominal terms. Growth and domestic demand decelerated significantly. Meanwhile, during the first months of 2009, Chile faced a sharp terms of trade shock, reflected by a severe drop in international copper prices, which fell to an averaged USD 1.50 a pound after reaching nearly USD 4 in the first half of 2008. Nevertheless, the structural surplus and the stabilisation funds

accumulated during the “prosperous” years, are now available for judicious use. In this regard, in response to the crisis, the government announced a USD 4 billion (2.8% of GDP) fiscal stimulus package in January 2009, boosting public investment programmes and transfers. This stimulus package includes among others, investments in infrastructure, small enterprise development, and subsidies to low income households. As in other countries, regional policies could offer an important tool for the allocation of public investment for maximum long-term impact in terms of productivity growth.

Regional performance varies widely, revealing underutilised regional potential

The current economic crisis highlights the importance of a long term strategy to boost productivity growth nation-wide to complement and deepen the gains arising from sound economic management. Challenges in terms of labour productivity and human capital show the country’s potential for further growth. In contrast to income levels, the productivity gap between Chile and the OECD average has widened in recent years. Moreover, Chile’s R&D intensity, tertiary education rates and PISA results are very low in comparison with OECD countries, revealing clear room for improvement. Chile’s lack of productive diversification makes the economy vulnerable and also creates risk. Finally, the outstanding reduction in poverty levels has not been accompanied by a reduction in income inequalities: despite positive changes between 2003 and 2006, Chile still remains among the countries with the highest income inequalities in the region.

These challenges have a clear spatial dimension. Performance varies markedly among Chilean regions. Regional disparities are substantially higher than in most OECD countries and are closely associated with large disparities in labour productivity. Regional inequality in GDP per capita declined from 1998 to 2004, but a longer time period (1990-2004) reveals significant variability, with upward and downward movements in the Gini coefficient of interregional disparities, mainly caused by marked fluctuations in growth in the northern mining-intensive regions of Antofagasta and Atacama. Territorial inequalities are also severe in access to education, in research and innovation, and in poverty levels. The pattern of regional disparities has three main characteristics: i) a wide gap between the mining-intensive regions of the North, such as Antofagasta and Tarapaca, and the Metropolitan Region of Santiago on the one hand, and the agriculture-intensive regions such as La Araucania, Coquimbo and Maule, on the other; ii) the concentration of business activity, firms and workforce in the capital, Santiago, which has 40% of the population, is responsible for 47% of GDP and records the country’s highest labour force participation rate; and iii) lack of growth in key regions: in

spite of the country's overall strong economic growth, four regions – Atacama, Valparaíso, the Metropolitan Region of Santiago and Magallanes – which represent half of the population and include the Metropolitan Region and the third most populated region, Valparaíso, recorded slower annual average growth rates from 1995 to 2004 than the average OECD TL2 regions.

The characteristics and assets of the regional economies are particularly varied but Chile remains highly concentrated

The structure, characteristics and assets of Chile's regional economies are particularly varied. Chile is over 4 300 km long and has an average width of close to 180 km. It has a wide range of soil types, climatic and environmental conditions, ranging from deserts in the north to lakes, fjords and glaciers in the south. Mining is the dominant sector in the north. In the Metropolitan Region of Santiago, industry and financial services prevail. Agriculture, forestry and fishing are the dominant sectors in the country's centre and south. However, in demographic and economic terms, Chile remains very concentrated: Santiago has most of the political, economic and intellectual capital and nearly half of the population. The economy depends on a few sectors, largely located in a small number of regions, which receive much of the private and public investment. This reinforces economic concentration and causes regional imbalances to persist and amplify. Mining (23% of GDP in 2006) and financial services (14% of GDP) are largely located in Antofagasta and the Metropolitan Region, respectively. Antofagasta alone accounts for close to 50% of the GDP from the mining sector; including Tarapaca and Atacama, the two other main northern mining regions, raises the share to 75%. Likewise, the Metropolitan Region accounts for nearly 77% of GDP from financial services.

Economic concentration on the resource-based sectors puts pressure on natural resources

Chile's economy is highly specialised in commodities and this puts pressure on natural resources and raises environmental concerns. Intensive agriculture in the centre and south and deforestation and salmon platforms in the south lead to soil erosion, loss of native forests, a rise in the presence of pesticides and fertilisers in rivers, and contamination of water due to the salmon industry. In the north, intensive copper production results in emissions of arsenic and carbon monoxide into the air and water around the mines. The concentration of population and industrial activity around Santiago, one of the world's most polluted cities, creates its own environmental problems.

Natural resources are one of Chile's important economic assets, but to avoid over-exploitation of non – renewable resources, a transition towards a sustainable development model should be a priority. Several potential measures are:

- Improve the sustainable management of natural resources. In particular, sustainable use of Chilean forests would be important both to conserve the country's rich biological diversity and to ensure economic sustainability and diversity, especially in the southern regions.
- Examine alternative energy sources, such as wind, hydro, solar and biomass. Chile has enormous potential in terms of alternative energy sources which have just started to be exploited.
- Reinforce public control of the sustainability of economic activities, as well as control of industries and vehicles emissions.
- Diversify the economy towards non – resource based activities.

Diversifying Chile's productive base is as important as adding value to existing sectors.

Regional policies should not only promote growth in areas in which economies of agglomeration are present, they should also encourage all regions to use their assets to reach their growth potential. In this respect Chile could benefit from greater economic and geographical diversification while continuing to add value to established sectors to make them more competitive. Chile's lack of economic diversification and over-dependency on commodity goods makes the economy vulnerable to sudden changes in international commodity prices and secular shifts in demand, and may constrain its long-term growth potential. OECD countries are generally much less dependent than Chile on natural resources. Diversification induces regions to mobilise their resources instead of depending on top-down development strategies. At the same time, Chilean regions need to transform static into dynamic advantages by producing more complex and higher value added goods in their sectors of specialisation. Science, technology and innovation policy can play a key role, first by exploring new products in emerging sectors and second by making existing ones more productive and efficient. Furthermore as Chile develops higher skills and technology in resource-based sectors it can transfer knowledge and productivity gains to other sectors.

Given its production of primary goods, Chile's manufacturing potential is clear, although the sector's potential for developing higher value added goods has not been fully exploited. Few regions are specialised in manufacturing and those that are moderately specialised, such as Bio-Bio or Valparaíso, have

recorded low growth rates. Technological upgrading of traditional industries for an innovation-led growth can be a spur for these regions as well as others, such as the northern regions in which manufacturing is underdeveloped. The mining industry should be the nexus of a broad set of diversified and interrelated services and manufacturing activities.

Improvements in productivity and diversification of the productive base require context-specific territorial policies

Improving productivity will require context-specific territorial policies. Chilean regions would benefit particularly from policies aimed at boosting productivity, such as those targeted at innovation and entrepreneurship and at improving education and training. These areas have a strong regional dimension given the heterogeneity of Chilean territories, as growth opportunities are tied to local conditions and resources are often underutilised. At the same time, diversifying regional economic structures would also require regionally driven strategies, capable of mobilising regional resources and taking advantage of the different possibilities offered by Chile's regions. This suggests the need for tailored place-based policies that can make targeted efforts to improve the quality of public investments and services to the regions. Boosting regional growth through context-specific territorial policies will not only benefit national growth but also territorial cohesion, an important element of a sustainable open economy.

The concentration of Chile's innovation system in and around Santiago slows the development of regional innovative systems, but progress is being made to promote regional innovation initiatives

At present, Chile's innovation system is concentrated in the capital to the detriment of regional innovative systems. Chile needs to move to a system that promotes regional-level innovation while maximising the diffusion of outcomes from the Santiago region. A specific challenge for developing a regional approach is the fact that innovation investment focuses strongly on public R&D, which tends to be carried out in the capital. On average, close to 40% of total R&D expenditure is carried out by universities, mainly located in Santiago: the two largest – the University of Chile and the Catholic University of Chile – account for a large share of university-performed R&D. Most private investment also goes to Santiago. The main regional industries perform little R&D.

In 2000, Conicyt launched 11 scientific and technological centres in various regions of the country to stimulate the development of centres of excellence in disciplines or specific areas of research that are consistent with regional assets and advantages. The initiative is managed by Conicyt, in a joint effort involving regional governments, universities and the private sector. Apart from its territorial focus, these initiatives have the clear advantage of inter-institutional articulation and the involvement of regional universities and the regional government in regionally driven innovation initiatives. However, these initiatives still represent a modest share of the public innovation budget. It is recommended to extend such initiatives and to allocate more resources to them. Regional scientific centres could be launched in areas with enormous potential, such as alternative energy sources or biotechnology. It will be crucial to give regional institutions and regional universities a role in the selection of targeted areas and in project implementation.

From 2008, regions participate in the assigning of 25% of the resources of the recently launched Competitiveness Innovation Fund. This fund allocates resources from the newly established mining royalty to improve the innovative capabilities of the different regions and represents a very promising initiative. The regional government, taking into consideration the national innovation strategy, will define the use of these resources in projects related to science, applied research, innovative entrepreneurship, human resources, or the transfer and diffusion of technology. A main challenge will be to reach a fair balance between the main priorities of the national innovation strategy and the regions' specific conditions, opportunities and strengths. Support from the centre is essential and involves, in particular, helping regional actors understand and react to global challenges, and providing innovative solutions to help them gradually integrate new approaches into their economic development programmes. However, regional governments and regional institutions need to have sufficient autonomy to adapt national innovation guidelines to the regional priorities.

Development of clusters has paid little attention to bottom-up definition of regional potential, thus undermining productive diversification

The government of Chile, through the National Innovation Council, has launched a new national strategy for developing more competitive clusters based on the view that to grow steadily Chile requires a strategy with two main axes: strengthening existing and competitive clusters, mainly through knowledge; and on the basis of their strengths, identifying and strengthening other sectors and activities in order to diversify production. In 2007 the National Innovation Council carried out a study to identify the country's most

promising productive sectors in the next decade. The eight clusters selected so far are mainly in mature sectors linked to natural resources: mining in the north and agriculture and fishing in the south, in addition to financial services in Santiago. In defining the clusters, there was little bottom-up input. This can be an obstacle to further productive diversification and to taking full advantage of the regions' diverse potential. Regional bottom-up diagnosis can help to find untapped regional resources for diversifying the economy. It would also make it possible to take account of territorial spillovers among sectors and regional dynamics.

Regional development agencies have been established as a key initiative to tackle this challenge

Between 2006 and 2007 the Chilean government established regional development agencies (RDAs) as a means of transferring responsibilities for productive development to the regions. RDAs are meant to further the move towards an integrated approach to regional development. Through the agencies, coalitions of public and private actors design the region's productive agenda on the basis of the region's strengths and challenges. They also seek to increase the participation of micro, small and medium-sized companies. In 2007 the agencies prepared strategic development agendas in which they defined a set of regional productive priorities. The agenda serves as a basis for developing programmes to improve competitiveness (PMCs) and for defining a strategy and concrete actions to increase the competitiveness of a subset of the region's priority clusters. It opens the way to place-based analysis in order to find untapped regional resources and thus diversify the economy. It can also take account of territorial spillovers among sectors and place-based dynamics. Finally, the agencies are to have an important role in co-ordinating and linking support for business development from Chile's public agencies. From 2008 at least 10% of the resources of national public agencies involved in productive development are to finance the RDAs' PMCs, a clear indication of the Chilean government's commitment to the RDAs.

Yet, there is a need to better articulate regional and national perspectives. RDAs should strengthen their regional perspective

At present, progress in implementing the RDAs' regional agendas is irregular, with some promising initiatives. The first strategic agendas, launched at the beginning of 2008, include some innovative or value-added areas. However,

the current agendas and PMCs largely concern the priority sectors set by the National Innovation Council (mainly mining, agriculture, fishing and primary fruit industry). While it is logical to take national priorities and strong productive sectors into account, one of the main values of the RDAs should be to set agendas based on specific regional vocations and opportunities for expanding the regional productive base. This will be crucial both for diversifying the regions' economic base and for adding value to existing sectors. The challenge for policy makers is to balance support for key sectors with an approach that allows greater flexibility across regions.

To improve the effectiveness of regional development agencies as the framework to promote regionally based productive development, the following challenges need to be tackled:

- The regional vocation of the RDAs should be gradually reinforced in parallel with an institutional strengthening of the RDAs' strategic boards. Currently the RDAs' progress towards meeting their objectives is very dependent on the commitment of the region's intendant (head of the regional government appointed by the president who also acts as the head of the RDAs).
- An enlarged team of professionals with the capacity to make an in-depth analysis of the different regional vocations and opportunities is required. Each regional development agency has a very reduced team of technical staff: five people per agency including an executive director. OECD RDAs' with similar ambitions normally have a larger group of employees.
- The responsibilities of the RDAs should be further clarified and their interaction with the regional government reinforced. Co-ordination mechanisms between the RDAs, the national public agencies and the regional government will be crucial for integrating the diverse and so far fragmented regional development initiatives in a common and coherent framework.
- There will be a need to further link the strategic agenda developed by the RDAs with the regional investment process. Currently the different public actors that intervene in the investment process are not required to consider the prioritised productive areas set in the strategic agendas of the RDAs.

To enhance the productivity of Chile's national and regional economies, the competitiveness and participation of micro, small and medium-sized enterprises must increase

As in many OECD countries, improving the productivity and competitiveness of micro, small and medium-sized enterprises (MSMEs) is a key challenge. These companies account for more than 99% of firms and are responsible for

more than 75% of the country's jobs, yet they produce only 21% of national sales and only 4% of national exports. A lack of skills and insufficient access to financial services or to innovation, among other factors, make it difficult for these firms to cope with the challenges of global competitiveness. The productivity gap of these firms clearly affects Chile's capacity to reach its growth potential. Taking regional vocations into account and offering MSMEs better access to skills, innovation and technology will help to improve the quality and value added of their products. They will also need a better institutional framework of public support at the regional level. The RDAs and programmes like *Chile Emprende* aim especially at improving the competitiveness of these enterprises. The *Chile Emprende* programme is a very interesting initiative that offers an integrated territorial approach to the promotion and development of MSMEs. It brings together the efforts and views of different ministries, public agencies and private actors in specific territories, opening the way to integrated place-based policies that go far beyond the traditional sectoral orientation. The RDAs can also help to strengthen the competitiveness of MSMEs at the regional level by involving them in regional productive planning. MSMEs are expected to find in the RDAs a good platform for articulating and setting out their particular requirements. However, special attention should be paid to ensure that RDAs do not become dominated by the interests of large firms.

*Education and the improvement of human capital
must be a priority for reasons of competitiveness
and equity*

Human capital development is crucial for improving the productivity of Chilean regions and for catching up with OECD countries. Efforts have been made, but higher educational attainments and better quality education still remain key national and regional priorities. Tertiary attainment rates and public investment in tertiary education are very low when compared to OECD countries: the share of the population with tertiary attainment was only 13% in 2004 (the OECD average was 26% in 2005). At the same time there are great territorial disparities with most high-quality tertiary education opportunities concentrated in Santiago (in 2006, 48% of student enrolments in higher education institutions were in the Metropolitan Region) and a few core cities. Regions with high poverty levels have especially low tertiary educational attainment rates. Chile must seek to spread access to quality education, research and vocational training opportunities to the different regions and to the underprivileged segments of the population in order to improve conditions in its different territories and develop their potential.

Traditionally, in Chile, as in most OECD countries, research and higher education institutions (RHEIs) emphasise the pursuit of knowledge based on national goals with little regard for local frameworks. Given the diversity of Chile's regional assets and characteristics, strengthening the links between the regional labour market and higher education and training programmes would help to close the gap between education and employment portfolios and give graduates a better chance to find local employment and remain in their home region. By meeting specific skills requirements it would also help local employers. Achieving this goal will require: i) education and human capital policies that are sensitive to the characteristics of the regional environment; ii) greater participation of education institutions in regional development matters; and iii) stronger collaboration and links among higher education institutions, research and innovation centres, regional and local authorities, local businesses, and regional development agencies. The goal is to raise the quality and relevance of education, research and training, making them more relevant to the economic needs and potential of each region.

Improving access to quality education for underprivileged segments of the population will be crucial for tackling the challenge of income inequalities in Chile. It will require in particular increases in the technical and financial resources available to municipalities for carrying out their devolved responsibilities for public primary and secondary education, since municipal schools manage close to 70% of the socio-economically underprivileged students. The recently approved preferential scholar subsidy represents a promising step by targeting educational subsidies to the poorest population and tying the delivery of funds to the development of a quality improvement plan and to performance. These measures would need to be accompanied by support to raise the capacities of teachers and the quality of programmes, along with further efforts to remove barriers to pre-primary and tertiary education for vulnerable social groups as a way to reach minimum standards throughout the country.

The agricultural sector plays a key role in Chile's economy, but to improve the prospects of rural areas a shift towards a multi-sectoral place-based approach of rural development is needed

There is a need to shift from sectoral policies focused on agricultural subsidies towards comprehensive rural development programmes. The agricultural sector is a significant contributor to regional output in various Chilean regions: in O'Higgins, Maule and Araucanía the share of the agriculture sector in total regional GDP exceeds 15%; in Coquimbo and Los Lagos is close to 10%. However, most agricultural regions lag behind in economic growth and

development. In addition, small-scale farmers have seen little change in their farm incomes, with most of their gains coming from off-farm opportunities. Close to half of rural households in Chile are employed in non-agricultural activities, basically in manufacturing and the services sector, which offer an alternative or complementary source of income. Yet, national policies remain focused on agricultural promotion and there is as yet no national rural development strategy in Chile. The development of such a strategy with a comprehensive territorial focus is highly recommended. OECD governments are increasingly recognising the need to shift from traditional rural sectoral policies towards comprehensive place-based approaches to rural development. Rural place-based programmes that consider agricultural and non-agricultural policies and the links between rural and urban areas would be better adapted to the diverse socio-economic characteristics and productive processes that affect the development of Chile's rural territories. Within these programmes, regional institutions (regional governments, RDAs) are called to play an active role: they are in the best position to plan a comprehensive approach to rural development and to make it part of their development strategies and agendas.

Several off-farm activities offer rural areas significant opportunities. Renewable energy could mean higher prices for producers, land rents for wind and solar facilities, jobs in construction, operations and maintenance, among others. Tourism represents another attractive alternative: given Chile's rich and diverse environmental attractiveness and rural heritage, tourism offers many unexploited opportunities. However, the diversification of activities depends largely on the capacities and attributes of the rural locality. These capacities are largely determined by drivers such as human capital, entrepreneurship, innovation, and availability of services and infrastructure. Improving the level of human capital in rural areas is crucial to enhancing their capacity to innovate – and to assimilate innovation – and to ensure that capital investment does not leak out of the region. In addition, local involvement and entrepreneurship will be important to ensure that the area produces value added for itself.

Infrastructure has been much improved, but further improvements are needed to connect peripheral regions and rural areas

Chile's challenging geographical and topographical situation presents a number of challenges for developing and managing the national infrastructure system and providing access to transport infrastructure, communications and basic services, especially in remote and peripheral regions. Under Chile's concession programme, which started in 1993, the

transport infrastructure network was substantially improved; however the needs of peripheral regions and rural areas have yet to be met. Connectivity with peripheral areas and remote regions needs to be improved, but care must be taken not to focus solely on inter-city linkages: connections between urban centres and rural areas are crucial for greater development of rural regions. Concession programmes based on shared public-private risk might be used for projects with high social returns, such as those to extend the infrastructure network in peripheral areas.

Interregional disparities in access to telecommunications also remain significant: while more than 30% of households in the Metropolitan Region or in the mining region of Antofagasta have Internet access, only close to 10% of households do so in Maule and Araucanía (agriculture-intensive regions) and in the far south region of Aysén. These inequalities in access to communication broadly correspond to disparities in GDP per capita. Improving access to telecommunications represents a potential source of growth and should be favoured.

The potential of transport infrastructure will only be fully exploited if co-ordination and territorial synergies exist; this will require governance arrangements and greater involvement of sub-national actors

Co-ordination of the different institutions dealing with transport infrastructure in Chile and of infrastructure and other economic development policies is crucial. Because several institutions play a role in infrastructure planning and development, territorial co-ordination is essential. There is also a need for synergies between transport infrastructure and other policies with an impact on regional development. Investment in infrastructure can facilitate development and help to diminish regional disadvantages, yet parallel measures (promoting innovation, investment incentives, and improvement of education and work skills) are also needed to ensure that a region, especially a backward one, takes full advantage of the opportunities that improved connectivity creates. In Chile, some initiatives towards inter-ministerial agreements such as the Infrastructure for Competitiveness plan suggest some progress. However, such initiatives tend to take a top-down approach and thus fail to exploit basic information regarding local opportunities and regional assets. Greater involvement of regional and local institutions (local and regional governments and RDAs) in these initiatives will be important to improve the information available about regional needs and to make local actors embrace the project and feel part of it. The need for greater collaboration by different levels of government and for harmonisation of

policies with a territorial impact calls for moving towards long-term governance structures for planning and co-ordinating regional policies.

Metropolitan governance remains a challenge in big cities like Santiago

A co-ordinated local governance structure is required in metropolitan areas like greater Santiago where the fragmentation of the urban territory into different *comunas* (municipalities) affects the overall co-ordination and management of urban public services. Greater Santiago is composed of 35 autonomous municipalities, and there is no single authority with jurisdiction over the entire city. The provision of local public services is normally the task of national institutions: national ministries (for instance, the Ministry of Transport deals with Santiago's urban transport system), regional directorships of national ministries or public agencies. Additionally, each *comuna* has exclusive responsibility for enforcing measures regarding transport, for implementing provisions regarding construction and city planning, and for planning and urban regulations. Finally, *comunas* also share responsibilities for social housing. In this context, it is essential to establish more clearly the role and responsibilities of the different authorities. In addition, metropolitan areas require a governance system which takes into account the position and knowledge of local actors. This is especially necessary for ensuring co-ordination in the delivery of key public services (especially public transport) across several municipalities of the functional metropolitan area, and for ensuring that sectoral policies are correctly integrated. Areas such as housing, land use planning and economic development need to be connected to the urban economy and require cross-sectoral coherence.

Chile increasingly includes the regional perspective in its agenda

Chile, historically a strongly centralised country, is increasingly including the regional development perspective on its agenda. Chile is moving towards a territorial development perspective as a way to adapt public policies to the characteristics and assets of the different regions. Up to now, Chile has not had a clearly identifiable regional policy and interventions at the regional level have been largely defined from the centre. However, in recent years some initiatives and governance reforms suggest a move towards greater emphasis on the regional dimension of economic development. Some institutional

initiatives (the RDAs) and programmes (such as *Chile Emprende*, or *Chile Califica*) have gone in this direction.

The government has also made decentralisation a priority

Moving towards an integrated territorial development approach in Chile will require changes in order to establish a governance structure capable of context-sensitive interventions. Under the current system, the head of the regional government, the intendant, is appointed from the centre, and presides over an indirectly elected regional council. Regional actors and policies remain largely controlled from Santiago. Yet, during the last years, the government of Chile has set high priority on decentralisation with the aim of providing sub-national governments with the tools, capacities and legitimacy to improve their autonomy and performance. To this end, several reforms are under way, including a reform to elect the regional council directly. This will create a democratically elected body for managing regional development. Additionally, responsibility for regional planning has been transferred from the national planning ministry to regional governments, and a new regional planning division has been established to manage it. On the municipal side a reform is under way to modernise municipal organisation and to give more autonomy and further responsibilities to municipalities. However, administrative and financial limitations on sub-national governments and an agenda still largely determined by national guidelines undermine these decentralisation reforms.

There are institutional obstacles to a territorial approach: investment in the regions follows a sectoral logic

Sectorally driven national grants are the main source of investment in the regions, a fact that hinders the development and financing of territorial initiatives. The norms and procedures that govern the Chilean public investment process are regulated by the National Investment System which also establishes the capacity of expenditure of each Chilean institution. Regional governments do not have an independent budget for carrying out regional investments. However they guide the allocation of resources from the annually determined regionally defined investments (24% of total public investments in 2006): different requesting entities (municipalities, provinces, regions, RDAs – from 2008 – and deconcentrated national public services) submit proposals to the intendant who selects a portfolio of projects for

submission to the National Investment System. However, the analysis and selection of the projects to be included in the regional portfolio (in which the Planning Ministry intervenes) largely take place on a project-by-project basis and so lack an overall territorial articulation. At the same time, the current system makes it difficult to move towards a multi-annual budgeting planning framework.

A gradual transition from sectoral subsidies to integrated territorial grants can pay off. Regional policy, in OECD countries, has increasingly shifted from sectoral subsidies to comprehensive regional policies directed to mobilise underutilised regional resources. The Sub-secretariat for Regional and Administrative Development of Chile, Subdere, has been closely involved in trying to move the main national source of investment in the regions, the National Fund for Regional Development (FNDR) from being a compensatory fund focused on infrastructure provision towards a territorial development fund with more comprehensive goals. This is not yet the case. Most of the projects submitted to the FNDR have a municipal basis and mainly seek to finance basic infrastructure and services requested by municipalities rather than integrated regional projects. The launching of the RDAs, which can present initiatives to the FNDR, promises to give a greater role to economic development initiatives for promoting endogenous growth. This will require attention both to the regional focus of the RDAs' proposals and to strengthening co-ordination between the RDAs and the regional government. At the same time, a shift towards more comprehensive regional investments would require further measures to adapt the investment process to a territorial logic that makes it possible to finance integrated, multi-sectoral initiatives and to a multi-annual budgeting planning framework.

A territorial approach to development requires reinforcing the role of regional governments in defining a regionally based agenda

Moving towards an integrated territorial approach in Chile will require evolving towards a solid regional governance structure that is able to create a coherent framework for economic development. In Chile this will involve increasing institutional support to regional governments to give them enforcement powers, legitimacy and further capacity to arbitrate in the discussion, planning and co-ordination of comprehensive regional development policies. Recent decentralisation reforms devolved regional planning responsibilities to regional governments. However, regional governments still do not have enough institutional strength to manage and co-ordinate a common strategy for the region that draws together the various agencies and actors operating in the region. The various public actors that

intervene in the regional investment process are not required to follow the guidelines set in the regional development strategies or in the strategic agendas of the RDAs. Moreover, information does not circulate well between national agencies and regional governments: regional governments sometimes learn about projects to be carried out by a national public agency in their region only when the projects have already been planned and are about to be implemented. All this affects the capacity to provide a coherent framework for formulating regional policies and creates a disincentive for regional planning.

National institutions and agencies, especially the regional representatives of national public services and the representative of line ministries in the regions (SEREMI), should reinforce their links, co-ordination and co-operation with regional governments. Institutionalised channels of collaboration should be enforced by law as a way to give regional governments a real capacity to lead the process of regional planning. There is also a need for greater co-ordination between the regional bodies dealing with economic development issues, mainly the RDAs and the planning division of the regional government. Attention should be paid to clarifying the roles and strengthening the interaction mechanisms of these two recently established institutions.

Institutionally reinforced regional development strategies, linked to the national investment process, would give the regional government and the new planning division the opportunity to play a greater role in guiding overall regional development. At the same time, it is necessary to ensure the quality of regional development strategies. Currently, their quality is variable and some regional plans do not provide a qualified analysis and definition of the strategic objectives and guidelines for regional economic development. Subdere has been carrying out training programmes with a view to improving the capacity and performance of the regional governments. Collaboration should continue in order to ensure that the regional governments and especially the new planning division have the elements and capacity to carry out their mandate efficiently.

The role of the regional intendant has to be more clearly defined and the territorial focus of the regional council further strengthened

The role of the intendant should be better defined. Intendants are the representative of the president and the main authority of the central government in the region, but, at the same time, they preside over the regional council, the unit in charge of regional planning. As head of the regional government, intendants work to develop the region, but as the president's

representative, they are also responsible for implementing national policies and guidelines. This coexisting mandate generates a problem of divided loyalty (to the central state and to the region) which can undermine the process of building place-based agendas. The reform under way to elect regional councillors through regional elections and the establishment from 2008 of a regional planning division are steps towards building a more regionally oriented body in charge of regional planning. These efforts should gradually go further in order to reinforce the role and position of the regional council as a more autonomous regional unit.

*Decentralisation requires a clear presentation
of the roles of the different actors*

Decentralisation in Chile will require establishing a national consensus regarding the objectives and scope of the process and the role and means at the disposal of the different actors. Targets in terms of the reallocation of responsibilities must be clear as must the path and means to reach them. In Chile, two organic laws define the main functions and responsibilities of regional and local governments. Yet, as of now, as in most OECD countries, concurrent responsibilities across different levels of governments, along with various overlapping functions, generate ambiguity. This makes it crucial to clearly define the roles, responsibilities and interactions of and between the different actors: vaguely defined or coexisting mandates may compromise the implementation of key services. Finally, to ensure service delivery, the devolution of responsibilities should be accompanied by a concomitant allocation of the resources, competences and organisational flexibility needed to carry them out efficiently.

*A territorial approach will require strengthening
multi-level governance arrangements*

Moving towards comprehensive place-based approaches in Chile will require developing governance arrangements among the different levels of government and among the different actors operating in the territory. Because they can be adapted to specific contexts and promote shared objectives and references (especially when accompanied by indicator systems) contracts might be considered a tool for reforming traditional practices in the governance of public policies in Chile, in particular for regional development. Programming agreements (*acuerdos de programación*) are in place and involve multi-level agreements between one or more regional governments and one or more ministries, public or private agencies, to implement certain projects.

Programming agreements are an important tool for co-ordinating regional and sectoral priorities. An additional advantage is that investment initiatives under these agreements allow for multi-year budgeting. Yet, to date, the use of programming agreements has mainly been restricted to big infrastructure initiatives; in addition, the leading role in these agreements is currently mostly played by the line ministries. A stronger and clarified role for regional governments and more institutionalised co-ordination between them, the line ministries and public agencies would be necessary to move the programming agreement format beyond big infrastructure initiatives to other areas, projects or parties, and to give a greater role to the regional government in their design and co-ordination.

Co-ordination at the national level is also required

In addition to greater involvement of sub-national governments in regional planning, it is important for central policies on regional development to have a territorial dimension. While there have been some valuable agreements to finance comprehensive place-based initiatives (*e.g. Chile Emprende*) with resources and support from several public agencies, these have been mostly *ad hoc* efforts. To promote integrated territorial approaches to regional policy, the central government level should consider the following: i) at the central level place-based rather than one-size-fits-all policies should have high priority on the political agenda; ii) efficient administrative and fiscal mechanisms for inter-ministerial co-ordination require procedures for financing multi-sectoral investments as well as collaborative mechanisms among ministries and public agencies; iii) involvement of local actors (including local and regional governments or RDAs) in the design and co-ordination of national initiatives to be carried out in the regions can improve information on regional requirements and regional synergies and help to see how the initiative fits with other projects being carried out in the territory.

The role of the Sub-secretariat for Regional and Administrative Development (Subdere) as “arbitrer” to facilitate and foster integral place-based approaches should be strengthened. Subdere is the national unit in charge of promoting regional development under the Ministry of the Interior and has a high degree of autonomy in dealing with different ministries on issues under its responsibility. Subdere supports initiatives that incorporate a regional vision in the activities of other central government institutions. However, it is currently very difficult for Subdere, in practice, to act as the national co-ordination unit. On the one hand, national investment funds are regulated by the National Investment System and are largely delivered on a sectoral basis. On the other, initiatives proposed by national ministries and public agencies normally follow a top-down approach, sometimes with insufficient

consultation and co-ordination with Subdere. Institutionalised channels of communication between line ministries and Subdere should be strengthened.

At municipal level, assignment of responsibilities should go along with a coherent allocation of resources and competence to carry them out

Important responsibilities have been transferred to Chilean municipalities but these have, on average, few resources and insufficient technical capacity to execute them efficiently, a situation that is especially problematic for less developed localities. Municipalities have few autonomous sources of revenue: sub-national revenues account for only 8.1% of total government revenues, a very low figure in comparison to OECD countries. They depend essentially on central government transfers and on an inter-municipal equalisation system, the Inter-municipal Common Fund (FCM), to carry out their principal devolved responsibilities, mainly primary and secondary education and basic health. Because the national transfers for education and health are insufficient to cover the provision of these services, municipalities must complement national grants with own resources. Small and less developed localities with small tax bases find this difficult to do, and the FCM's compensatory mechanism has proven insufficient. The recently approved preferential scholar subsidy will provide an additional source of revenue and technical support for municipalities. However, beyond that, Chile should undertake an in-depth evaluation of the resources and support required to provide less developed municipalities with enough technical support and economic resources to implement these basic public services efficiently.

The municipal reform under way is a necessary step in adapting municipal structure, capacities and resources to municipal responsibilities

The reform of the organic constitutional law of municipalities which is under way is a necessary step in adapting municipalities' organisational structure, capacities and resources to local characteristics and demands. It proposes several measures for creating an institutional framework more in keeping with the responsibilities of local governments. They include: i) improving municipalities' fiscal revenues and redesigning the FCM to improve its redistributive impact; ii) giving more flexibility to municipalities to adapt their organisational structure to their particular characteristics and to manage their staff (currently these functions are defined in national laws); iii) making performance incentives part of the remuneration of local officials and offering

municipalities further capacity building; and iv) giving associations of municipalities the status of legal person, a crucial and necessary step for promoting associations of municipalities and backing the requests for investment from coalitions of municipalities. The underlying logic is that the assignment of responsibilities to municipalities has to be accompanied by a coherent allocation of resources, competences and organisational flexibility to carry them out efficiently.

To increase the municipal tax base, the municipal property tax exemption could be modified. At present, the exemption concerns an important share of the property of less developed municipalities, thereby undermining their capacity to tax (close to one-third of municipalities' revenues come from the property tax). Currently the FCM compensates municipalities for exempted land or property but the compensation is said to be insufficient. Changes could be implemented in order to apply the tax exemption only to low-income properties belonging to households under the poverty level (currently exempted properties may be secondary residences) and to further compensate municipalities for the fiscal shortfall due to the exemption (the source of the exemption is a national law aimed at social compensation, yet the poorest municipalities bear the burden of this measure).

An incentive to promote local economic development could be added to the Inter-municipal Common Fund

Currently less advantaged municipalities have neither the resources nor the incentive to invest in local economic development initiatives. Only richer localities can afford to use their autonomous resources in this way. Most of the locally available resources of the poorest localities go to municipal education and health systems to complement transfers from the national level, leaving few resources available for additional investment. In this regard, the FCM does not offer any incentive to encourage efficient public management in municipalities. Part of the fund could be gradually shifted from unconditional subsidies to conditional transfers to support local investment initiatives (for instance, fostering innovation and competitiveness, business development, or promotion of MSMEs) to promote endogenous growth of under-performing municipalities. Such a measure should be accompanied by at least temporary support to municipalities for designing such initiatives. Finally, it would be important to ensure that the additional resources for promoting endogenous growth allocated to municipalities through this incentive scheme do not replace funds for social equalisation purposes, thereby leaving overall spending unaltered: poorest municipalities are very dependent on this fund to carry out their primary activities (such as provision of public education). To

avoid this, the national government's contribution to the FCM (only 4% of total FCM resources in 2007) could rise in the same proportion as the economic development incentive.

Efforts have been made in capacity building and performance measurement and should be strengthened and go further

Investing in capacity building and measurement of performance will be crucial to the implementation of decentralisation reforms in Chile in order to dispel one of the fears of opponents to these reforms (lack of sub-national officials' capacity to carry out a broader mandate). Chile is implementing some programmes that aim to improve the skills of local and regional public officials in order to prepare them to carry out their devolved responsibilities efficiently. This is the case of Subdere's Governance Improvement Programme (*Programa de Mejoramiento de la Gestión de Subdere*). Chile has also implemented several performance management programmes based on indicators, such as the Management Improvement Programme and the Municipal Services Accreditation System. The success of these measures in improving sub-national governance performance is likely to depend on several parallel factors: i) the existence of efficient multi-level governance arrangements for co-operation and co-ordination; ii) the release of regulatory constraints that impede the adaptation of municipalities' organisational structure to local requirements; iii) the gradual implementation of a learning-by-doing framework by offering technical assistance and capacity building along with the progressive transfer of responsibilities; and iv) the participation of sub-national governments and institutions in the assessment of the most important skills and training programmes needed.

Within the decentralisation context the central government has an important role to play

Finally, greater decentralisation does not mean that the central government should leave sub-national governments alone. Central governments need to set the general legal framework to enable virtuous relations, vertically among the different levels of governments and horizontally among the different national sectoral policies and among the different regions or municipalities. In Chile, the central government can help sub-national governments carry out their new mandates by offering technical support and training, and especially by monitoring and evaluating their performance.

To sum up

Chile, traditionally an extremely centralised country, has made stronger territorial policy and greater decentralisation a priority as a way to adapt public policies to the characteristics and assets of its diverse territories and to unleash their potential. At present, progress remains irregular. Attention to national policy goals should be combined with greater involvement of regional actors in designing a territorial agenda based on particular regional strengths and opportunities as a way to improve their competitiveness. Measures such as the launching of the RDAs or the devolution of responsibility for regional planning to regional governments are a step forward. However these efforts should gradually be extended in order to reinforce the institutional setting of the regional governments to make them more independent and capable regional bodies. The devolution of responsibilities to sub-national governments should be accompanied by the resources and competences necessary to execute them efficiently. All this will imply building trust and increasing co-operation among levels of government. Co-ordination arrangements and other mechanisms, such as capacity building, performance indicators, or institutions for participation and accountability, could help by raising sub-national governments' capacities and strengthening the legitimacy, coherence and effectiveness of the reform.

Chapter 1

Regional Development in Chile: Trends, Achievements and Challenges

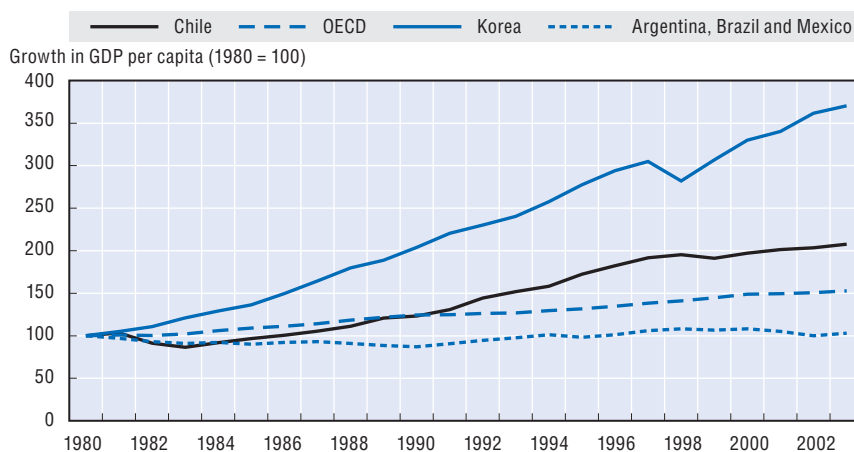
Chile's macroeconomy has been well managed, but the government is looking to enhance performance in a number of key areas, especially productivity, innovation, human capital and economic diversification. Furthermore, Chile's economy depends on a few resource-based sectors located in a small number of regions which receive much of the private and public investment. This reinforces economic concentration and causes regional imbalances to persist and even amplify. In this respect Chile could benefit from deepening economic diversification while continuing to add value to established sectors. It needs to seek out growth potential in its regions by identifying and developing the accumulated skills, practices and assets of different territories as potential sources of competitive advantage. All this calls for moving towards tailored place-based policies, in order to better adjust public management to the different opportunities, strengths and needs of the country's diverse territories.

1.1. Major macroeconomic trends

At the national level, Chile's economy has been buoyant over the last two decades, with sound management of public finances. Macroeconomics and fiscal stability have been key drivers of growth in Chile's open resource-based economy. While necessary, these conditions are not sufficient to sustain positive growth rates in the medium and long term. In fact growth rates have recently slowed, mainly owing to lags in productivity, human capital, innovation and lack of economic diversification. Improvements in these areas represent potential sources of growth and a means of accelerating the catching-up process.

Assessing the macroeconomic environment

During the past two decades Chile has experienced strong GDP per capita growth rates. Growth was particularly buoyant between 1988 and 1997, with annual average rates of 7.9%. In 1998 growth rates slowed to 3.2% and in 1999 the economy contracted (-0.8%). From 2000 to 2003, growth rebounded but remained more varied than in the decade to 1997. Then, in 2004 and 2005, real GDP rose sharply by 6.2 and 6.3%, respectively. This pattern contrasts with the performance of most Latin American economies, which experienced stagnation and macroeconomic disarray in the aftermath of the debt crisis of the 1980s. Chile not only outperformed its neighbouring countries but also the majority of OECD countries (Figure 1.1).

Figure 1.1. **Growth in GDP per capita (1980 = 100) at 2000 PPP, 1980-2003**

Source: OECD (2005).

Although Chile is closing the gap in GDP per capita levels with advanced OECD countries, the process is far from finished. In 1995 GDP per capita in Chile was recorded at USD 7 600 in PPP terms, approximately 37.7% of the OECD average. In 2006, GDP per capita stood at USD 13 000 in PPP terms, reducing the per capita GDP gap to 41.6% of the OECD average. Despite these positive developments, Chile's GDP per capita is still significantly below the OECD average, suggesting that the catching-up process is far from completed. Chile's economy needs to be further spurred in order to maintain positive growth rates in the medium and long term.

Macroeconomic stability has been a key factor of growth. Macroeconomic stability was reinforced by the adoption in 2001 of a structural fiscal rule which forces the government to maintain a structural surplus equivalent to 1% of GDP (relaxed in 2008 to a structural surplus of 0.5% of GDP). Balanced fiscal accounts have been complemented by low inflation, an open trade regime and favourable legislation for foreign direct investment (FDI). This stability and openness reduces uncertainty, increases business confidence and helps attract investment.

The opening of the economy has centred primarily on resource-based sectors. Chile's resource-based economy has undergone a profound policy shift from import substitution to exports. A series of trade reforms along with favourable international conditions, such as high copper prices, raised the ratio of exports to imports to GDP from 45.7% in 1976-84 to 60.3% in 1995-2002. The opening of trade-related productive activity gave rise to new industries based on primary goods such as the agro-food sector.

Institutions in Chile have been strong and reliable with favourable effects on growth. The quality of institutions and the stability of Chile's regulatory framework are comparable to those of OECD countries.¹ National regulations in Chile focus on full disclosure of public information and sanctions of irregularities, thereby encouraging good governance practices with a view to strengthening the country's democratic system. The stability of the national regulations applied to foreign investment is internationally recognised. This stable regulatory framework and solid macroeconomic management have helped to create the conditions for growth.

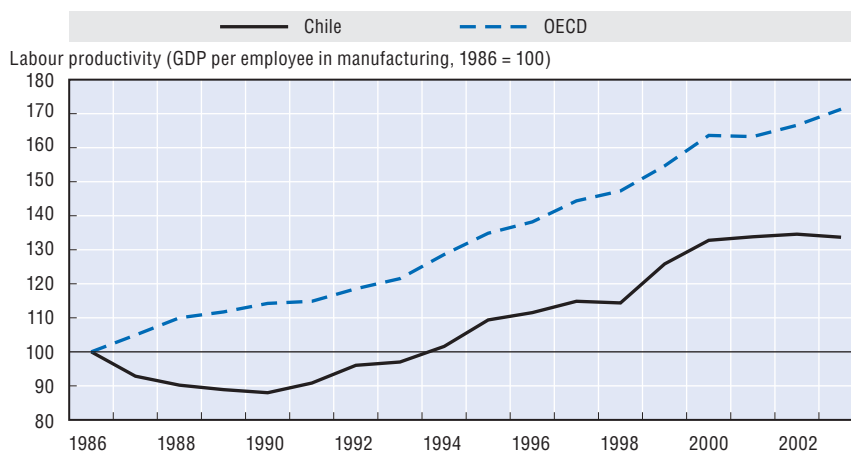
The overall Chilean economic outlook shifted drastically during the last quarter of 2008 with the world economic crisis. The exchange rate has depreciated significantly in nominal terms. Growth and domestic demand decelerated significantly. Meanwhile, during the first months of 2009, Chile faced a sharp terms of trade shock, reflected by a severe drop in international copper prices, which fell to an averaged USD 1.50 a pound after reaching nearly USD 4 in the first half of 2008. Nevertheless, the structural surplus and the stabilisation funds accumulated during the "prosperous" years, are now available for judicious use. In this regard, in response to the crisis, the government announced a USD 4 billion (2.8% of GDP) fiscal stimulus package in January 2009, boosting public investment programmes and transfers. This stimulus package includes among others, investments in infrastructure, small enterprise development, and subsidies to low income households. As in other countries, regional policies could offer an important tool for the allocation of public investment for maximum long-term impact in terms of productivity growth.

Challenges

Productivity and innovation

The productivity gap has widened in recent years. Chile's productivity remains low by OECD country standards. Total factors productivity (TFP), the efficiency with which inputs are combined to produce outputs, is estimated to have accounted for about one-third of GDP growth in the 1990s (OECD, 2005). This suggests that there is room to lift GDP growth further by some combination of faster growth in the quantity and quality of labour inputs, physical capital accumulation, and more efficient ways of using inputs, which can be achieved through technological deepening (i.e. innovation). Furthermore, in contrast to income levels, the productivity gap between Chile and the OECD average has widened in recent years (Figure 1.2).

Innovative practices and production methods should be further pursued. At 0.68% (2004), Chile's total R&D intensity (the ratio of gross expenditure on research and development [GERD] to GDP) is less than one-third of the OECD average of 2.25% (2003). Furthermore innovation in Chile is primarily financed

Figure 1.2. **Labour productivity, Chile and the OECD area, 1986-2003**

Source: Central Bank of Chile, World Bank, OECD Productivity database (December 2004), OECD STAN database and OECD calculations (OECD 2005).

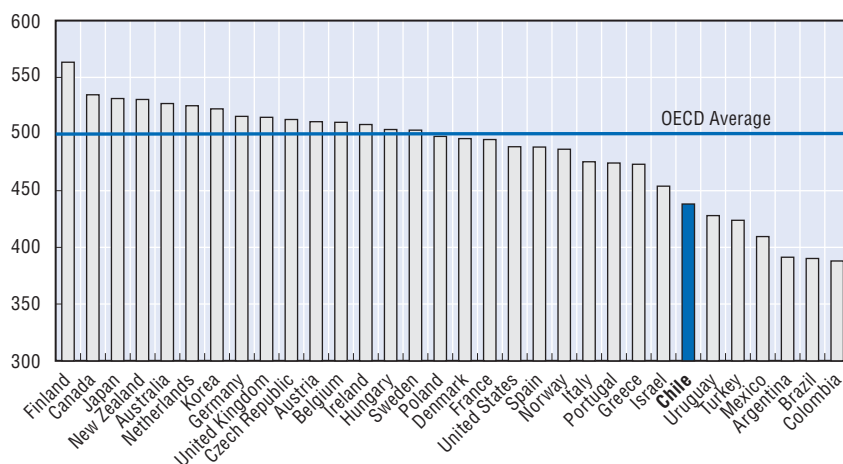
by the public sector whereas in OECD countries, it is largely financed by the private sector. Given Chile's current comparative advantages in natural resources, it should move from static to dynamic advantages by adding products with higher value added to the export base and promoting innovative practices and production methods for current goods and services.

Economic diversification

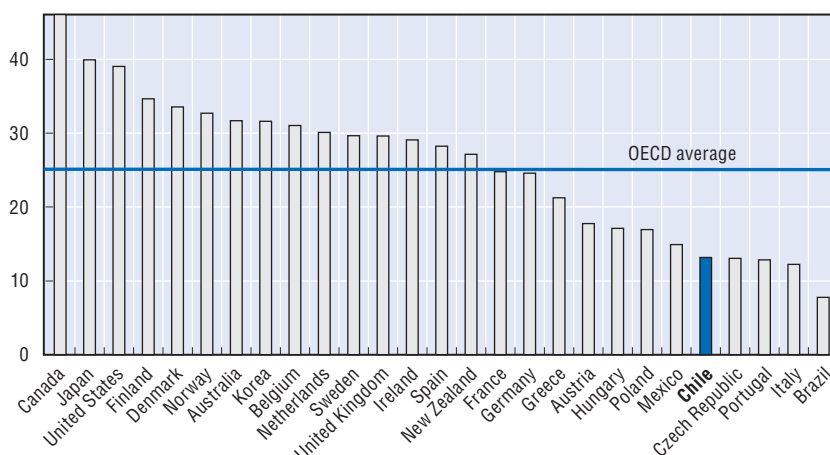
Chile's lack of economic diversification entails risk. The share of intra-industry trade, a highly dynamic segment of international trade, is very low in Chile, much lower than in comparable Latin American countries. Chile's export base lacks diversification and mainly specialises in commodity goods, especially copper. This renders the economy vulnerable to sudden changes in international commodity prices and secular shifts in the demand for commodities. In addition, the limited product variety discourages innovative activity, an additional source of growth potential in the medium and long term.

Human capital, education, poverty and income inequalities

Improving Chile's human capital encourages growth in the medium and long term. Chile's population aged 25-64 had, on average, less than ten years of schooling in 2002, compared to the OECD average of nearly 12. In addition, the quality of education is also below OECD standards according to PISA international standardised tests (Figure 1.3). Simulations by the OECD have estimated that an increase in secondary school enrolments to the level of New Zealand's would raise Chile's growth rate by 0.8 percentage point a year (OECD, 2005), whereas an increase in education performance to the level

Figure 1.3. **PISA survey science scale, 2005**

of Korea (a top performer) would raise Chile's annual growth rate by 1.5 percentage point (OECD, 2005a). Tertiary education rates also remain below the OECD average (Figure 1.4).

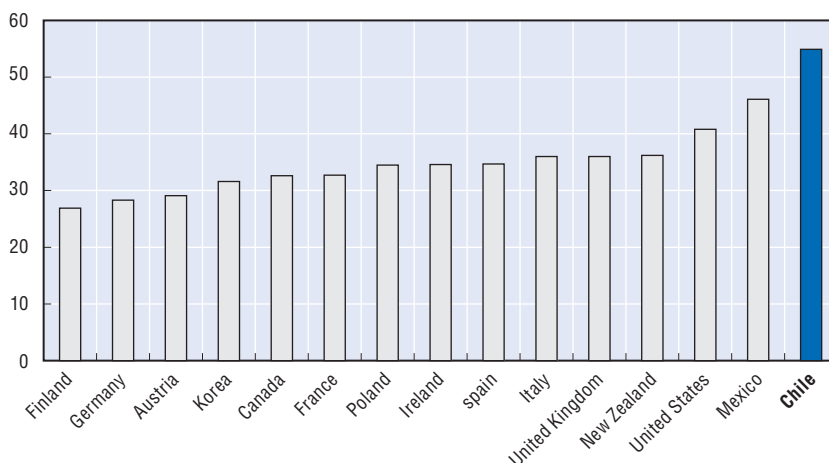
Figure 1.4. **Tertiary educational attainments, 2005 or latest available year¹**

1. Data for Chile and Brazil are 2004

Although sustained economic growth in Chile has reduced overall poverty rates, income disparities remain strong. In spite of the noteworthy reduction in poverty levels – the poverty rate has declined from almost 40% in 1990 to 13.7% in 2006 – income inequalities remain significant. The bottom decile of households accounts for 1.2% of income and the top decile for 38.6%.

Despite positive changes that have taken place between 2003 and 2006, Chile still remains among the region's most inequitable countries. This represents a significant gap with respect to OECD countries (Figure 1.5). Improving access to quality education for the underprivileged segments of the population is a key condition for dealing with Chile's social inequality.

Figure 1.5. **Gini coefficient of income inequalities in Chile and selected OECD countries, 2004 or latest available year¹**



1. 1997 for France, 1998 for New Zealand, 1998 for Korea, 1999 for the United Kingdom, 2000 for Austria, Canada, Finland, Germany, Spain and the United States, 2002 for Poland, 2003 for Chile and 2004 for Mexico.

Source: The World Bank, World Development Indicators.

Enhancing innovation, human capital development and economic diversification are a key to raising national productivity levels and ensuring growth over the medium and long term. Improvements in these areas should have a strong regional dimension, given the heterogeneity of Chile's regions: growth opportunities are tied to local conditions, and resources in many regions remain underutilised. Boosting growth in all regions will not only benefit national growth rates, but also social cohesion, an important aspect of a sustainable open economy.

1.2. Regional dimension

Regional performance varies significantly among Chilean regions, and improvements in productivity and growth at the national level will depend on the effectiveness with which regions utilise their assets to develop their growth potential. This involves, in particular, adapting regional policies to regional assets and gradually integrating regional approaches in economic development programmes.

Territorial units – Chile’s administrative system

Chile is a centralised unitary state. At the sub-national level there are three main territorial units, each with different administrative responsibilities: 15 regions, 52 provinces and 345 municipalities (*comunas*).² Yet, under the tight administrative, fiscal and regulatory framework of the central state, the main sub-national actors remain largely controlled by national guidelines (this issue is examined in Chapter 3). The composition, organisation and function of the different regional, provincial and local governments are summarised in Table 1.1. This territorial review focuses on 13 regions for which data are available (the regions of Los Ríos [previously part of the region of Los Lagos] and Arica y Parinacota [on the northern border with Peru, formerly part of the region of Tarapacá] were added to the previously existing 13 regions in 2007).

Measuring economic performance in the regions

The geographical structure, characteristics and assets of Chile’s regional economies are particularly diverse. However, Chile’s economy depends on a few sectors. In the north mining is the dominant sector. In the metropolitan region, industry and financial services prevail. Finally, agriculture, forestry and fishing are the leading sectors in the centre and south of the country. Indeed, sectors are largely located in a small number of regions, which receive much of the private and public investment. Mining (23% of GDP in 2006) and financial services (14% of GDP) are largely located in Antofagasta and the Metropolitan Region, respectively. Antofagasta alone accounts for close to 50% of the GDP from the mining sector (year 2005); when including Tarapaca and Atacama, the two other main northern mining regions, the share increases to close to 75%. Likewise, the Metropolitan Region accounts for nearly 77% of GDP from financial services (see Table 1.2).

Mining-intensive regions and the capital region (*Región Metropolitana* referred to as the Metropolitan Region of Santiago, RM) display the highest GDP per capita among Chilean regions. The highest GDP per capital levels are recorded in the northern regions of Antofagasta (USD 20 411 in 2004 PPP) and Tarapacá (USD 10 443), which have intensive mining, along with the sparsely populated southern region of Magallanes (USD 11 543) and the Metropolitan Region (USD 10 111). Their GDP per capita levels are up to five times higher than in La Araucanía (USD 3 951) and Coquimbo (USD 4 887) (Table 1.3).

The Metropolitan Region of Santiago, home to 40% of Chile’s population, has the highest labour force participation and household income. This densely populated Region attracts a considerable share of business activity and labour demand mainly owing to the benefits of agglomeration. People want to live where firms – and therefore job opportunities – are concentrated. For their part,

Table 1.1. **Chile's territorial units, governance and main functions at sub-national level**

Regions (15)	<p>a) The government of the region – national government line</p> <ul style="list-style-type: none"> ● Intendant (<i>intendente</i>): The direct representative of the President of the Republic in each of the regions. The intendant is named by the president of the Republic and is maintained in the office at the discretion of the president. The intendant directs the government of the region according to the guidelines given directly by the president. <p>b) The regional government (GORE) – territorially decentralised line</p> <ul style="list-style-type: none"> ● Intendant (<i>intendente</i>): Acts as the executive head of the regional government and presides the Regional Council. ● Regional Council (CORE): Supervises the intendant's duties. A reform is under way to elect regional councillors directly through a democratic election. <p>Main functions of the regional government:</p> <ul style="list-style-type: none"> ● Design programmes and policies for regional development and productivity. ● Approve the regional development plan. ● Define and take investment decisions regarding use of resources from regionally defined public investments, especially from the National Fund for Regional Development (FNDR). ● Advise municipalities. ● Build and administer the paving of sidewalks and roads in rural areas. ● Carry out various tasks related to land management, human settlements and infrastructure equipment. <p>c) Other organs of the public administration in the region</p> <ul style="list-style-type: none"> ● Ministerial regional secretaries (SEREMIS): National ministries' regional representatives who co-ordinate the public services under their responsibility. The Regional Planning Secretariat (SERPLAC) is a key institution in the investment process.
Provinces (52)	<ul style="list-style-type: none"> ● Governor (<i>Gobernador</i>): Appointed by the President. He is the territorial deconcentrated authority of the intendant in the territory of the province. ● Provincial Economic Council: Headed by the governor, acts as an advisory institution to the provincial governor. <p>Main functions: Supervise public services provided in the province. Maintain public order and citizens' safety.</p>
<p>Municipalities (345)</p> <p>Public corporations, with both legal personality and private assets, whose end is to satisfy the needs of the local community</p>	<ul style="list-style-type: none"> ● Mayor (<i>Alcalde</i>): Highest authority in a municipality; chair of the municipal council. ● Municipal council: advises, regulates and supervises the mayor's performance. It is in charge of ensuring the effective participation of the local community. ● Economic and social council: It is an entity of the municipality composed of representatives of civil organisations of the comuna, aimed at ensuring their participation. <p>Both the mayor and the council are chosen through popular elections every four years.</p> <p>Main functions:</p> <p>Exclusive functions: To develop, approve and modify the communal zoning plan (<i>Plan Regulador Comunal</i>); to promote local development; to enforce all measures regarding transport; to implement provisions regarding construction and the planning and urban regulation of the commune.</p> <p>Shared faculties (implemented either directly or in conjunction with other levels of government): public health, primary and secondary education, culture, work training and economic development, tourism, traffic regulations, social housing development and sanitary infrastructure, citizen safety.</p> <p>Special attributions to carry out its functions: Collect fees for municipal services, concessions or licences; enforce taxes on activities or goods with a clear local identity to be used for communal development; award grants to public or private non-profit organisations; acquire or transfer moveable properties or real estate.</p>

Source: Subdere.

Table 1.2. **GDP by selected sectors/region 2005**^{1, 2}

Region	Mining	Financial services	Manufacturing	Retail trade ³	Transport communication	Construction	Agriculture forestry	Fishing
Tarapacá	15.7	1.2	1.6	5.2	3.1	2.3	0.6	7.6
Antofagasta	50.8	1.9	1.8	2.7	3.8	10.1	0.1	2.0
Atacama	8.6	1.0	0.3	1.1	1.1	1.6	1.8	2.8
Coquimbo	4.7	1.2	0.8	2.2	2.3	3.4	4.8	2.4
Valparaíso	5.3	5.2	13.2	5.4	10.6	9.2	10.4	0.7
Metropolitan	5.5	76.8	45.2	64.4	52.2	42.9	13.0	0.0
O'Higgins	5.4	1.6	3.0	4.9	3.4	5.6	21.0	0.0
Maule	0.3	1.6	4.6	2.0	4.0	4.2	15.4	0.1
Biobío	0.6	4.5	20.3	4.6	8.5	11.1	15.1	20.6
Araucanía	0.1	1.4	2.2	2.2	2.4	3.4	7.0	0.0
Los Lagos	0.2	2.8	3.5	4.0	5.8	4.5	10.5	48.2
Aisén	0.6	0.2	0.2	0.3	0.6	0.6	0.3	10.5
Magallanes	2.1	0.5	3.3	1.0	2.1	0.9	0.2	5.2
Total	100	100	100	100	100	100	100	100
Share of national GDP (2005)	16.6	15.1	15.8	9.5	8.8	6.5	3.4	1.0
Share of national GDP (2006)	23.4	14.0	14.0	8.8	7.8	6.5	2.9	1.0

1. Regional GDP data by sector are expressed in constant 2003 prices; national GDP data by sector are expressed in nominal prices.

2. Data are preliminary figures published by the Central Bank of Chile with the exception of share of national GDP 2005.

3. Retail trade includes restaurants and hotels.

Source: OECD calculations using data from the Central Bank of Chile.

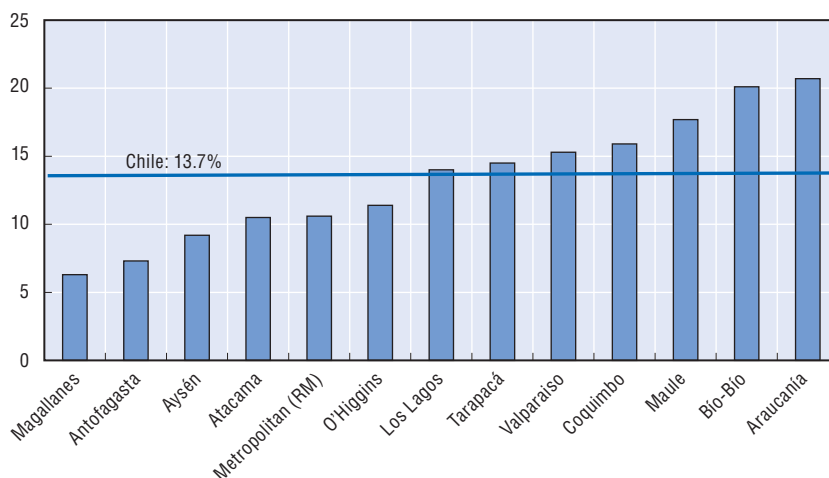
firms want to locate where demand – and therefore population – is large. In the Metropolitan Region demand factors accommodate a larger share of the working age population than the rest of Chilean regions, with the country's highest labour force participation rate (81% for males, 56% for females), and the second highest employment rate (59%) and employment to population ratio (40%). In addition, owing to the increasing returns to scale and externalities associated with economies of agglomeration, firms in Santiago are more productive and can offer higher wages, which translates into higher household incomes (29% higher than the national average) (Table 1.3).

High regional disparities in poverty rates reveal a concentration of poverty in agriculture-intensive regions (Figure 1.6). The four Chilean regions with the highest poverty rates are Araucanía, Maule and Coquimbo, all agriculture-intensive regions; and Bio-Bio, a region with manufacturing and environmental problems (OECD, 2005a). Araucanía, the region with the

Table 1.3. **Regional Data and Indicators**
2007 or latest year available

	Economic			Population		Household income ⁵		Labour Market ⁶					Employment by sector ⁷				
	GDP per capita PPP ¹	GDP per worker PPP ¹	Competitive index 2003 ²	Population (thousands) ³	% in urban areas ⁴	Average	% Poverty rate	Employment rate	Emp/population ratio	Unemployment rate	Participation rate (male)	Participation rate (female)	Agriculture, fishing	Mining	Industry	Construction	Services
I. Tarapacá	10 443	15 639	242	481.7	94	91.2	14.5	0.57	0.39	8.5	0.43	0.25	8.79	2.59	12.31	7.52	68.79
II. Antofagasta	20 411	30 325	353	554.8	98	118.3	7.3	0.55	0.37	7.9	0.72	0.50	3.10	8.33	13.24	16.54	58.80
III. Atacama	9 189	14 069	232	274.4	91	105.7	10.5	0.58	0.38	9.6	0.74	0.49	12.23	11.07	5.21	16.90	54.60
IV. Coquimbo	4 887	7 499	272	687.7	78	76.7	15.9	0.54	0.35	7.0	0.79	0.41	21.04	6.08	7.29	8.74	56.84
V. Valparaíso	7 524	11 313	270	1 701.3	92	81.9	15.3	0.56	0.37	8.7	0.77	0.49	10.59	1.86	8.35	6.28	72.92
RM Metropolitan	10 111	14 947	362	6 676.7	97	128.9	10.6	0.59	0.40	7.8	0.81	0.56	2.87	0.36	15.41	8.79	72.57
VI. O'Higgins	7 311	11 071	226	857.7	70	76.9	11.4	0.54	0.36	5.4	0.80	0.45	33.46	2.77	8.84	7.68	47.25
VII. Maule	5 365	8 109	211	983.4	66	70.0	17.7	0.55	0.37	7.1	0.79	0.46	32.70	0.78	10.06	6.77	49.68
VIII. Bío-Bío	6 846	10 287	273	1 996.1	82	73.9	20.1	0.52	0.35	10.1	0.72	0.42	15.22	0.51	14.97	6.47	62.82
IX. Araucanía	3 951	6 109	189	945.5	68	69.9	20.7	0.56	0.36	7.7	0.77	0.42	29.52	0.04	10.32	8.96	51.16
X. Los Lagos	5 977	9 094	279	1 180.2	68	81.9	14	0.57	0.38	5.6	0.54	0.32	23.93	0.05	15.83	5.68	54.51
XI. Aysén	8 294	12 501	246	101.5	80	88.9	9.2	0.66	0.44	5.4	0.70	0.49	15.02	1.93	13.75	10.00	59.30
XII. Magallanes	11 543	16 778	350	157.0	93	109.2	6.3	0.57	0.40	4.2	0.68	0.52	10.97	4.94	8.18	10.67	65.24

1. OECD calculations based on data from the Central bank of Chile. Data for 2004 expressed in 1996 USD Constant PPP.
2. The competitive index is elaborated by the Sub-secretariat for Regional Development taking into account 65 different variables from seven strategic regional competitive areas: economic results; business structure; education, working and social indicators; infrastructure; natural resources; local and regional institutional performance; and innovation.
3. Data for 2007; *Source*: The National Institute of Chile (INE).
4. *Source*: INE based on the 2002 population census.
5. *Source*: MIDEPLAN based on the 2006 National Household Survey (CASEN).
6. OECD calculations based on data from INE for 2006.
7. *Source*: INE based on data for October-December 2007. The services sector includes: electricity gas and water, business activities, transport storage and communication, financial services, personal and social services.

Figure 1.6. **Poverty rate by region, 2006**

Source: Casen Survey (2006).

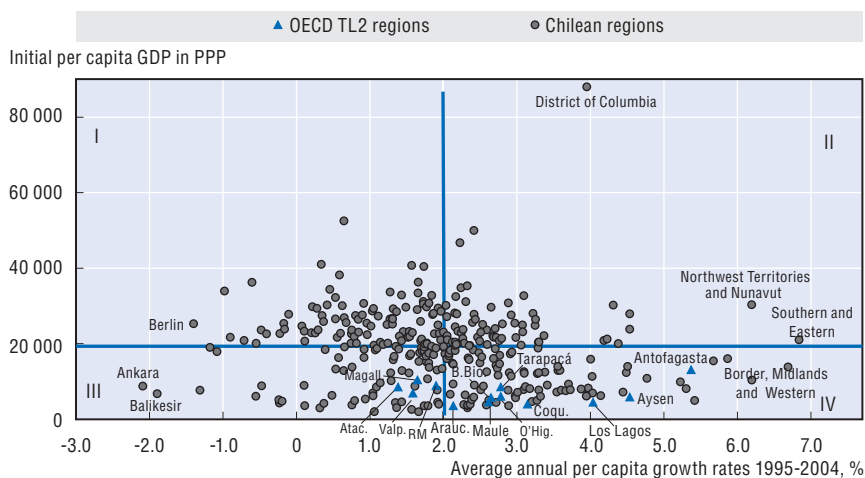
highest poverty rate (20.7% of the population) and lowest per capita GDP is also home to the indigenous ethnic group Mapuche. As expected, poverty rates and per capita incomes are inversely related.

Approximately half of the Chilean population lives in regions that are growing more slowly than the average OECD TL2 region. Four regions – Atacama, Valparaíso, Metropolitan Region and Magallanes – recorded slower annual average growth rates during 1995-2004 than the average OECD TL2 region (third quadrant in Figure 1.7). Although small in number, these regions are home to 53% of the national population³ and 55% of the labour force. Therefore Chile's catching-up process needs to include a larger portion of the population.

At the same time, more than half of the Chilean population lives in regions that fall in the bottom quintile of the OECD GDP per capita distribution. Only four regions (Antofagasta, Tarapacá, the Metropolitan Region and Magallanes) have per capita incomes above the bottom quintile. Antofagasta's USD 20 411 approximates OECD standards, but remains below the OECD average in TL2 regions (USD 21 306). Furthermore in nine out of the 13 regions, which are again home to close to 53% of the population as well as to 50% of the labour force, per capita income levels fall in the bottom quintile of the OECD TL2 distribution (Table 1.4). Convergence is not occurring uniformly across the national territory and is far from achieved.

Although growth rates in northern regions are higher, they fluctuate more, owing to the volatility of the mining sector. For instance, the mining sector accounted for 17% of the national GDP in 2005, and rose to 23% in 2006

Figure 1.7. **Initial GDP per capita PPP¹ and average annual growth rates**
OECD and Chile TL2 Regions, 1995-2004



1. GDP per capita is expressed in 1996 prices for comparability with Chilean GDP data.

Source: own calculations based on OECD Regional Database.

mainly due to the rise of copper prices in the international market (see Table 1.2). Antofagasta and Atacama displayed the highest growth but also the highest standard deviation in GDP per capita over the period 1990-2004 (Figure 1.8). As a result of the lack of diversity of their productive base, mainly driven by the copper sector (close to 60% of the regional GDP of Antofagasta and 40% in Atacama are from the mining sector) these regions are very vulnerable to external shocks resulting from volatility in commodity prices and in demand.

The catching-up process is not occurring uniformly, causing periodic imbalances and polarisation among regions. Territorial inequalities in GDP per capita are substantially higher in Chile (Figure 1.9) than in most OECD countries according to the Gini index (0.25) and the weighted coefficient of variation (0.30). Although inequality has declined over 1998-2004, a longer time period (1990-2004) reveals significant upward and downward movements in the Gini coefficient (Figure 1.10) and a declining trend in the weighted coefficient of variation. The Gini coefficient assigns equal weight to all regions and is therefore particularly sensitive to marked fluctuations in the growth patterns of the northern mining-intensive regions of Atacama and Antofagasta. In contrast the weighted coefficient is more stable owing to the weight of the Metropolitan Region of Santiago and gives a relatively stable growth pattern.

Table 1.4. **Quintile distribution GDP per capita PPP OECD TL2 regions, 2004**

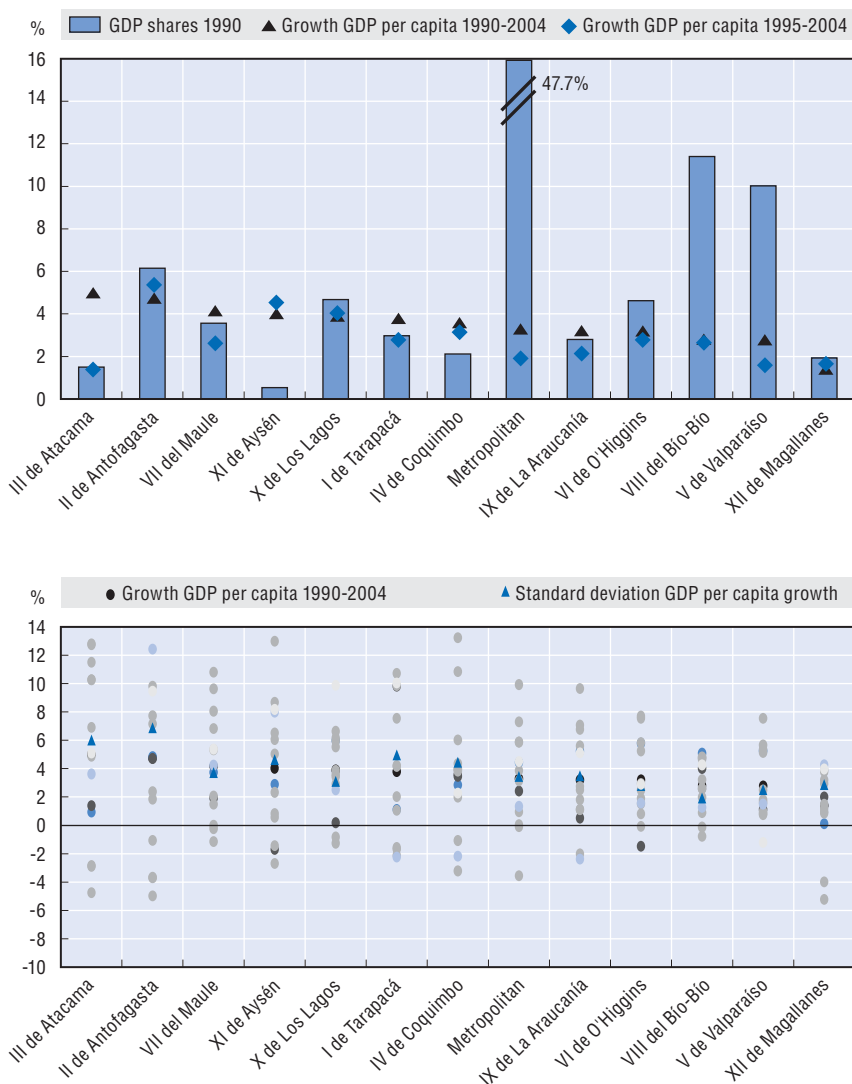
	Number of regions in					Total
	Top quintile		Bottom quintile			
	1	2	3	4	5	
United States	38	11	2	0	0	51
Ireland	1	1	0	0	0	2
Finland	2	0	3	0	0	5
Australia	3	3	2	0	0	8
Austria	3	4	2	0	0	9
Belgium	1	1	1	0	0	3
Denmark	1	1	1	0	0	3
Canada	3	5	4	0	0	12
Netherlands	1	3	0	0	0	4
Italy	4	8	2	7	0	21
United Kingdom	2	7	3	0	0	12
Korea	1	0	1	5	0	7
Norway	1	0	4	2	0	7
Germany	2	4	5	5	0	16
Czech Republic	1	0	0	7	0	8
Sweden	1	5	2	0	0	8
France	1	1	20	0	0	22
Japan	0	4	5	1	0	10
Spain	0	6	7	6	0	19
Slovak Republic	0	1	0	2	1	4
Greece	0	1	1	2	0	4
Portugal	0	1	1	5	0	7
Hungary	0	1	0	6	0	7
Chile	0	0	1	3	9	13
Mexico	0	0	1	7	24	32
Poland	0	0	0	9	7	16
Turkey	0	0	0	1	25	26
Iceland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
New Zealand	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Switzerland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

n.a.: not available.

Source: OECD Regional Database; Chile: INE and Casen Survey.

Territorial disparities are associated with the convergence process. Territorial inequalities are particularly marked in converging countries with low per capita incomes. In such countries, agglomeration economies occur in specific regions bringing benefits to these places as increasing returns to scale, lower transport costs, forward and backward linkages and positive externalities that operate as drivers of the national economy. These benefits translate into positive national growth rates, especially – as in the case of

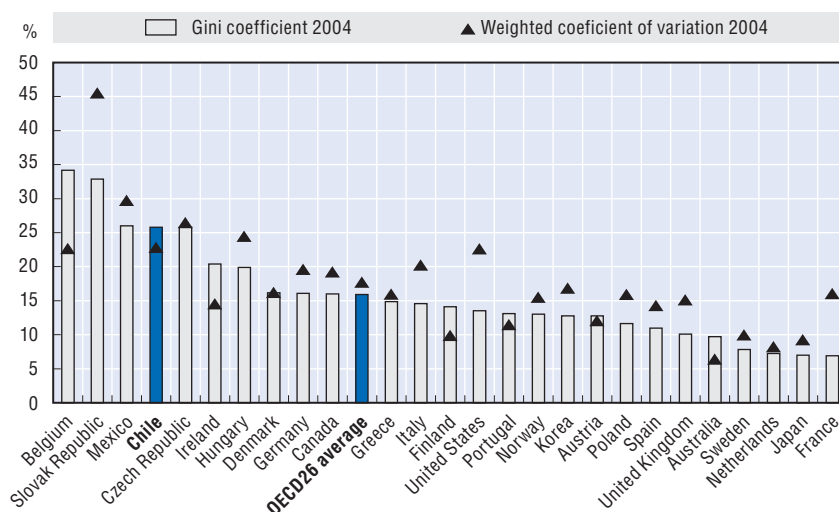
Figure 1.8. **Shares of GDP and GDP per capita growth and variation, 1990-2004 and 1995-2004**



Source: OECD calculations based on data from the Central Bank of Chile.

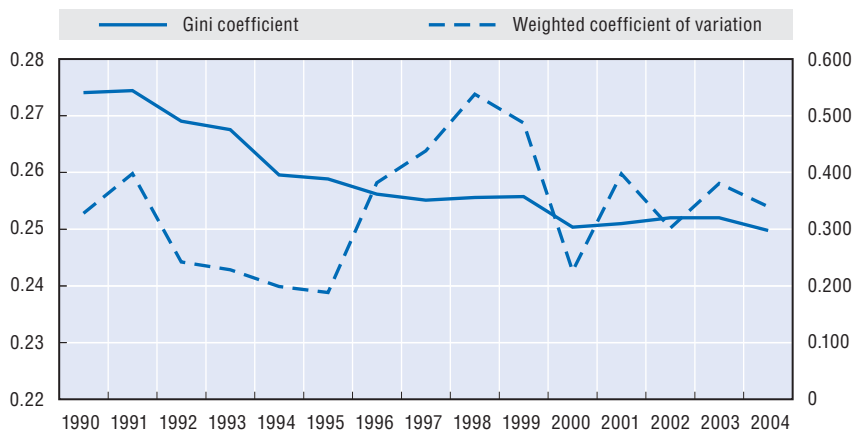
Santiago – when the region represents a large share of the national economy. In this case, national growth rates are positively associated with increases in disparities (Figure 1.11).

Figure 1.9. **Gini index of inequality and coefficient of variation in GDP per capita across TL2 regions within each country, 2004**



Source: OECD database and OECD calculations based on data from the Central Bank of Chile.

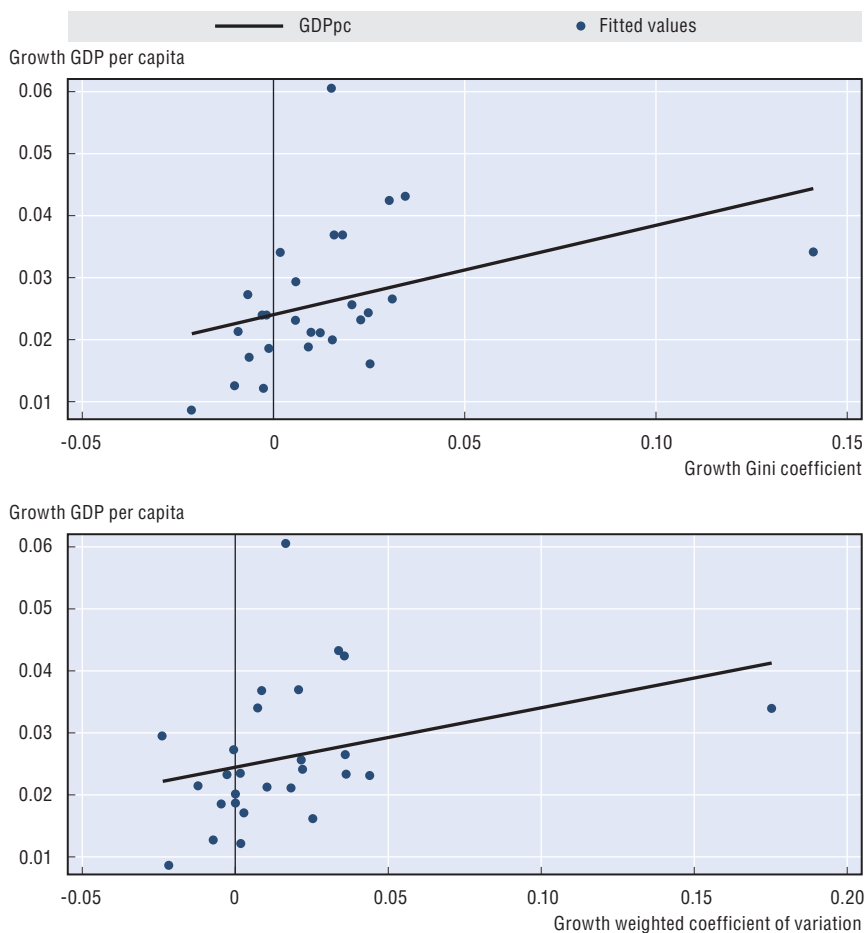
Figure 1.10. **Disparities in GDP per capita among Chilean regions, 1990-2004**



Source: OECD calculations based on data from the Central Bank of Chile.

As countries develop higher per capita income territorial disparities might balance out. Economies of agglomeration may eventually suffer from congestion costs and oversupply of labour in the medium and longer term. As a result, other regions in the territory converge and therefore reduce territorial imbalances. Figures 1.12 and 1.13 show that the most advanced economies tend to have lower interregional disparities. Regional policies should not only promote growth in

Figure 1.11. National GDP per capita growth and changes in regional disparities in GDP per capita across OECD TL2 regions within each country, 1995-2004

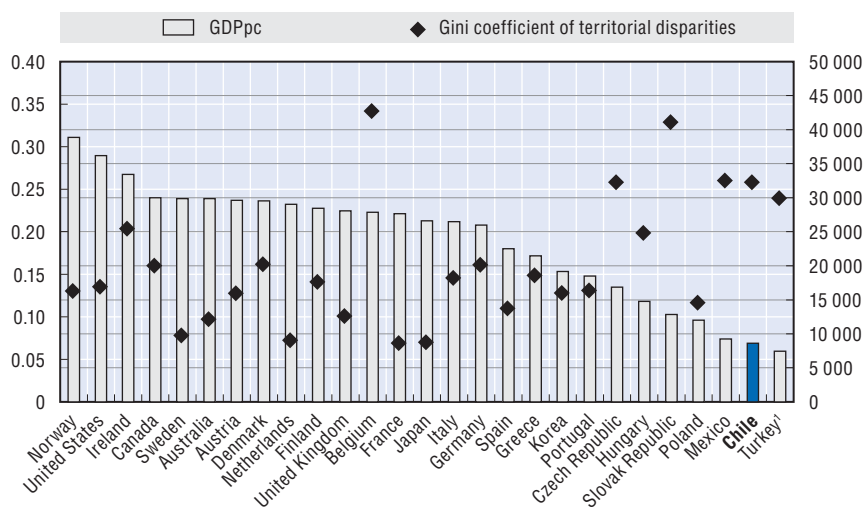


Source: OECD calculations using the OECD Regional Database.

areas in which economies of agglomeration are present, but they should also incite all regions to reach their growth potential. Chilean regions have so far not fully utilised their assets and reached their potential for growth.

Chile's regional disparities in labour productivity are very high in comparison to OECD countries (Figure 1.14). Disparities in GDP per capita are often associated with marked disparities in factors affecting regional growth. The OECD has identified a series of factors that are relevant for regional growth; they are both exogenous (i.e. demography, natural resources, connectivity) and endogenous (productivity, labour force, human capital,

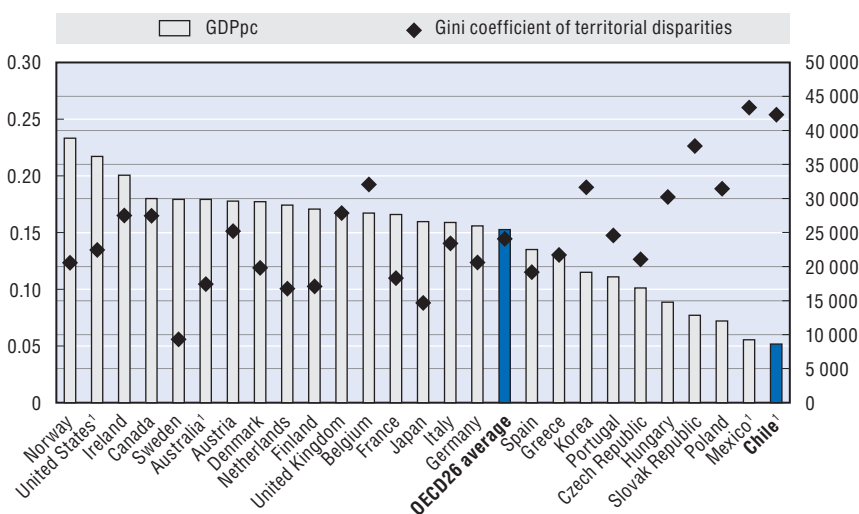
Figure 1.12. **GDP per capita in PPP and regional disparities across TL2 regions within each country, 2004 or latest available year**



1. Data for 2001.

Source: OECD database and OECD calculations based on data from the Central Bank of Chile.

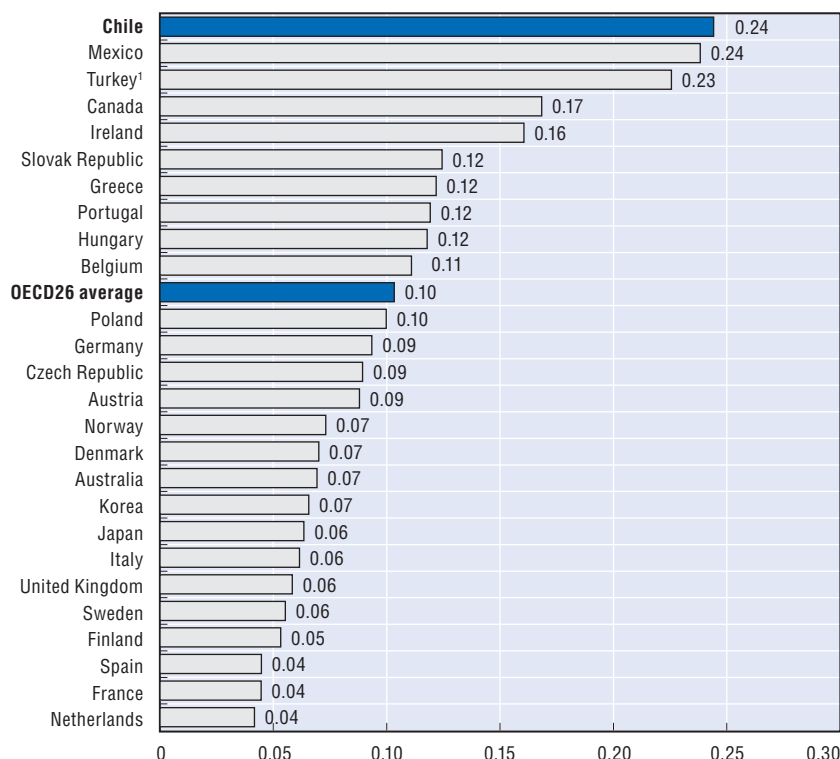
Figure 1.13. **GDP per capita in PPP and regional disparities between TL3¹ regions, 2004**



1. GDP data for Mexico, Chile, Australia and the United States are only available for TL2 regions.

Source: OECD database and OECD calculations based on data from the Central Bank of Chile.

Figure 1.14. **Gini index of inequality of GDP per worker across TL2 regions within each country, 2004 or latest available year**



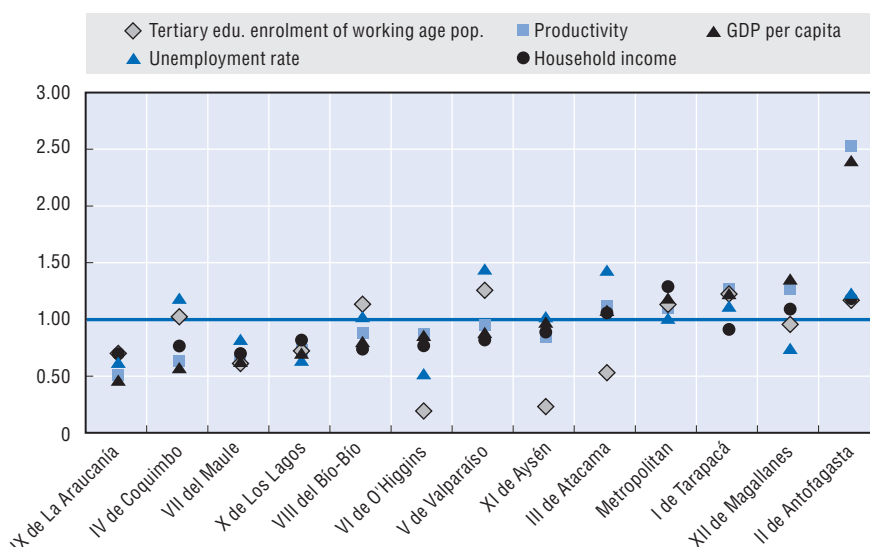
1. Labour productivity data for Turkey for 2000 using employment in the place of residence.

Source: OECD database and OECD calculations based on data from the Central Bank of Chile and INE.

innovation capacity, among others) (OECD, 2007a). Indeed, the large disparities in Chile's GDP per capita are associated with large disparities in labour productivity, a key factor in growth.

Chile's marked regional disparities show that lagging regions have lower productivity levels, lower tertiary education enrolment rates – with the exception of Bio-Bio and Coquimbo – and lower household income levels than the national average (Figure 1.15). This implies that lagging regions are underutilising their resources and could particularly benefit from policies aimed at boosting productivity, such as those targeted at improving education and training. Such policies can not only encourage innovation activity in these regions but also increase their capacity to absorb innovation. In addition, improvements in human capital and innovation will lessen the risk of capital leaking out of the regions.

Figure 1.15. **Regional disparities in GDP per capita, productivity, household income, tertiary education and unemployment relative to the national average (Chile = 1), 2004**



Source: Central Bank of Chile, CASEN Survey 2006, Chilean Ministry of Education 2006, INE Chile.

1.3. Assets in Chilean regions

Regional performance varies significantly among OECD regions as a result of differences in the endowment of a fixed number of exogenous and endogenous assets. A region's growth potential largely depends, in addition to its endowments, on the efficiency with which the region can mobilise its assets and resources for productive activities.

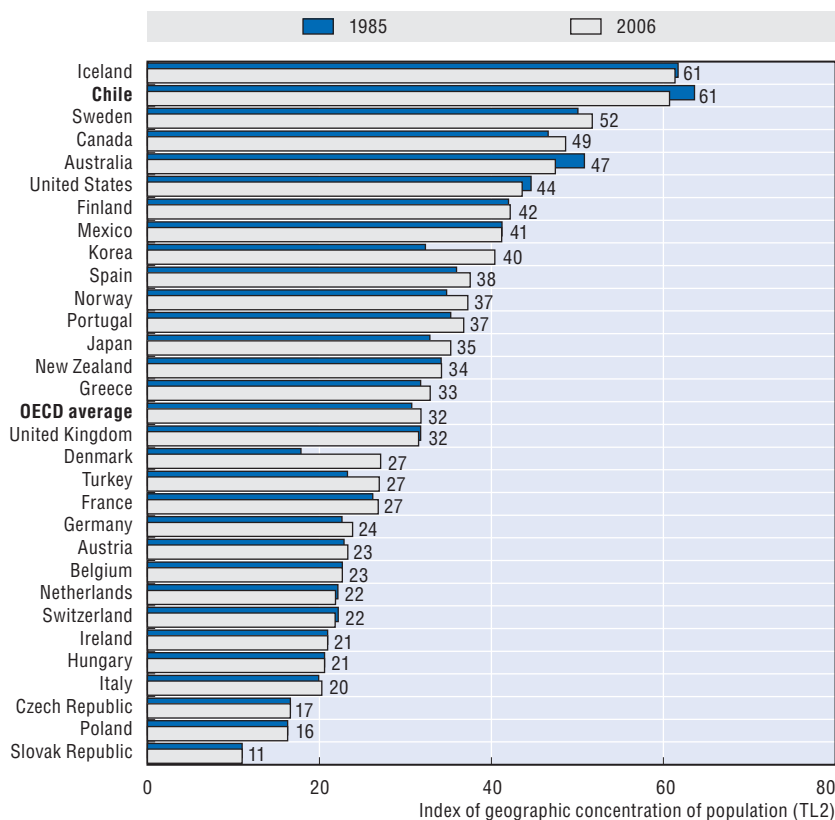
Population, settlement and geography

Chile's geographical structure is both an asset and a challenge. Chile is over 4 300 km long with an average width of close to 180 km. This creates a challenge for developing and managing connections among individuals, firms and regions throughout the country. Moreover, international connectivity is essential to innovation and economic growth and represents a challenge for countries and regions that are at a distance from major markets. Nevertheless, Chile's remoteness can also be viewed as an asset, especially in a turbulent region where macroeconomic stability and resilience can attract foreign capital and business activity from neighbouring countries that also experience poor international connectivity.

Although Chile's population is more concentrated than that of OECD countries, there has been a trend toward deconcentration during the past

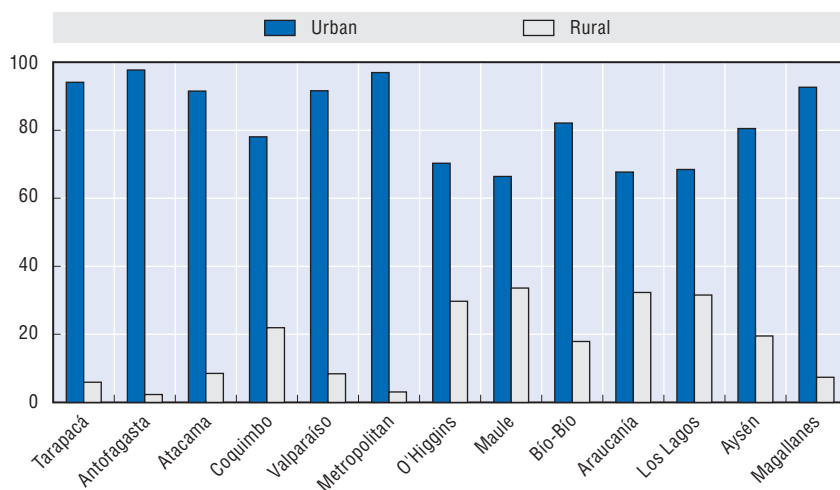
20 years. With nearly half of the Chilean population living in the Metropolitan region of Santiago and almost 60% in Santiago and Bio-Bio, demographic concentration in Chile is almost twice the OECD average. However, the past 20 years have seen a slight move towards deconcentration of the population and a decline in the geographic index of concentration of 3 percentage points (Figure 1.16).

Figure 1.16. **Index of geographic concentration of total population (TL2 regions)**



Source: OECD Regional Database.

Settlement in Chile is characterised by an urban-rural divide. The share of the urban population⁴ nationwide has been increasing and accounted for 86.6% of the total population in 2002. However, while regions such as Antofagasta, the Metropolitan Region or Tarapacá concentrate close to 95% of their inhabitants in urban areas, Maule, Araucanía, Los Lagos and O'Higgins have nearly 30% of their inhabitants in rural localities (Figure 1.17).

Figure 1.17. **Urban and rural population in Chilean regions**

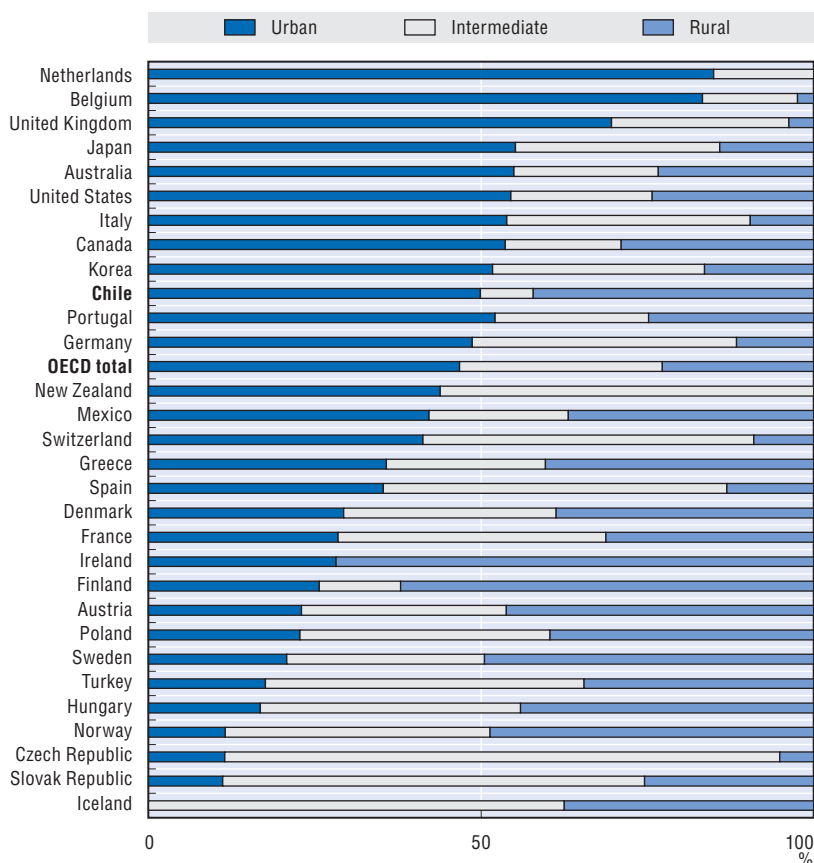
Source: INE based on the Population Census 2002.

The OECD's regional typology also finds evidence of an urban-rural divide in Chile. The OECD's regional typology applied to the provinces of Chile (see Annex 1.A1) reveals that 50% of Chileans live in predominantly urban TL3 regions (provinces in Chile),⁵ 42% in predominantly rural regions and only 8% in intermediate regions. The share of the population living in intermediate regions is the smallest compared to the OECD average (Figure 1.18).

Dependency ratios are much higher for the youth than for the elderly in Chile. The ageing of population represents a challenge for OECD countries as a whole, and in particular for predominantly rural and intermediate regions as a result of patterns of migration towards urban centres. Evidence of this challenge is obtained by higher elderly dependency ratios in OECD rural and intermediate regions than in urban ones (OECD, 2007b). This challenge is not present in Chilean regions: dependency ratios in the highly agricultural regions of Maule, La Araucanía, Los Lagos and Coquimbo are not significantly higher than in other regions. Instead the main challenge is high youth dependency ratios which are only slightly lower in the urban areas of Santiago and Valparaíso and in Magallanes (Figure 1.19).

The large share of the youth population is an important asset in Chilean regions. According to the concentration index, the youth population is more concentrated than both the elderly and the total population in most Chilean regions (10 out of the 15) (Figure 1.20). This means that the young are more

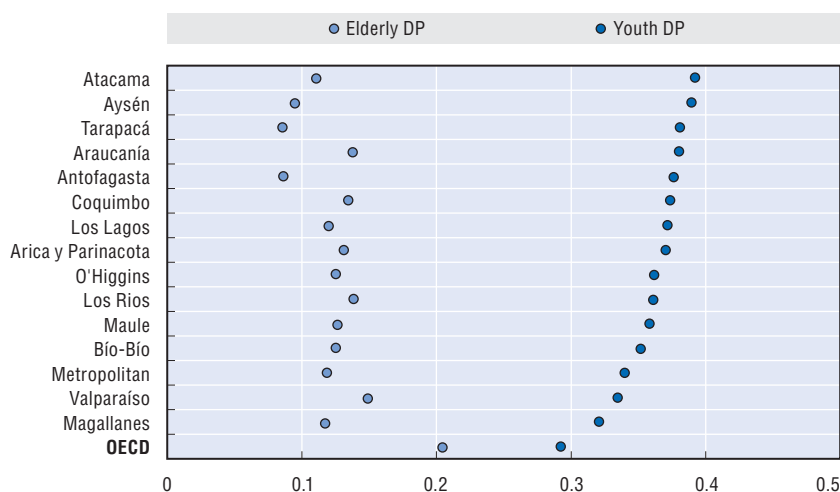
Figure 1.18. **Distribution of total population in urban, intermediate and rural regions (TL3)**



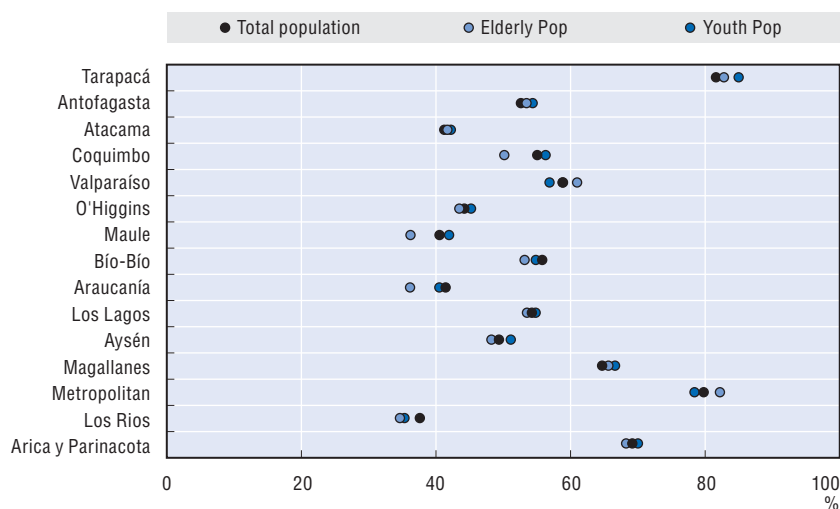
Source: OECD Regional Database.

concentrated in cities and urban centres and represent an important productive factor for growth as they enter the workforce and engage in productive activities.

Population growth is an important component of regional growth, and this is the case in almost all Chilean regions.⁶ Except in Atacama and Maule, population growth is highly correlated to the growth of regional GDP (Figure 1.21). Tarapacá experienced the largest increase in population growth, followed by Coquimbo and Antofagasta. These three regions displayed the third, fourth and the largest increases in GDP shares, respectively, in Chile. Likewise Magallanes and Bio-Bio experienced the largest population decline and as a result the weakest economic performance during 1990-2004.

Figure 1.19. **Youth and elderly dependency ratios in Chilean regions**

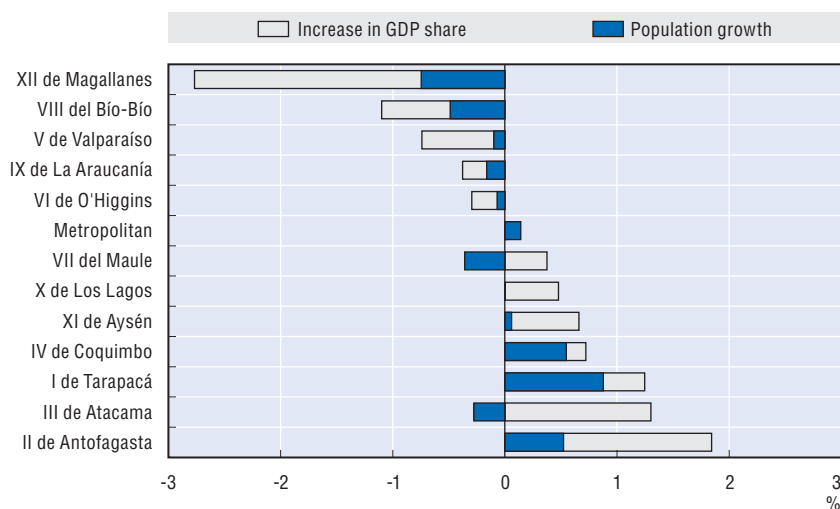
Source: OECD Regional Database and OECD calculations based on data from INE.

Figure 1.20. **Concentration index for Chilean regions, 2006**

Source: OECD calculations based on data from INE.

Migration flows in Chile display a south to north pattern although there are significant variations. According to the 2002 National Population Census, the Metropolitan Region, Valparaíso and Bio-Bio attracted the largest number of immigrants (400 058) but also experienced the largest emigration (an

Figure 1.21. **Population growth and performance of Chilean regions, 1990-2004**



Source: Central bank of Chile and INE.

outflow of 409 840). This pattern has not changed significantly over the past ten years. Net migration from 1997 to 2002 reveals an increase in the populations in northern regions (Tarapacá and Antofagasta), Los Lagos, and regions adjacent to Santiago (Valparaíso, O'Higgins and Coquimbo). In contrast, regions with a negative net balance are located in the south of Chile (with the exception of Los Lagos) and in Atacama (Figure 1.22).

Natural resources

Chile's current economic strategy is based on raw material exports, puts pressure on natural resources and raises concerns for the environment. The state of the environment has worsened over the past years, owing mainly to Chile's economic reliance on intensive exploitation of natural resources. The growing pressure of agriculture in the centre and south, as well as deforestation and salmon platforms in the south raise environmental concerns: soil erosion, loss of native forests, growth in the presence of pesticides and fertilisers in rivers, and contamination of water due to the salmon industry. In the mining sector in the north, intensive copper production has an impact on water and air pollution, owing to emissions of arsenic and carbon monoxide into the air and water around the mines. Environmental problems are also linked to population growth and over-concentration of population and industrial activity around the metropolitan region. Air pollution has increased severely, especially in Santiago, one of the world's most polluted cities.

Figure 1.22. **Internal migration rates**

Source: Celade, based on the Population Census 2002.

Chile's forestry sector is of considerable economic importance. Yet unsustainable use of forests has a negative impact on economic sustainability. Forestry is the country's second largest export sector after copper, accounting for 13% of exports in 2005. Nearly half of the sector's exports are in the form of pulp and paper. Forestry is also a major employer, particularly in the south of the country. However, deforestation and the conversion of native forests to plantations has increased rapidly in recent years, raising concerns about the trade-off between growth and objectives such as protecting the country's rich ecosystem and biodiversity and the long-term sustainability of local economies especially in the southern regions. Sustainable use of Chilean forests would be important both to conserve the country's rich biological diversity and to ensure the economic sustainability and diversity of its regions (see Box 1.1). The recent approval of the national law for native forest protection represents a step forward towards sustainable management of natural resources.

Box 1.1. Native forests and economic sustainability in Chile

Research by the Austral University of Valdivia reveals the importance of native forest conservation for economic sustainability in the south of Chile. The native forest supports fundamental ecological functions, which provide a range of ecosystem services and goods such as conservation of biological diversity, better water retention, maintenance of soil fertility, supply of water for human consumption, and provision of nature-based tourism opportunities, among others. Native forests play a key role in storing and gradually releasing water, which is the basis for important economic activities in the south of the country, including agriculture, salmon farming, sports fishing and tourism. The presence of native forests in watersheds is particularly crucial for maintaining summer streamflows and the associated dissolved oxygen in fjords and estuaries above the critical values required for salmon production. Mismanagement of the sector in the past degraded native forests, decreasing water availability in forest regions. This had a negative impact on rural communities and put added stress on the problems of poverty and emigration in these areas.

Source: Lara et al. (2003).

Natural resources are an important asset, but to avoid over-exploitation of non – renewable resources a transition towards a sustainable development models should be a priority. Several potential measures are:

- Improve the sustainable management of natural resources.
- Reinforce public control of the sustainability of economic activities.
- Diversify the economy towards non – resource based activities.
- Further examine alternative energy sources, such as wind, hydro, solar, biomass, hybrid and small-scale natural gas systems.

Given the current over-exploitation of resources, Chile's energy dependency, and the environmental problems associated with traditional sources of energy, Chile is well positioned to rely more on research on and use of renewable energy. Chile's growing reliance on energy imports has generated problems with the energy supply. In April 2004, Argentina began restricting natural gas exports to Chile, with cuts reaching nearly 50% of contracted volumes on some days. According to the National Commission for Energy (CNE), Chile had an installed power-generating capacity of 12 658 Mw at the end of 2006. Hydroelectric energy accounted for 38% of the country's generating capacity, thermal plants for 61.8% and wind power only for 0.2%. Other sources, such as geothermal or solar energy, have enormous potential. Individual photovoltaic (solar) panels have been installed to supply energy to

rural households and schools in the north. However, the north of Chile has an enormous potential which has just started to be exploited in this area, as it receives a high amount of solar radiation (see Table 1.5).

Table 1.5. **Natural assets of regions**

	Tarapacá	Antofagasta	Atacama	Coquimbo	Valparaíso	Metropolitan	O'Higgins	Maule	Bio-Bio	Araucanía	Los Lagos	Aysén	Magallanes	Total
% of territory covered by forest	0.6	0	0	0.1	10	6.3	13.5	26	47.3	40.4	57.1	45	20.7	20.6
% continental water	0.1	0.1	0.1	0.1	0.3	0.2	0.5	0.9	1.3	1.7	4.9	3.7	2.5	1.6
Solar radiation (Kcal/ M ² /day)	4 554	4 828	4 346	4 258	3 520	3 570	3 676	3 672	3 475	3 076	2 626	2 603	2 107	–
Detected locations with geothermic potential	23	13	7	2	3	7	2	9	10	13	25	6	–	–

Source: Conaf and CNE.

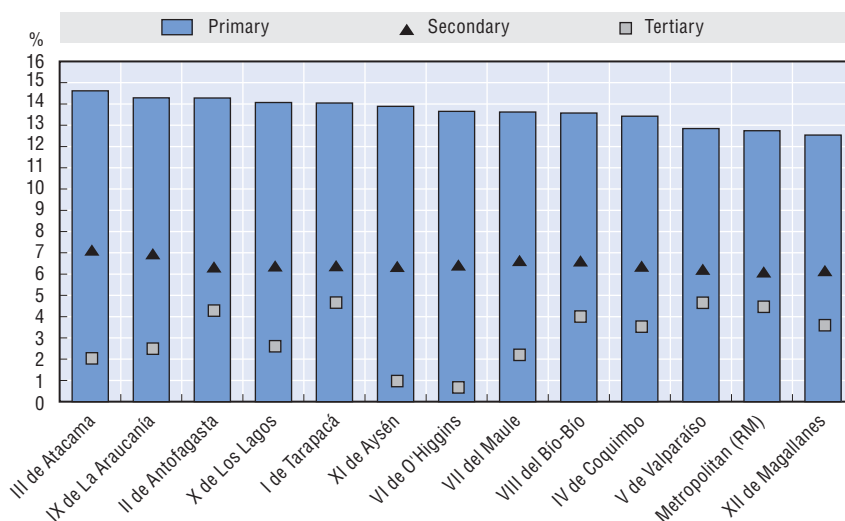
Human capital

Human capital development is essential for boosting the catching-up process. Human capital is necessary to sustain high levels of growth in the medium and long term. Recent estimates suggest that an additional year of schooling raises GDP per capita in OECD countries by over 5% (Bassanini and Scarpetta, 2002a; Cohen and Soto 2007; de la Fuente and Domenech, 2006; OECD, 2003b). The benefits of better skills include less risk of unemployment and higher future earnings potential. Educational attainment is an important hedge against the risk of unemployment, as individuals with no secondary educational attainment have an estimated unemployment rate penalty of 5 percentage points (OECD PISA).

Disparities in tertiary enrolment rates in Chilean regions are larger than in primary and secondary enrolments. Valparaíso, the Metropolitan Region, Bio-Bio, Tarapacá and Antofagasta display significantly higher enrolment rates in tertiary education. In contrast, regions with very high poverty levels – Araucanía, Maule, and Atacama, along with Aysén and O'Higgins – lag in tertiary educational enrolment (Figure 1.23).

Improving access to quality education would have an effect on inequality. Overall income and territorial inequalities are closely tied to inequalities in access to education. Those in the top quintile of income earners have close to five more years of education than those in the bottom quintile.⁷ At the same time, standardised tests of education performance (SIMCE⁸ results for primary and secondary education) reveal that students from the poorest families perform worse than those from families with higher incomes (Figure 1.24).

Figure 1.23. **Share of total population enrolled in primary, secondary and tertiary education, 2006**



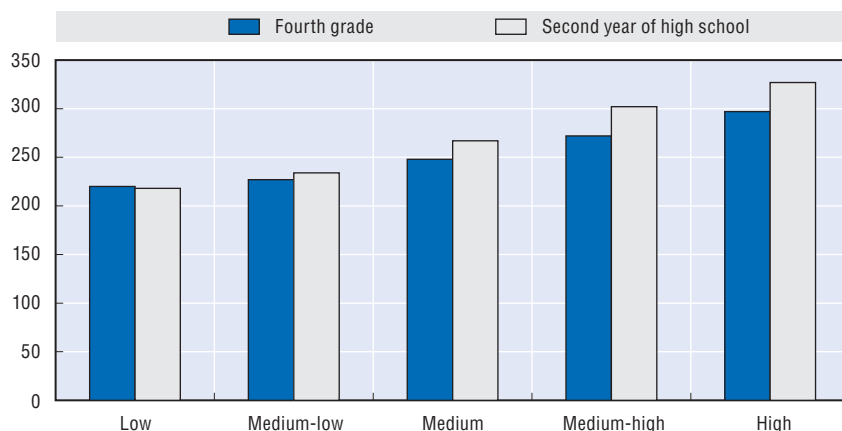
Source: Ministerio de Educación de Chile.

Close to 70% of the poorest students attend municipal schools and challenge the capacity of municipalities to provide adequate primary and secondary education, one of their main devolved responsibilities. Moreover reasonably qualified students from low- and middle-income backgrounds who could be successful in university have restricted access to higher education because of financial barriers to entry (OECD, 2004).

Higher education centres of excellence are concentrated in few main cities, especially in Santiago. In 2006, 48% of student enrolments in higher education institutions were in the Metropolitan Region (see Figure 1.25). There are centres of excellence in some regions, but most of the high-quality tertiary education opportunities are concentrated in the capital city.

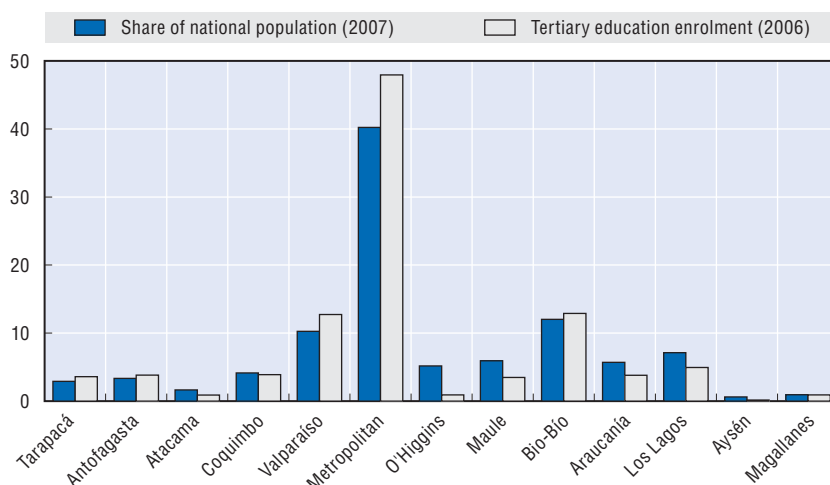
In spite of the recent favourable trend in rising educational attainments, improving the quality of education remains a key national and regional priority. The low quality of education evidenced by Chile's poor performance in standardised tests such as PISA (Figure 1.3) reveals significant gaps in this area.

Extending and improving centres of excellence with a regional focus can help improve enrolments, quality of education and labour stability in the regions. Improving the quality and national recognition of regional tertiary education centres could improve enrolment rates and help attract talent from outside. At the same time developing education centres with a regional focus – specialised in subjects related to regional assets and regional economic specialisation – would improve employment opportunities and help local

Figure 1.24. **Average Simce score by school socio-economic group¹ 2006**

1. Socio-economically homogeneous groups of schools are based on three variables: parents' educational level, family income and school vulnerability index.

Source: Simce 2006.

Figure 1.25. **Regional higher education enrolment**

Source: INE; Ministerio de Educación.

employers by responding to skills requirements. This will improve the balance between labour market supply and demand and allow more local graduates to find local employment and remain in their home region.

Improving education, skills and human capital policies can boost labour productivity and innovation. Regions with low levels of education face difficulties for improving labour productivity and for initiating and

stimulating innovation. Improvements in human capital and innovation can help attract capital investments and economic activity to regions and lead to higher living standards in the medium and long run. Skills formation should be stressed at all levels, rather than simply at the high end of skills. Furthermore, given the large number of small and medium-sized enterprises (SMEs) in Chile, vocational training and on-the-job training can be effective ways to improve skills in firms. Human capital policies are examined further in Chapter 2.

Infrastructure

Chile's unusual geography – its length exceeds its average width by a factor of more than 20 – presents a number of challenges for developing and managing the national infrastructure system and providing access to communications and basic services especially in remote and peripheral regions. The physical separation of knowledge producers from users and the distance to major markets and centres of knowledge are major difficulties for these regions, raising concerns about their capacity to reach their growth potential and their capacity to innovate. In addition it raises issues relating to social cohesion, public service delivery and sustainable growth in the medium and long term.

Transport and connectivity

In general, for a given distance, the better the infrastructure is, the lower the average transport costs and the better the market accessibility. Therefore, investments in transport infrastructure between dispersed regions reduce the distance between lagging regions and the main knowledge and economic centres. This facilitates the creation of trade corridors and the productivity and profitability of firms in remote areas. In addition, transport infrastructure enhances labour mobility, firm relocation, access to public services and the educational opportunities that are only present in few central regions.

The country's geographical and topological characteristics represent a significant challenge. The country's length creates problems of communication, especially for cities in the extreme north and south (see Table 1.6). At the same time, the territory between the regions of Los Lagos and Magallanes is characterised by insular fragmentation and ice fields, meaning that there is no land connection to “continental Chile”. In this regard, a main concern is to connect the southern zone and the different islands with the rest of the country. At present, this is only possible by air, sea or in some cases, through Argentina. In the extreme north, there is also a problem of accessibility owing to a lack of infrastructure in the mountainous area.

Table 1.6. **Distances and estimated journey time to Santiago from the main cities in the north and the south**

To Santiago	Distance in Km	By air ¹	By road ²
Arica	2 062	2.40 h	29 h
Antofagasta	1 319	2.00 h	19 h
Concepción	519	1.10 h	6.5 h
Puerto Montt	1 016	1.45 h	13 h
Punta Arenas ³	3 090	3.20 h	–

1. Estimated time based on the Lanchile timetable.

2. Estimated time based on Turbus passenger transport company timetable.

3. Punta Arenas has no land connection to continental Chile. Distance in km to Santiago is expressed as land connection through Argentina.

Expanding and maintaining a high-quality road network has been a key objective in Chile. Yet, additional means of transport are needed. The road network is the principal means of transport in Chile. Route 5, the only road that links Chile from north to south, concentrates most of the transport of goods. Accidents or repair work are not unusual, causing problems and delays. Alternative means of transport, such as railway or sea freight, are underutilised and represent a potential way to improve transport services.

While the current concession scheme successfully developed infrastructure in the core regions around Santiago, the needs of peripheral regions have yet to be met. About one-third (32%) of all transport concession projects are located in the Metropolitan Region or Valparaíso. Furthermore, 19% of other interregional roads cross the Metropolitan Region. This represents close to 70% of the total investment in transport infrastructure under the concession projects. The current concession scheme reinforces the trend towards economic concentration in the core regions, especially around Santiago (Table 1.7).

Table 1.7. **Location of transport infrastructure under concession projects 1993-2006**

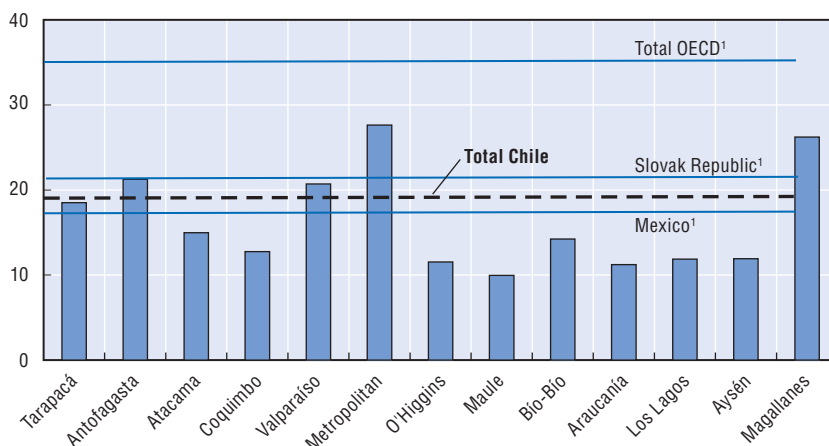
	KM	Km %	Investment (USD Millions)	Investment %
Central Zone (RM and Region V)	806.9	32.2	3 057.5	51.6
Other interregional roads crossing the RM	483.3	19.3	1 081.8	18.2
Region IV	228.6	9.1	265.0	4.5
Regions VII, VIII, IX and X	986.8	39.4	1 526.7	25.7
Total	2 505.6	100	5 931.0	100

Source: Ministerio de Obras Públicas de Chile.

Access to communications technology

Communications infrastructure in Chile has improved greatly during the past decades, but interregional disparities in access to telecommunications remain significant. In 2006, Chile had an average of 20 fixed phone lines per 100 inhabitants (a figure similar to OECD countries such as Mexico or the Slovak Republic but lower than the OECD area average of 35.6). Yet, the number of fixed phones per 100 inhabitants in the Metropolitan Region or in Antofagasta was double that of the regions of Maule, Bio-Bio or la Araucanía (Figure 1.26). On the other hand, 22% of Chilean households had Internet access in 2006, a figure comparable to OECD countries such as Greece (but considerably lower than the OECD Median of 58%). However, only 8% of households in Maule and 10% in Aysén had Internet access, compared to 37% in Antofagasta and 31% in the Metropolitan Region (Figure 1.27).

Figure 1.26. **Fixed phone lines per 100 inhabitants, Chile and selected OECD countries (2006)**¹



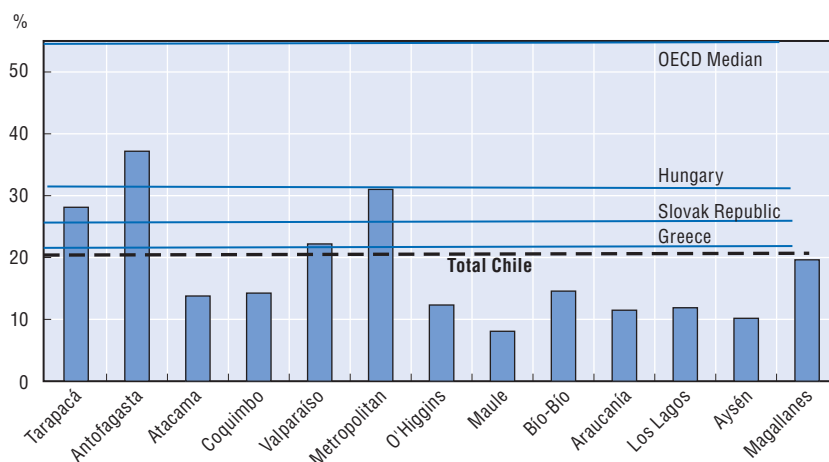
1. 2005 data for OECD; 2004 for the Slovak Republic.

Source: Subtel 2006 and OECD Telecommunications database

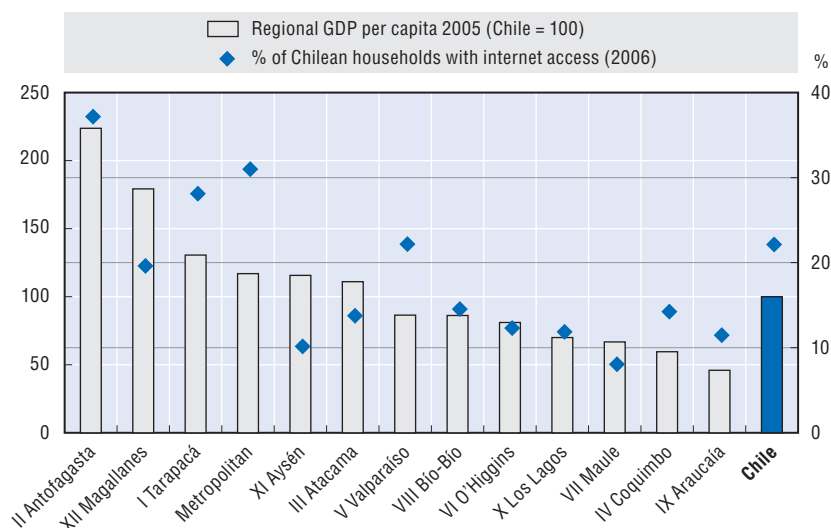
Improving access to telecommunications represents a potential source of growth especially in regions with low connectivity. Interregional disparities in access to telecommunications are closely correlated with economic disparities in GDP per capita (Figure 1.28).

Efforts to further improve access to telecommunications in the Chilean educational system should be enhanced to dampen the effects of the digital divide. The government is currently implementing a three-year plan to:

- i) install new computers in schools to reduce the ratio of students to

Figure 1.27. **Households with Internet access, Chile and selected OECD countries (2006)**

Source: Subtel 2006 and OECD Country statistical profiles 2008.

Figure 1.28. **Interregional disparities in Internet access**

Source: Central Bank of Chile; Subtel.

computers from 30 to ten; ii) increase the use of computers and projectors in classrooms as a teaching tool; and iii) provide schools with broadband Internet connections with an average connection speed of two megabytes per second.⁹ However, efforts to dampen the effects of the digital divide in education

should continue, as Chile still lags considerably in this area: on average there are 30 students per computer (in comparison to 10 in Spain) and only 60% of schools with access to the Internet have a broadband connection.

Access to basic services

The gap between urban and rural areas in the provision of basic services remains significant. Chile has been very successful in providing infrastructure services such as drinking water, sanitation and electricity. Nonetheless, as shown in Table 1.8 there are significant differences in service provision between urban and rural areas.

Interregional disparities among urban areas are not substantial but are considerable in rural areas. Rural localities in Araucanía and Bio-Bio are particularly deficient in services provision, while rural areas in northern regions require improvements in their access to water (Table 1.8). In spite of the advances in expanding rural infrastructure services, further improvements are needed to enhance the efficiency and impact of services in remote and isolated rural areas of Chile. Initiatives like the Rural Infrastructure for Territorial Development Project (Box 1.2) go in this direction.

Table 1.8. **Access to basic services in rural and urban households**

	Water ¹ %		Sanitation ² %		Electricity %	
	Urban	Rural	Urban	Rural	Urban	Rural
Tarapacá	98.8	79.4	94.9	43.2	98.7	89.1
Antofagasta	97.9	78.7	96.4	54.3	99.6	80.9
Atacama	99.1	73.1	98.6	46.6	99.2	92.2
Coquimbo	99.4	71.9	95.7	39.9	99.6	90.2
Valparaíso	99.1	93.4	95.8	61	99.4	99.7
Metropolitan	99.5	94.7	96.1	64.9	99.8	99.0
O'Higgins	99.3	90.9	91.7	46.5	99.5	97.7
Maule	99.6	83.9	93.4	42.3	99.8	97.5
Bío-Bío	99.3	81.8	91.9	39.4	99.5	93.9
Araucanía	99.8	65.9	93	20	99.3	87.1
Los Lagos	99.1	82.4	89.9	41.4	99.4	88.7
Aysén	99.2	81.7	96.3	50.9	99.9	82.3
Magallanes	99.6	80	99	68.4	99.9	77.8
Total	99.5	82.3	94.8	41.1	99.7	93.3

1. Coverage include houses with indoor connection.

2. Include houses connected to improved facilities: sewic and septic systems.

Source: Mideplan based on Casen Survey 2003.

Box 1.2. Rural Infrastructure for Territorial Development

The Government of Chile (acting through Subdere) established this initiative in 2005 with financing and technical assistance from the World Bank. The main objective is to improve access to basic infrastructure (roads, electricity, water supply, sanitation and telecommunications) in rural areas through selected investments in 25 areas of five regions (Coquimbo, Maule, Bio-Bio, Araucania and Los Lagos). A basic element of the project strategy is the elaboration of comprehensive territorial development plans (Planes Marco de Desarrollo Territorial, PMDT). In these plans, local stakeholders assess the productive potential of their territories (e.g. agriculture, tourism) and prioritise individual rural infrastructure investments. Plans must be approved by the Regional Councils (COREs) to ensure consistency with the territorial planning policies defined and implemented at the regional level and to empower regional governments. This project makes empowerment of local stakeholders a basic characteristic: the decentralisation of decision-making is seen as a means of boosting ownership and adapting investment to meet local needs. At the same time, it introduces a territorial approach with a focus on cohesive communities that cross administrative boundaries.

Source: Subdere.

Industrial clusters and areas of specialisation

Regions are endowed with a distinct set of assets. Some assets, such as the region's geographic location, availability of natural resources or demography, cannot be changed or can only be changed in the long run, while others, such as infrastructure, human and social capital, innovative capacity and labour market conditions, are resources that may be used more efficiently to generate higher levels of growth. Regions can specialise in economic activities for which they enjoy comparative advantages, which are determined by the complex interaction of natural endowments (e.g. oil, mining, etc.) and endogenous assets (e.g. infrastructure, technology or skills). Regions may also gain from diversifying their productive base. Firms cluster close to other firms owing to the benefits of knowledge spillovers, forward and backward linkages, and proximity to suppliers and clients, thereby enhancing innovative activity and productivity in the region where they are located. These benefits may occur when firms from the same industry locate close to each other (specialisation) and also when firms from different industries locate in a common space (diversification). The former favours intra-industry transmission of knowledge and inter-firm competition, which leads to efficiency gains, and the latter facilitates the transfer of ideas among sectors

through formal and informal interaction which also leads to efficiency gains and to a larger portfolio of goods and services.

In Chile competitive clusters favour a few regions, most of which are in resource-based sectors. The main clusters of competitive potential identified in Chile are: outsourcing, fish farming, tourism, copper mining and sub-products, pork and chicken farming, processed food for human consumption, primary fruit industry, and financial services (see Box 1.3). Most of these sectors are already mature and the clusters naturally occur in the regions with abundant natural assets: mining in the north and agriculture and fishing in the south, in addition to financial services in Santiago (see the specialisation index in Table 1.9). The current strategy ignores the potentialities of other Chilean regions; in addition these clusters do not require a highly skilled

Box 1.3. Identifying competitive clusters in Chile

Chile's National Innovation Council carried out a study to identify the main clusters with competitive potential. The report prioritised eight clusters (outsourcing, fish farming, tourism, copper mining and sub-products, pork and chicken farming, processed food for human consumption, primary fruit industry, and financial services) using a three-step methodology:

Step 1: Identify an initial (long) list of **70 potential sectors** through workshops, consultations with national experts, research in relevant literature and benchmarking methods.

Step 2: Narrow the list to **31 sectors**, subjecting them to four basic criteria:

- Possibility of consolidating various opportunities.
- Current and expected size of the sectors.
- Compatibility with current or potential competitive advantages in the Chilean economy.
- The possibility that this sector could be considered a cross-platform that supports other sectors rather than an individual sector (i.e. human resources or energy).

Step 3: Narrow the list to **8 sectors** using an analysis based on four variables:

- Define a starting point – the current importance of each sector in total GDP.
- Measure the growth potential of each sector – how much each sector could contribute to GDP over the next 10 years.
- Efforts required to increase GDP on the basis of geographic location, existence of natural resources, human capital, attracting investment, access to technology, infrastructure and logistics, association and/or connection, environmental sustainability, sustainability of advantages and regulatory framework.
- The necessary intervention by the state to capture the potential of the sector.

Box 1.3. Identifying competitive clusters in Chile (cont.)

In spite of the efforts made to identify competitive clusters, the report and the list of clusters have several limitations:

- **A “low effort” criterion hinders growth in the medium and long term.** A vigorous economy is based on a highly skilled labour force and innovative activity. Both require investment in human capital and in research and development. The low effort criterion overlooks the potential returns from these investments in the medium and long term.
- **The study did not take account of spillovers among industries and or place-based dynamics.** The unit of analysis in the selection process treated sectors as isolated units. There was no consideration of technological spillovers between industries, forward and backward linkages, interaction between industries and the regulatory framework, institutional specificities and other actors in regions.
- **The eight clusters do not diversify the productive base.** Most of the chosen sectors are mature resource-based sectors that do not require or encourage further development of a skilled labour force or innovative activity.
- **There is little attention to a bottom-up approach to identifying possible competitive clusters.** Local authorities and stakeholder possess valuable information at the local level that can help identify local resources and opportunities for growth in the region. Their knowledge and their input are essential for successfully mobilising these local assets into growth opportunities.

Table 1.9. **Specialisation Index,¹ 2003**

Regions	Agriculture forestry	Fishing	Mining	Manuf.	Construction	Electricity, gas, water	Transport, communi- cations	Retail trade, rest. and hotels	Financial services	Housing property	Public adminis- tration	Personal services
Tarapacá	0.21	1.14	2.65	0.81	0.51	1.27	1.63	0.80	0.33	0.68	0.67	1.56
Antofagasta	0.01	0.25	7.53	0.24	1.50	1.03	0.18	0.40	0.20	0.42	0.45	0.46
Atacama	0.97	1.88	4.68	0.16	2.34	0.96	0.64	0.51	0.34	0.96	0.70	0.84
Coquimbo	2.03	1.54	2.78	0.46	0.74	1.23	0.57	0.64	0.57	1.12	1.06	0.87
Valparaíso	1.29	0.10	0.44	1.29	1.27	1.07	0.63	1.78	0.46	1.05	1.06	1.57
Metropolitan	0.30	0.00	0.13	1.00	0.50	0.85	1.35	1.13	1.61	1.10	1.11	0.89
O'Higgins	4.69	0.02	1.28	0.97	1.07	1.88	0.59	0.47	0.32	0.82	0.61	0.59
Maule	3.59	0.13	0.01	1.25	3.72	0.87	0.74	0.75	0.47	0.87	0.94	0.87
Bío-Bío	1.39	1.43	0.02	1.84	1.95	0.97	0.71	0.80	0.54	0.98	1.06	0.87
Araucanía	3.25	0.03	0.01	0.60	0.66	1.42	0.88	0.78	0.56	1.52	1.55	1.60
Los Lagos	2.20	11.36	0.01	0.86	1.05	1.12	0.67	0.88	0.41	1.13	1.00	1.02
Aysén	0.80	16.00	0.17	0.22	0.69	1.67	0.41	0.93	0.42	0.77	1.08	3.81
Magallanes	0.33	5.58	1.12	1.01	0.67	1.13	0.69	1.18	0.43	0.88	0.77	3.30

1. See definition in Annex 1.A2.

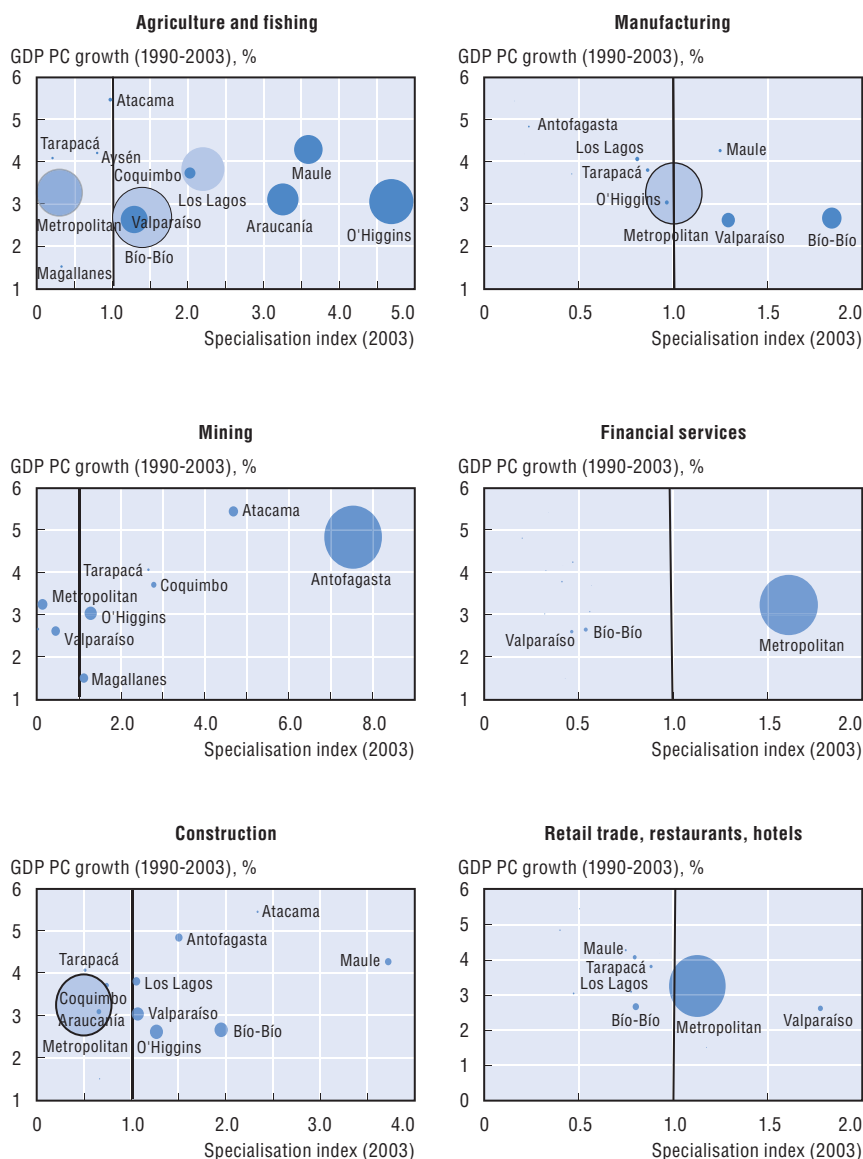
Source: OECD calculations based on GDP data by sector in constant terms (2003) of the Central Bank of Chile.

labour force and so reduce workers' incentives to upgrade their skills and knowledge. Finally, the clusters do not mobilise local resources and assets. All these elements are key factors for enhancing growth in the medium and long term.

Chile's lack of diversification and dependence on natural resources may constrain its growth potential in the long term: OECD countries are on average much less dependent than Chile on natural resources. Diversifying Chile's productive base is as important as adding value to existing sectors. Diversification induces regions to mobilise their resources instead of depending on top-down development strategies, while adding value to existing sectors calls for higher skills and innovative activity that can increase productivity. Science, technology and innovation policy plays a key role in both cases, first by exploring new products in emerging sectors and second by making existing ones more productive and efficient. Furthermore as Chile develops higher skills and technology in resource-based sectors it can transfer the knowledge and productivity gains to other sectors.

Regions with sectors of competitive advantage need to transform static advantages into dynamic ones. The sectors of mining, retail trade, agriculture and fishing and financial activities are concentrated in very few regions (Table 1.9 and Figure 1.29). These regions presently depend on the static advantages of these sectors but will need to transform these into dynamic advantages by producing more complex and higher value added goods in their sectors of specialisation. In addition, diversifying their production base will help them cope with global shocks and fluctuations in prices and in demand. International evidence points to a positive link between product diversity in export goods and growth as new products and services often exploit untapped resources and potentialities of countries and regions. More developed countries have in fact proven successful in transforming production of simple goods to production of more complex and higher value-added goods in the production chain.

Chilean regions have not fully used the potentialities of the manufacturing sector to develop higher value added goods. The manufacturing sector has many linkages with other sectors of the economy. It transforms outputs from other sectors into higher value added goods and produces capital goods and inputs for other industries. Furthermore it can transfer new technologies to the economy and increase the efficiency of other industries through their use of technology and skilled labour. Given its significant production of primary goods, Chile's manufacturing potential is clear. However, no regions are highly specialised in manufacturing and those that are moderately specialised, such as Bio-Bio, Valparaíso and Maule, have recorded low growth rates. This sector represents an unexploited area for these three regions as well as for other regions.

Figure 1.29. **Specialisation Index and increase in GDP per capita, 1990-2003**

Note: The bubble size corresponds to size of the sector in terms of GDP in 1990.

Source: OECD calculations based on data from the Central Bank of Chile

1.4. Specific challenges of urban and rural regions

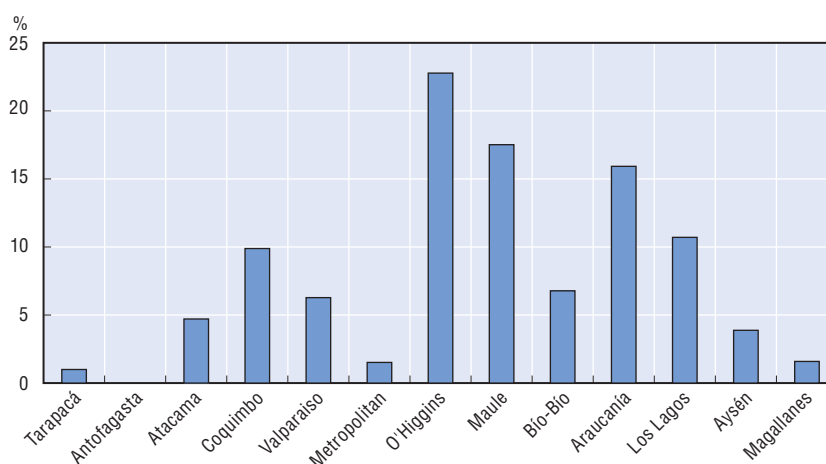
Regional development strategies should induce regions to reach their growth potential by mobilising their assets. Rural and urban Chilean regions face challenges common to all urban and rural OECD regions. A key priority is to capitalise on the current favourable external conditions and transform these static advantages into dynamic ones in lagging areas such as in education, labour productivity, economic diversification and innovation.

Rural regions

Challenges common to all OECD rural regions include remoteness from large markets and global hubs, out-migration of population to urban centres, lack of critical mass for economies of scale, changing trade patterns for commodities, difficulty in attracting foreign investment, poor delivery of public services and lack of economic diversification. Chilean rural regions are not immune to these challenges; in fact remoteness, connectivity and diversifying the economy are a central concern not only of rural regions but of all Chilean regions. Chile's geographic characteristics augment some of these challenges, but also offer sources of potential growth if assets in rural regions are efficiently mobilised.

The agriculture sector is a significant contributor to regional output in various Chilean regions. It adds significant value to regional GDP through the production of primary commodities and processed products such as wine and fruits. In O'Higgins, Maule and Araucanía the share of the agriculture sector in total regional GDP exceeds 15% (Figure 1.30) and in Coquimbo and Los Lagos

Figure 1.30. **Share of agriculture in regional GDP, 2003**



Source: ODEPA- Central Bank of Chile, 2007; OECD calculations (OECD, 2008).

its share is approximately 10%. Yet, there are differences among regions in terms of the competitiveness of farm enterprises. On average, in the central regions in which fruits and wine production are located, farms with access to irrigation, capital and modern inputs have developed links to agribusiness and become modern companies. Other regions with more traditional, semi-subsistence farmers operating on a small scale, without access to modern techniques, have fallen behind and generate low incomes (OECD, 2008).

However, on average, the incomes of non-agricultural households are higher than those of agricultural households and have increased more rapidly. Moreover, the incidence of poverty among agriculture-dependent households is higher than among non-agricultural households (20.7% versus 14.6% in 2003). Salaried-workers families (around two-thirds of agriculture-dependent families in Chile) are the most affected, with a higher incidence of poverty than self-employed farm households. The income of this second group has improved, mainly owing to higher off-farm incomes, in contrast to farm incomes which show little change. Having diversified income reduces substantially the probability of self-employed farm families of being poor (OECD, 2008).

Rural areas are not simply the agriculture sector and development strategies for rural areas therefore go beyond investments in agriculture. The emergence of important non-farm activities in rural areas offers Chilean regions opportunities and challenges. Opportunities depend both on linkages with urban centres and on linkages between agriculture and other sectors. Rural areas need to develop manufacturing and services sectors as complements to existing agriculture activity, especially by promoting higher value-added agriculture-related goods. Diversification in rural areas reduces their vulnerability to fluctuations in agricultural prices and climatic shocks. However, the access to non-agricultural employment in rural areas depends largely on the capacities, attributes and attractiveness of the rural locality, such as education and skills, infrastructure and availability of services, among others. Rural OECD regions have long recognised the new rural paradigm and the need for policies adequate to meeting these challenges (Box 1.4).

Improving the level of human capital in rural Chile is a key to enhancing their capacity to innovate – and to assimilate innovation. In addition it reduces the risk of capital leaking out of rural regions, when infrastructure projects lessen the burden of remoteness and accessibility of rural regions. Enhancing education in rural regions will not only promote participation of workers in the formal economy, but it will also facilitate the diversification of the rural productivity base and add more value to existing goods and services. The future prosperity of rural regions will be thus determined by key drivers such as human capital, entrepreneurship, innovation and competitive farming.

Box 1.4. The OECD Rural Paradigm

Policy makers are increasingly recognising the need to upgrade traditional rural sectoral policies and, in some cases, replace them by more appropriate instruments. Particular concerns are raised by the modest positive impact that agricultural subsidies have on general economic performance even in the most farming-dependent communities. Indeed, with farm families relying increasingly on off-farm employment, the economic success of rural communities will depend on the development of new economic drivers.

In this context, OECD governments are showing increasing interest in a more place-based approach to rural policy which emphasises investments rather than subsidies and is able to integrate different sectoral policies and improve the coherence and effectiveness of public expenditure in rural areas.

Evidence obtained through a series of OECD territorial reviews at the national level and a number of case studies of policy strategies in rural regions suggests that the shift in policy towards a **“new rural paradigm”** concerns both changes in the policy focus and adjustments to the governance structure, most notably:

- A shift from an approach based on subsidising declining sectors to one based on strategic investments to develop the area’s most productive activities.
- A focus on local specificities as a means of generating new competitive advantages, such as amenities (environmental or cultural) or local products (traditional or labelled).
- More attention to quasi-public goods or “framework conditions” which support enterprises indirectly.
- A shift from a sectoral to a territorial policy approach, including attempts to integrate the various sectoral policies at regional and local levels and to improve the co-ordination of sectoral policies at the central government level.
- Decentralisation of policy administration and, within limits, of policy design to the corresponding levels.
- Increased use of partnerships between public, private and voluntary sectors in the development and implementation of local and regional policies.

This new rural paradigm requires important changes in how policies are conceived and implemented in order to include a cross-cutting and multi-level governance approach. Traditional hierarchical administrative structures are likely to be inadequate to administer these policies effectively and adjustments are thus needed along three key governance dimensions: horizontally at both the central and the local levels and vertically across levels of government.

Source: OECD (2006b).

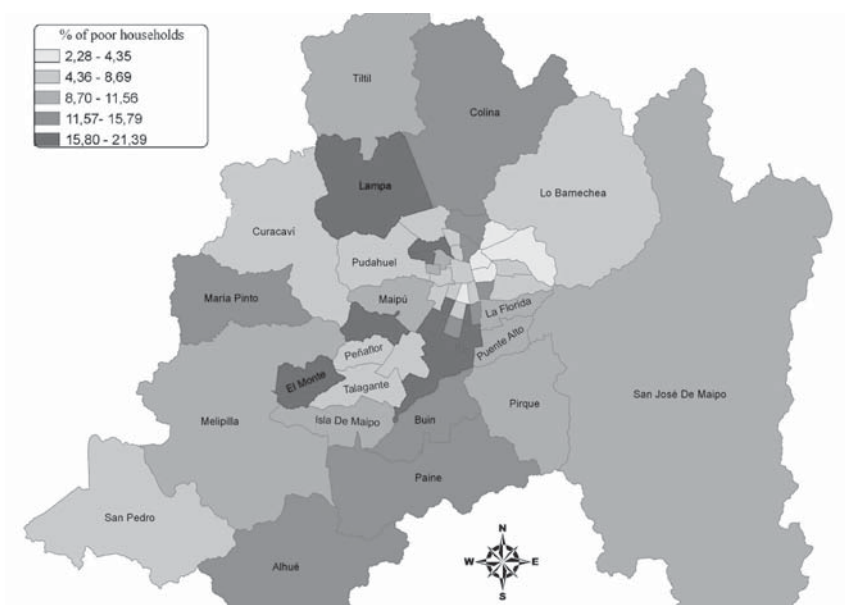
Urban metropolis

Chile is highly urbanised, with around 83% of the population living in localities of more than 5 000 inhabitants. There are three metropolitan areas with at least 800 000 inhabitants: Valparaíso, Concepción and Santiago. The main metropolitan nucleus is Santiago, which is home to 40% of the Chilean population and produces almost half of the national product. Like many metropolitan areas Santiago is often considered Chile's engine of growth, owing to benefits associated with economies of agglomeration. The fact that Santiago grew on average more slowly than all OECD TL2 regions during 1995-2004 reflects a general trend in a significant number of OECD metropolitan regions: an eventual slowdown in growth rates due to dynamics associated with diseconomies of scale. In addition to revitalising growth, Santiago faces challenges raised by increasing levels of spatial inequality and has failed to achieve acceptable standards of environmental quality.

Santiago should produce higher value added goods and services. During 1995-2004, Santiago grew annually, on average, by 1.92%, somewhat more slowly than OECD TL2 regions (1.96%). Economic activity is concentrated in Santiago (48% of national GDP) owing to benefits associated with economies of agglomeration (e.g. increasing returns to scale, forward and backward linkages among firms, and labour market pooling). This virtuous cycle is weakened when congestion costs, oversupply of labour and diseconomies of scale are present in the development cycle. Given that economic activity in goods and services that have higher value added and are based on information technology tend to concentrate in large internationally well-connected capital cities, this represents a potential for boosting the competitiveness of Santiago.

Higher value added goods and services should go beyond financial activities. Resilient and stable macroeconomic conditions in a turbulent region point to Santiago as a potential financial and banking centre in Latin America with a comparative advantage in providing financial services to multinational firms in the southern hemisphere and connecting Latin American financial markets to global markets in Europe, Asia and North America. In addition to attracting foreign capital, Santiago can further develop complementary segments in value added sectors and progressively upgrade towards activities with higher technology content such as chemicals, pharmaceuticals, medical and electrical devices. Although positive developments in this direction are already under way, Santiago's area of specialisation should not be confined to financial services but should also diversify to these complementary sectors.

The high degree of inequality within Santiago, Valparaíso or Concepción is of particular concern given the large social costs it induces. Greater Santiago encompasses 35 *comunas* which are highly polarised in terms of poverty rates (Figure 1.31). This inequality is also present in household incomes and levels

Figure 1.31. **Disparities in metropolitan Santiago, 2006**

Source: Subdere based on Casen Survey 2006.

of education: Santiago's richest *comuna* has an average household income eight times higher than the poorest as well as higher levels of education. In addition richer municipalities have better education coverage (especially in pre-primary and higher education) and better results on basic education performance tests (Table 1.10). An ethical concern in its own right, high levels

Table 1.10. **Main social indicators in polarised *comunas* within Santiago metropolitan area, 2006**

	Average household income ¹	% of poor households	Years of education head of family	Preschool education coverage ²	Simce average Result in mat. ³	Higher education Coverage ⁴
La Pintana	403 495	14.3	7.9	44.6	233	11.5
Padre Hurtado	427 462	16.8	8.4	39.9	230	24.3
San Bernardo	478 831	17.2	9.1	43	246	35.4
Providencia	1 625 851	2	14.4	83.2	319	69.3
Las Condes	2 045 533	2.8	15	56	314	77.0
Vitacura	3 120 749	5	16.1	59.8	325	80.1

1. In Chilean Pesos.

2. Mideplan's calculations over population less than six years.

3. Average Simce score in the 2006 test of mathematics for second year of high school.

4. Mideplan's calculations over population 18-24 years.

Source: Casen Survey and Simce 2006.

of inequality and spatial polarisation within the metropolitan area also challenge social cohesion and social stability and raise concerns about the provision of basic public services such as water, sanitation, health and education.

In spite of recent positive developments in education policy aimed at reducing inequalities in access to education, these efforts should increase. Spatial inequalities are particularly linked to education. It is a challenge for poorer municipalities to provide adequate primary and secondary education. Their schools have a larger share of students from disadvantaged socio-economic backgrounds¹⁰ and they generally lack the necessary human and financial resources. This contributes to the present gap between poorer and richer municipalities (Table 1.10) in primary and secondary education. Inequalities are also present in access to preschool and higher education. Pre-primary education plays an important role in promoting the participation of women in the labour force, while access to tertiary education is a precondition for good employment opportunities. The education challenge has recently been addressed by several government reforms to improve access by the underprivileged segments of population to quality education. For example, President Bachelet announced in May 2008 an increase of 15% in the education subsidy for urban schools and of 25% for rural schools. Additionally, the recent approval of the preferential scholar subsidy increases the financial and technical resources available for educating the most vulnerable students.

During the past years access to housing has increased considerably, especially for the poorest segments of the population, but quality deficiencies remain. Recent initiatives to improve access to housing have reduced the housing deficit during the past decade by more than 50%. However, the Ministry of Housing and Urban Planning estimates that some 670 000 units still need upgrading (e.g. materials, sanitation, etc.) and that some 500 000 units are overcrowded.¹¹ Additionally, new housing developments are located far from city centres owing to rising land prices. A further reduction in the housing deficit involves better co-ordination of the various policy makers in charge of urban planning, transport, public works and the environment, at the central government level, as well as between them and the regions and municipalities. Improving access to services, such as medical facilities, education and public transport, together with urban amenities and better recreational areas outside the housing estates is important to raise living standards outside the city centre. Recent measures to improve the quality of housing and to reduce urban segregation include an increase in the value of the housing subsidy (by 20% per unit in real terms in 2006), improvements in public transport and utility services, especially water and sanitation (OECD, 2007c).

Pollution remains a serious concern for Santiago's sustainable development. As the country's most urbanised, industrialised and populated city, Santiago faces a problem that is typical of large urban areas, namely environmental pollution. Santiago's severe environmental problems are due mainly to industrial and transport emissions, made worse by its site: a valley surrounded by the Andes and Cordillera de la Costa mountain ranges, with little wind and rain to disperse emissions. The 6 million inhabitants of the Santiago agglomeration are exposed to high levels of air pollution (air pollution levels in Santiago are similar to those of Mexico City and twice as bad as those of Los Angeles), resulting in respiratory diseases and premature deaths. The World Health Organisation ranks Santiago among the world's most polluted cities. Pollution is further exacerbated in the colder months between April and September by the natural phenomenon of thermal inversion. In the winter, concentrations of most pollutants (particularly PM₁₀, PM_{2.5} and CO) reach their highest levels (OECD 2005b).

Conclusion

Chile's macroeconomic management has been strong. Nevertheless, there are a number of areas – mainly productivity, innovation and human capital – in which the government is looking to enhance performance. These areas have a clear spatial dimension.

The performance of Chilean regions varies significantly. Regional disparities in GDP per capita are very high in comparison to those of OECD countries, and are especially associated with large disparities in labour productivity. This implies that lagging regions underutilise their resources and are far from their production possibility frontier. Development policies should not only be geared to improving human capital, high-quality research and innovation in metropolitan Santiago, but should also be pursued in all Chilean regions in which growth opportunities can be exploited. Many Chilean regions have assets and resources that are currently underutilised. Furthermore, the current competitive cluster policy largely favours a small number of regions and sectors which therefore receive much of the private and public investment. These unbalanced growth patterns parallel interregional disparities in access to basic public services, transport and communications infrastructure. Within this context, the process of globalisation will not only represent an opportunity to trigger growth opportunities for some Chilean regions, it will represent a danger for those that are unable to reap the benefits of globalisation. This implies that a significant share of the Chilean population will be unable to benefit from these opportunities.

This has led to a stronger focus on unlocking the potential for development, with an emphasis on regions' competitiveness and comparative

advantages. Therefore, diversifying Chile's productive base by mobilising local resources and assets is as important as adding value to existing sectors. Science, technology and innovation will play a key role if high growth rates are to remain competitive in the medium and long term, enabling regions to develop new products in emerging sectors and become more productive and efficient in their current sectors. Although innovation will play a key role for metropolitan Santiago, improving innovation in other Chilean regions will raise their capacity to absorb technology as well as to produce higher value added goods. Moreover, human capital is essential for innovation and ultimately for regional productivity levels which lead to higher levels of output per capita and ultimately to higher national growth rates. Finally, an improved infrastructure network throughout all the regions will facilitate this task.

Enhancing the productivity and competitiveness of regions and sectors requires agile, place-based policies that can make targeted efforts to improve the quality of public investments and services to the regions. Within this context, regional policy is seen as the way to “unlock” the potential of regions. The potential for regional growth will largely depend on how public policies adapt to the specific characteristics of the regions and how they integrate their different synergies, attributes and assets. This will be the subject of Chapter 2.

Notes

1. The World Bank's *Worldwide Governance Indicators 2006* showed values similar to those of the United States, France or Spain. These indicators measure control of corruption, effectiveness of governance, political stability, regulatory quality, rule of law, and accountability.
2. Municipalities are broadly referred to as *comunas* in Chile. Both terms are very similar in practical terms. Municipalities are public corporations, with both legal personality and private assets, and their role is to satisfy the needs of the local community. *Comunas* are managed by municipalities, and a municipality may administer a group of *comunas*. In Chile there are currently 346 *comunas* and 345 municipalities.
3. In 2007.
4. In Chile, urban localities are considered to be those inhabited by over 2 000 persons or by between 1 001 and 2 000 persons when 50% or more of the economically active population is engaged in secondary or tertiary activities. As a special case, tourism and recreation centres which have at least 250 clustered dwellings but fail to meet the required population standard may be classified as urban.
5. The OECD has classified its TL3 regions as predominantly urban, predominantly rural and intermediate. This territorial level (equivalent to provinces in Chile) has been chosen in order to compare the degree of rurality of Chilean and OECD regions (see OECD regional typology in Annex 1.Ax).
6. For further information on GDP decomposition see OECD (2009).

7. Casen Survey 2006.
8. The SIMCE test consists of an annual national examination of student performance in 4th, 8th and 10th grades. Testing started in 1987.
9. Enlaces, the government agency in charge of this programme, is assessing the technological requirements of the more than 9 000 public schools in Chile.
10. SIMCE results revealed that under equal conditions, students from the poorest families obtain lower results; at the same time, schools with a high proportion of socially disadvantaged students obtain lower learning outcomes.
11. 2004 data.

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ANNEX 1.A1

OECD Regional Typology in Chile

Regional grids

The OECD has classified regions within each member country. The classifications are based on two Territorial Levels (TL). The higher level (Territorial Level 2) consists of 335 macro-regions while the lower level (Territorial Level 3) is composed of 1 679 micro-regions. This classification – which, for European countries, is largely consistent with the Eurostat classification – facilitates greater comparability of regions at the same territorial level. Indeed, these two levels, which are officially established and relatively stable in all member countries, are used by many as a framework for implementing regional policies.

OECD regional typology

The OECD typology classified TL3 regions as predominantly urban, predominantly rural and intermediate. This typology, based on the percentage of regional population living in rural or urban communities, allows for meaningful comparisons among regions of the same type and level. The OECD regional typology is based on three criteria. The first identifies rural communities (*comunas* in Chile) according to population density. A community is defined as rural if its population density is below 150 inhabitants per square kilometre (500 inhabitants for Japan to account for the fact that its national population exceeds 300 inhabitants per square kilometre). The second criterion classifies regions according to the percentage of population living in rural communities. Thus, a TL3 region is classified as:

- Predominantly rural (rural), if more than 50% of its population lives in rural communities.
- Predominantly urban (urban), if less than 15% of the population lives in rural communities.

- Intermediate, if the share of population living in rural communities is between 15% and 50%.

The third criterion is based on the size of the urban centres. Accordingly:

- A region that would be classified as rural on the basis of the general rule is classified as intermediate, if it has an urban centre of more than 200 000 inhabitants (500 000 for Japan), representing no less than 25% of the regional population.
- A region that would be classified as intermediate on the basis of the general rule is classified as predominantly urban if it has a urban centre of more than 500 000 inhabitants (1 000 000 for Japan), representing no less than 25% of the regional population.

Application of this typology to Chilean provinces

This typology classifies Chilean provinces (equivalent of TL3) as follows:

Table 1.A1.1. **Chilean provinces classified by the OECD typology**

Provinces	OECD type	Provinces	OECD type
IQUIQUE	PR	BÍO-BÍO	PR
TAMARUGAL	PR	ÑUBLE	PR
ANTOFAGASTA	PR	CAUTÍN	PR
EL LOA	PR	MALLECO	PR
TOCOPILLA	PR	LLANQUIHUE	PR
COPIAPÓ	PR	CHILOÉ	PR
CHAÑARAL	PR	OSORNO	IN
HUASCO	PR	PALENA	PR
ELQUI	PR	COIHAIQUE	PR
CHOAPA	PR	AYSEN	PR
LIMARÍ	PR	CAPITÁN PRAT	PR
VALPARAÍSO	PU	GENERAL CARRERA	PR
ISLA DE PASCUA	PR	MAGALLANES	PR
LOS ANDES	PR	ANTÁRTICA CHILENA	PR
PETORCA	PR	TIERRA DEL FUEGO	PR
QUILLOTA	IN	ÚLTIMA ESPERANZA	PR
SAN ANTONIO	IN	SANTIAGO	PU
SAN FELIPE DE	PR	CORDILLERA	PU
CACHAPOAL	PR	CHACABUCO	PR
CARDENAL CARO	PR	MAIPO	PU
COLCHAGUA	PR	MELIPILLA	PR
TALCA	IN	TALAGANTE	PU
CAUQUENES	PR	VALDIVIA	IN
CURICÓ	PR	RANCO	PR
LINARES	PR	ARICA	PR
CONCEPCIÓN	PU	PARINACOTA	PR
ARAUCO	PR		

ANNEX 1.A2

*Specialisation Index***Specialisation Index**

Definition: the specialisation index is computed according to the Balassa-Hoover index, which measures the ratio between the weight of an industry in a region and the weight of the same industry in the country:

$$BH_i = \frac{Y_{ij}/Y_j}{Y_i/Y}$$

where Y_{ij} is total employment of industry i in region j , Y_j is total employment in region j of all industries, Y_i is the national employment in industry i , and Y is the total national employment of all industries. A value of the index above 1 shows specialisation in an industry and a value below 1 shows lack of specialisation.

Chapter 2

Regional Approaches to Economic Development Challenges

Introduction: The emergence of a new debate on regional policy

As observed in Chapter 1, the assets of Chile's regions are very diverse, and their potential for growth will largely depend on how public policy is adapted to their specific characteristics. At the national level, this requires greater emphasis on “unlocking” regions' potential to contribute more to national objectives. This leads in turn to renewed interest in regional policy as an integral element of national economic management and not simply as an instrument for reducing disparities.

Chile is becoming interested in a more concerted approach to regional policy. In this respect, it is part of a more general trend apparent throughout the OECD area. After a long period in which regional policy was marginal, it has become a more central element of policy in OECD countries (see Box 2.1). The view is that comprehensive regional policies can complement national economic and structural policies by helping to generate growth in the regions.

Up to now, Chile has not had a clearly identifiable regional policy and interventions at the regional level have been largely defined from the centre.

Box 2.1. Towards a comprehensive place-based approach to regional development

Over the past decade, regional policy has been a subject of debate, formal review and/or new legislation in many OECD countries. There is widespread evidence of new policy thinking and an identifiable shift in the regional policy “paradigm”. In the past, regional policy was used particularly to absorb “shocks” (industrial restructuring, rural decline, etc.) and to support particular regional economies that had failed to modernise. The new paradigm of territorial policy is focused on developing regional potential for competitiveness. The precise nature of change is country-specific, but there are common features to the new territorial approach to development: i) regional competitiveness is strengthened by focusing on growth-oriented activities (notably innovation, education and employment). ii) policies are context-specific, based on the territory's particular strengths and challenges; iii) use of comprehensive regional economic strategies instead of national sectoral instruments: the different aspects that affect the development of a territory are considered in an integrated way; iv) different levels of actors (national, regional and local) intervene in the policy process.

This is in line with Chile's strongly centralised administrative system, which leaves little scope for action at the regional level. However, in recent years some initiatives and governance reforms suggest a move towards greater emphasis on the regional dimension of economic development.

This chapter looks at the main arguments in favour of introducing or reforming regional policies in order to remove the principal challenges to regional development identified in Chapter 1. It has seven sections. Section 2.1 examines innovation policies. Chile's innovation system is strongly centred on public R&D, which is largely located in the capital, Santiago; this makes it difficult to develop producer-centred regional innovation systems in locations far from the capital. It is argued that a key issue for Chile is to establish an innovation system that both supports action at the regional level and at the same time maximises the diffusion of outcomes from the core of the national system in Santiago. Section 2.2 focuses on business development in Chile. The government has a strong new strategy to support clusters and business development, which needs to take better account of regional assets and conditions and the opportunities they offer for productive diversification. This applies especially to the recently launched regional development agencies. They represent a promising means of creating regional frameworks for business development and public/private partnerships. However, their productive strategies ("agendas") still need to strengthen their regional orientation in order to respond fully to the needs and opportunities of the different regions. Section 2.3 studies human capital and education policies and argues that Chile must increase its efforts on education and human capital for reasons of both equity and competitiveness. Local availability of knowledge and skills and the links of the education and training system to the demands of regional labour markets are increasingly important in the context of a more regional approach to economic development. At the same time, improving access to education of quality for the underprivileged segments of population will be crucial for tackling the challenge of income inequalities in Chile. This issue relates particularly to improvements in the technical and financial resources available to municipalities for carrying out their devolved responsibility for public primary and secondary education.

The need to shift from sectoral policies focused on agricultural subsidies towards comprehensive rural development programmes is the focus of Section 2.4. Rural development programmes that integrate agricultural and non-agricultural policies and strengthen links between rural and urban areas would be better adapted to the diverse socio-economic characteristics of rural territories. Regional institutions are called to play an active role in rural policies, which should be less closely attached to specific sectors and more concerned with territorial co-ordination of different actors and policies. Section 2.5 focuses on infrastructure investments as a main policy tool for increasing the potential competitiveness of the different regions by improving their accessibility. It

argues that the potential of infrastructure policy can only be fully exploited if territorial synergies exist with other economic development policies and thus ensures that local needs and potentialities are comprehensively addressed.

This leads to a discussion in Section 2.6 of the importance of strategic frameworks for regional policies. Initiatives such as the RDAs or the Chile Emprende programme suggest that public policy is evolving towards a more territorial orientation. However, in spite of the considerable advances of the past years, the agenda for regional economic development is still largely decided from the centre. In addition, public investment mechanisms have a sectoral logic and represent a specific challenge for co-ordinating actions and resources across departments to support regional development objectives. National investment in the regions has risen significantly. Yet, the focus remains more on national priorities than on regional planning. This has of course had the advantage of ensuring strong control over fiscal expenditures. However, these mechanisms may fail to respond to specifically regional opportunities and to finance territories' multi-sectoral initiatives. Moving towards regionally integrated policies will imply strengthening the institutional framework at the regional level.

2.1. The focus on innovation: from a centralised policy focus to a regional approach

In the past, OECD industrial policies supported individual firms, strategic industries, infant industries, and the attraction of foreign direct investment (FDI). From several standpoints, this policy orientation is now problematic. Trade regulations and competition policy at the international level constrain a country's ability to provide direct subsidies to firms. Many OECD countries now take a strong "hands-off" stance towards what is typically termed industrial policy, backed by a liberal approach to economic policy (OECD, 2005a). Increasingly, governments are looking to innovation policy, rather than traditional industry policy, as a means to support key sectors, key technologies and key production hubs, with an added accent on the regional dimension of innovation.

Pressing issues such as globalisation, a more technology-driven economy, ageing of populations, environmental concerns, etc., also push OECD governments to change their views on innovation and the systems that manage it. As a result, governments are broadening the definition of innovation and the objectives of innovation policy, with cluster policy often playing a key role. In Chile as well, innovation has become a central concern and is closely linked to Chile's measures to support its key export sectors and industry clusters.

At national level, Chile has significant strengths on which to build its innovation capacity and make innovation policy a more active source of economic growth; but the national innovation system also has weaknesses.

The strengths were highlighted in the recent OECD report on innovation in Chile (OECD, 2007a) and broadly correspond to:

- **A favourable institutional framework.** Major strengths in Chile's environment for innovation include quality and reliability of institutions and political stability, strong macroeconomic performance, an open trade regime and favourable legislation for FDI.
- **A core of competent actors, though still lacking critical mass.** Chile has now acquired some experience in learning how to increase value added through innovation in some resource-based industries, including science-based new technology, especially biotechnology. This concerns both the development of business competencies and the development of supporting institutions, such as *Fundación Chile*.

In addition, the report points to opportunities to enhance the innovation system, such as: further progress towards becoming a leader in certain industry and services sector niches; greater use of new knowledge to increase value added in resource-based industries; consolidation of strong clusters to develop new innovative services and industrial activities; creation of new opportunities to diversify production by building around or creating bridges between poles of strength; exploitation of Chile's environmental advantages to capture a larger share of the high-end tourism market. Many of these recommendations refer, in practice, to activities that are strongly regionalised in specific parts of the country. This points to the argument for a more regional approach to targeting innovation policy to support national objectives.

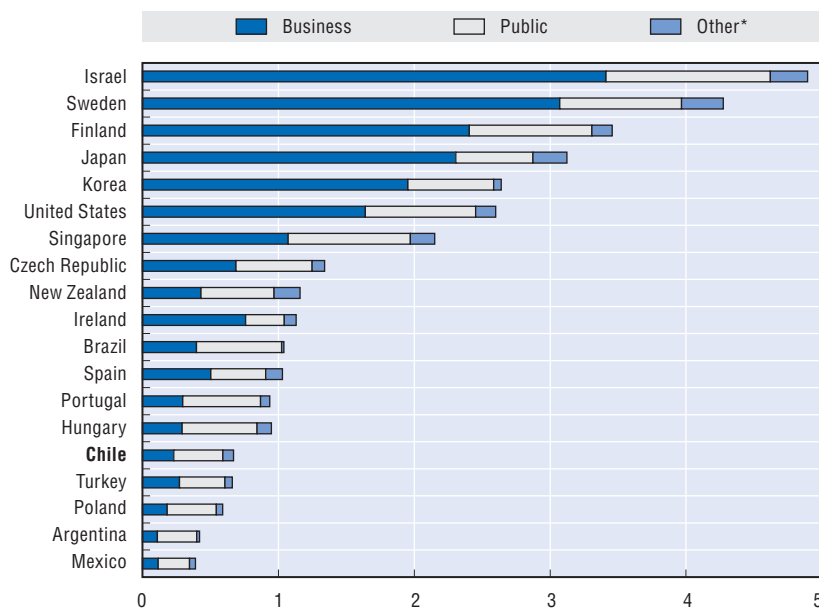
Regional innovation as a key instrument of national economic policy

It has been observed that some of the weaknesses of national innovation systems in OECD countries, particularly those relating to cluster development and network building, could usefully be addressed through a regional approach. Evidence from OECD countries suggests that the capacity of regions, whether urban or rural, to support processes of learning and innovation is a key source of competitive advantage. This finding is complemented by academic research identifying the regional level as a key source of innovation. In spite of the difficulties that OECD countries experience in implementing a cross-disciplinary and multi-level innovation policy, there is growing interest – visible in large and small, centralised and decentralised countries – in doing so.

Two specific challenges for implementing a regional innovation approach in Chile are: the concentration of most innovation activity around the capital, and the reduced role of the private sector in the financing and performance of R&D (OECD 2007a). While many key industries are located in specific regions, research and development (R&D) spending is concentrated in and around Santiago. OECD

indicators show that Chile's gross domestic expenditure on R&D (GERD) is low by the standards of most OECD countries (see Figure 2.1). A striking feature is the dominance of R&D by the public sector. The relatively concentrated pattern of publicly funded R&D is an important influence on the ability of regions to develop a stronger focus on innovation. Close to 40% of total R&D expenditure is carried out by universities, mainly located in Santiago: the two largest Santiago universities (the University of Chile, and the Catholic University of Chile) account for a large share of university-performed R&D.¹ Most private investment is also carried out in Santiago,² while the main industries in the regions perform little R&D. Additionally, only a small share of Chilean firms put the development of new products and processes at the centre of their business strategy. This is probably a result of an economy based on natural resources in which technology is imported rather than developed. Finally, the multinational enterprises involved in Chile's main export sectors do not see Chile as a base for R&D and contribute relatively little to innovation in comparison to their weight in terms of employment and value added: the share of foreign affiliates in business R&D is very low, only 3.6% in 2002, considerably behind other Latin American countries such as Mexico (32.5%, 2001) and Argentina (23.2), and OECD countries such as Ireland (70.3%, 2005), the United Kingdom (38.7%, 2005), Spain (26.3%, 2005) or Canada (24.9%, 2004) (UNCTAD, 2005, pp. 127).

Figure 2.1. **R&D Intensity in selected countries, 2004 or latest available year**



* Other national sources and foreign funding.

Source: OECD, RICYT and CONICYT.

Co-ordinating innovation efforts

Another specific challenge to improve innovation in Chile's regions is related to the co-ordination of: i) the various national agencies offering innovation-related programmes; ii) the co-ordination of national agencies with research and initiatives carried out by regional universities and research centres; and iii) the harmonisation of all these initiatives with the regional development strategy of the regional government. Co-ordinating innovation policy across departments is a common challenge for governments in OECD countries. As governments attempt to respond to greater external and internal complexity and dynamism, policy co-ordination becomes the main means of achieving greater coherence. Until the recent launching of the national innovation strategy, Chile did not have a formal mechanism for defining or

Box 2.2. Agencies for innovation at the national level

The National Innovation Council for Competitiveness (CNIC) is a permanent body which counsels the President of the Republic on science, technology and innovation policies. It was first established by decree in November 2005 and renewed in October 2006 by President Bachelet. Its goal is to give advice on the identification, formulation and execution of policies, programmes and measures relating to innovation, including fields of science, human resource formation, and the development, transfer and diffusion of technologies. Among its members are the ministers of Industry, Economy, Education, Public Works and Agriculture, the President of Conicyt and the Executive Vice-President of Corfo.

Conicyt, the National Commission for Scientific and Technological Research, was created in 1967 as an advisory body to the government. It is the main national science and technology (S&T) body and acts as co-ordinator of the Chilean S&T community. Its main task is to promote advances in the following fields: scientific and technological research; training of human resources; development of new areas of knowledge and productive innovation. Conicyt is politically overseen by the Ministry of Education but has its own budgetary endowment.

Another initiative is **Chile Innovates**, managed by the Ministry of Economy, with the participation of other institutions, such as Conicyt, Corfo and FIA. Its main task is to enhance competitiveness through the promotion of technological innovation. It has five areas of work: identification of technology opportunities, biotechnology, information and communications technologies (ICT), sustainable production, and promotion of quality in the production process.

Source: National Innovation Council; Conicyt; Chile Innovates.

Box 2.3. The national innovation strategy

The national innovation strategy sets the main guidelines for promoting innovation and competitiveness over the long term. It is an ongoing process that may lead to the reorganisation of national institutions. A first volume of the strategy was delivered to the President in January 2007. It noted progress made during the past 20 years and drew attention to the need to enhance national growth in the long term. In particular, Chile needs to add knowledge to production, improve human capital, develop a systemic view and create new alliances that combine private entrepreneurial efforts with public participation. Goals to be reached by 2020 include:

- Increase R&D spending as a percentage of GDP, from a modest 0.68% in 2004 to at least 2.3% by 2020.
- Invert the relation that currently exists between total public and private spending on R&D, by reducing the former from 53 to 32%, and increasing the latter from 37 to nearly 55%. By 2021, 50% of resources should come from the private sector and reach 1.24% of GDP (versus 0.25% in 2004).
- Diversify production by reducing the proportion of the 25 main export products from 76% to no more than 50% of total exports.
- Improve levels of educational attainment.

This first volume of the national strategy concludes that to grow steadily Chile needs two main axes: strengthening existing and competitive clusters, mainly through knowledge; and identifying and strengthening other sectors and activities in order to diversify production. Among other changes these would make it possible to approach the situation in OECD countries. In order to identify priorities, a study was carried out to create a map of Chile's most promising production areas (already referred to in Chapter 1).

A second volume of the national innovation strategy was presented in March 2008. This document establishes the main guidelines for public action regarding the three main components of the national strategy for innovation:

- **Human capital:** To establish a lifelong learning perspective, providing education of quality that is accessible to all.
- **Science, technology and research:** To create a platform to strengthen the generation and diffusion of scientific knowledge, in line with Chile's social and productive requirements.
- **Entrepreneurial innovation:** To establish an innovative entrepreneurial system oriented to the generation of value added.

This second volume argues that to move successfully towards a "know-how" economy it is necessary to strengthen and make more coherent currently diverse and fragmented innovation efforts. At the same time, it recognises the basic role of the state in providing a framework and the necessary incentives to involve the private sector as a key actor in the innovation process. This report also establishes a roadmap for developing the country's eight main competitive clusters.

Source: National Innovation Council.

implementing an explicit innovation strategy. Priorities were defined by a combination of state agencies such as Corfo (the Economic Development Agency) in the Ministry of Economy, Conicyt (the National Commission for Scientific and Technological Research) in the Ministry of Education and FIA (the Agrarian Innovation Fund) in the Ministry of Agriculture.

To deal with these co-ordination challenges and to improve commercial outcomes and increase collaboration between the research community and the business sector, the National Innovation Council for Competitiveness of Chile launched the National Innovation Strategy (Box 2.3). This initiative appears to be an excellent step towards co-ordinating efforts and setting guidelines for innovation policy. It identifies the main challenges and presents an agenda for dealing with them, which involves the country's principal national institutions. The strategy goes beyond innovation, involving aspects related to promoting competitiveness over the long term, as is also the case for the roadmap for developing more competitive clusters. Although the strategy is focused on national issues, it provides the framework for the development of innovation and competitiveness policies at the regional level as well.

Towards more regionally based innovation

The establishment of a framework to improve co-ordination at the national level has paralleled growing interest in more regionally based innovation. In 2000, Conicyt launched the regional programme on science and technology, which counts, to date, 11 scientific and technological centres in different regions of the country (see Table 2.1). The objective of this initiative is to stimulate the development of centres of excellence in disciplines or specific areas of research that are consistent with regional assets and advantages. It seeks to raise the level of research and training in the regions in order to reach critical mass. While the initiative is managed by Conicyt, it is a joint effort of the national government in conjunction with regional governments, universities and the private sector. Apart from its territorial approach, this initiative has the advantage of inter-institutional articulation: it builds and strengthens regional scientific and technological capacities in topics that are relevant to the regions' economic and social development according to the priorities established by the respective regional governments and their co-funding institutions (the project partners). These are in line with the development strategy of the regional government and with the national innovation strategy which sets the main national priorities (Box 2.3). However, few projects have been undertaken so far, and they represent a modest share of Conicyt's total budget (2.9% for 2008).

In addition, the launching of the Competitiveness Innovation Fund of Regional Assignment in 2008 appears as a major effort to improve innovation in the regions (see Box 2.4). The 2008 budget of the Competitiveness Innovation

Table 2.1. **The regional scientific and technological centres**

Name	Location	Partners	Focus
<i>Centro de Investigaciones del Hombre en el Desierto</i> (CIHDE) (Man in the Desert Research Centre)	Arica Parinacota	CONICYT, Arica and Parinacota Regional Government, Tarapacá University	Archaeology and anthropology
<i>Centro de Investigación Científico para la Minería</i> (CICITEM) (Scientific Research for Mining Centre)	Antofagasta	CONICYT, Antofagasta Regional Government, Catholic University of the North, and Antofagasta University	Mining and biodiversity of the arid, semi-arid and hyper-arid area of the Atacama Desert
<i>Centro Regional de Investigación y Desarrollo Sustentable de Atacama</i> (CRIDESAT) (Regional Centre of Sustainable Research and Development)	Atacama	CONICYT, Atacama Regional Government, Atacama University, Corporation for the Development of the Atacama Region and the miners' trade union of Copiapó	Sustainable competitiveness in the Atacama Region
<i>Centro De Estudios Avanzados en Zonas Áridas</i> (CEAZA) (Centre for Advanced Research in Arid Zones)	Coquimbo	CONICYT, Coquimbo Regional Government, La Serena University, Catholic University of the North, Institute of Agricultural Research, INIA, Intihuasi.	Climate change, hydrology, biology
<i>Centro Regional de Estudios en Alimentos Saludables</i> (CREAS) Regional Centre of Healthful Food	Valparaíso	CONICYT, Valparaíso Regional Government, Catholic University of Valparaíso, Federico Santa María Technological University of Valparaíso, Institute of Agricultural Research, INIA La Cruz.	Research on healthful food
<i>Centro de Investigación de Polímeros Avanzados</i> (CIPA) (Centre for Advanced Polymer Research)	Bío Bío	CONICYT, Bío Bío Regional Government, Concepción University, and Bío Bío University	Polymer science
<i>Centro de Genómica Nutricional Agroacuicola</i> (CGNA) (Agro-aquaculture Nutritional Genomic Centre)	Araucanía	CONICYT, Araucanía Regional Government, Institute of Agricultural Research, INIA Carrillanca, Catholic University of Temuco, and La Frontera University	Agro-aquaculture
<i>Centro de Ingeniería de la Innovación – CIN</i> (Centre for Innovation Engineering)	Los Ríos	CONICYT, Los Ríos Regional Government, Centre of Scientific Studies (CECS)	Technology transfer and innovation
<i>Consorcio de Investigación en Nutrición, Tecnología de los Alimentos y Sustentabilidad del Proceso Alimentario en la Acuicultura</i> (CIEN AUSTRAL) (Group for Research in Nutrition, Food Technology, and the Feeding Process in Aquaculture)	Los Lagos	CONICYT, Los Lagos Regional Government, Austral University, and Santiago University	Development of aquaculture food and its nutritional effects in fish, molluscs or crustaceans
<i>Centro de Investigación en Ecosistemas de la Patagonia</i> (CIEP) (Patagonia Ecosystems Research Centre)	Aysén	Aysén Regional Government, Austral University of Chile, Concepción University, INIA, Salmon Technological Institute, Ice Fields Institute, SHOA, Fishery Industry Trade Federation, Salmon Industry Association, Coyhaique Tourism Association, University of Montana in the US, and University of Siena, Italy	Research on aquatic eco-systems and sustainable development of productive activities in aquatic environments.
<i>Centro de Estudios del Cuaternario de Fuego-Patagonia y Antártica</i> (CEQUA) (Centre for Quaternary Period Research in Tierra del Fuego, Patagonia, and Antarctica)	Magallanes	Magallanes and Chilean Antarctic Regional Government, Magallanes University, Chilean Antarctic Institute, and Institute of Fishing Development, IFOP.	Multidisciplinary scientific research on the evolution of the natural environment

Source: Conicyt.

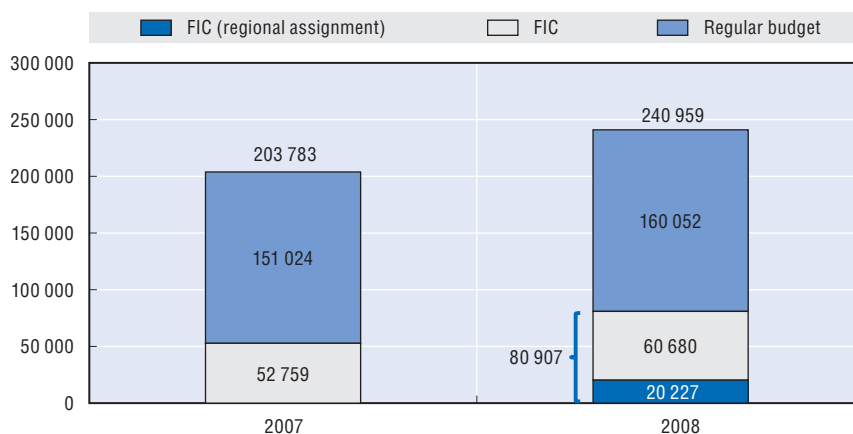
Box 2.4. The Competitiveness Innovation Fund of Regional Assignment

The Competitiveness Innovation Fund is the instrument that finances the implementation of national and regional innovation policies focused on strengthening the national innovation system. It obtains its resources from the newly established mining royalty. Starting from 2008, 25% of the Fund's resources will be regionally assigned, 60% will go to mining regions, and 40% to non-mining regions. The regional government, taking into consideration the national innovation strategy, the corresponding regional development strategy, the strategic innovation agenda and the plans for improving competitiveness of the regional development agencies, will define the use of these resources. The projects have to focus on science, applied research, innovative entrepreneurship, specialised human resources formation and development, or the transfer and diffusion of technology. Finally, the resources must be transferred, through agreements, to *Corfo*, *Innova Chile*, *Conicyt*, state universities or those recognised by the state, and/or technological scientific centres of excellence. The distribution of these resources among the regional governments will be done through a resolution of the Sub-secretariat for Regional Development.

Source: Subdere.

Fund amount to CLP 80 907 million (more than USD 154.5 million), or close to 30% of total public investment for innovation in 2008 (see Figure 2.2). Regions will participate in assigning 25% of these resources and thus in decisions on

Figure 2.2. **Public Investment in Innovation**
(Millions of Chilean Pesos of each year)



Source: Ministry of Economy of Chile.

the use of public resources for innovation, giving them the opportunity to link innovation investment to regional priorities.

The Competitiveness Innovation Fund of regional assignment is an important step towards directing more resources to the different regions of Chile. Yet, an important challenge will be to merge national and regional priorities in implementing projects financed by the Fund in a way that benefits both regional and national competitiveness. The programmes have to take into consideration the national guidelines set in the innovation strategy, and programme execution is supervised by the innovation division of the Ministry of Economy. It is worth recalling here that even in decentralised countries, support from the centre is essential. This relates to the ambition of the programmes, which is probably limited if they focus only on building relational assets/social capital among economic actors at local level, and involves, in particular, helping regional actors understand and react to global challenges and providing innovative solutions to help them gradually integrate new approaches into their economic development programmes. The case of the French regional innovation strategies is a good example of the support the national government can offer in implementing regional innovation strategies (see Box 2.5).

It will be crucial to reach a good balance between the main priorities of the national innovation strategy and the regions' specific conditions,

Box 2.5. Regional innovation strategies: toolkit for French regional authorities, 2007

When applying for structural funds, French regions prepare documents on their development strategies and forward them to the EU Commission. Brussels often considered that such papers lacked coherence and that the policy analysis could be more robust. The French government therefore decided in 2007 to create a guide that would help regions to assess their strengths and weaknesses and would improve the decision-making process. The guide was completed in November 2007 after discussion and consultation with several pilot regions. It has now been communicated to all regions.

The guide provides an overview of the main factors determining regional growth in modern economies. It describes the overall components of the innovation system and indicates a number of regional indicators to calculate as well as benchmarks to consider. It provides methodological keys for establishing a regional strategy based on the diagnosis. Priorities are selected according to a number of criteria. Monitoring of programmes is made possible through the use of appropriate indicators and references.

Source: OECD Territorial Review of Poland (2008).

opportunities and needs. Two things will be especially important in reaching this balance: on the one hand, regional development and productive agendas have to be established on the basis of regional assets, strengths and opportunities (see below); on the other, the regional governments and regional development agencies need sufficient autonomy to adapt the national innovation guidelines to the regional priorities established in the regional agendas. Canada's Atlantic Innovation Fund is a good example of a deliberate alignment of actions between departments which sensed that both innovation and regional development objectives could be well served by a joint cross-departmental approach (Box 2.6).

The challenge for the regional governments and for national public agencies such as Corfo is to show that their recent initiatives at the regional level (such as the regional development agencies) can make a strong contribution to reaching the goals of the national strategy by developing their own regional productive agenda. Some parallels can be seen with the United Kingdom, where the 2008 Innovation Nation White Paper sets out a new

Box 2.6. Atlantic Innovation Fund

The Atlantic Innovation Fund (AIF) is a programme designed to make strategic investments in research and development initiatives that directly contribute to the development of technology-based economic activity in Atlantic Canada. The AIF was established in 2001 as an Atlantic Canada Opportunities Agency (ACOA) programme with funding of CAD 300 million for five years. It was then renewed for a further five years with an additional CAD 300 million. Its objective is to increase the region's capacity to carry out leading-edge R&D and to encourage new, technology-based economic activities. It was designed to fill a funding gap in Atlantic Canada that prevented institutions and firms from accessing national science and technology programming and to act as a catalyst to bring together research institutions and the private sector for major investments in research capacity.

The objectives of the AIF are to:

- Increase activity in, and build capacity for, innovation and research and development (R&D) that lead to technologies, products, processes or services that contribute to economic growth in Atlantic Canada.
- Increase the capacity for commercialisation of R&D outputs.
- Strengthen the region's innovation capacity by supporting research, development and commercialisation partnerships and alliances among private-sector firms, universities, research institutions, and other organisations in the Atlantic system of innovation, and increase their critical mass.
- Maximise benefits from the national R&D programmes.

Box 2.6. Atlantic Innovation Fund (cont.)

Eligible projects: The AIF finances R&D and related initiatives in the areas of natural and applied sciences, as well as social sciences, humanities, arts and culture, where these are explicitly linked to the development and commercialisation of technology-based products, processes or services. In order to maximise the economic benefits to Atlantic Canada, the AIF favours projects that provide the best opportunity for future growth. These are found in sectors in which Atlantic Canada has a comparative advantage in emerging knowledge-based clusters. These include aquaculture, environmental technologies, information technologies (including communications and geomatics), health and medical technologies, ocean technologies, and biotechnology. Investments made through the AIF focus on, but are not restricted to, these growth sectors. The AIF also encourages the development of technologies that allow resource sectors such as oil and gas, agriculture and agri-food, fisheries, forestry and mining to maintain and improve their competitive positions.

Eligible recipients: The AIF entertains proposals from commercial and non-commercial entities such as universities, colleges, research institutions and private-sector firms. Federal departments, including federal research laboratories and institutes, and provincial government departments are not eligible. Nevertheless, they may be active participants in, and may contribute funding to, AIF projects.

Financial assistance: Contributions are determined on the basis of what is required to allow a project to proceed. Project proponents are encouraged to lever financing from other sources. One way to do so is to leverage financing from national programmes such as the Canada Foundation for Innovation, the national granting councils and the National Research Council's Industrial Research Assistance Programme. Contributions under the AIF to private-sector projects involving the commercialisation of a technology, product, process or service are repayable based on the commercial success of the project. Contributions to non-commercial organisations are normally not repayable.

Results to date: Under the first five competitive rounds of the AIF programme, 626 project proposals were received. Of these, 192 were approved, and up to CAD 521 million in AIF assistance was committed towards projects valued at CAD 1.2 billion. For every CAD of AIF funding for approved projects, project proponents are expected to leverage another 1.33 CAD from other public or private sources.

From 2001 to 2004, Statistics Canada reported that R&D performed by the private sector increased by 20% in Atlantic Canada, while only increasing nationally by 1%. ACOA's AIF is considered by experts as a key source of this growth in private-sector R&D activity. The AIF has proven to be a strong catalyst for encouraging partnerships among businesses and the research community, including higher education institutions.

Source: ACOA.

framework for innovation policy that includes “place innovation” largely because the regions (regional development agencies and some cities) have proven that they are able to deliver innovation policy that complements national policies (OECD 2008b).

The benefits of a regional innovation system are particularly clear in Chile, where policy making remains relatively centralised and policy formulation is distant from recipients.³ The advantages include the help such policies can give governments for diagnosing regional economic strengths and opportunities, clarify market linkages among economic actors, dialogue with “systems” of public and private actors, and focus public resources on key sectors or projects. This more regionalised system would need further involvement of the business sector and other non-public stakeholders, not only in setting regional priorities for innovation but also in supporting an innovation system currently strongly focused on public resources.

2.2. Co-ordinating productive development⁴ in the regions

The traditional concentration of productive activity in a few sectors and regions has led to a debate in Chile about the advantages of a bottom-up, regionally based method for better targeting regional needs and opportunities. Currently, clusters are established in few sectors and focus more on national strategies than on regional opportunities. This can be an obstacle for further productive diversification and thus for taking further advantage of the different possibilities offered by Chile’s regions. To address this challenge, regional development agencies have been created as the framework for transferring responsibilities for productive development to the regions. Yet, there are concerns about whether these agencies will take a mainly regional or a national perspective when designing regional agendas and about the nature of the clusters to be developed.

In the OECD area, the new regional policy paradigm calls for capitalising on local assets, which are often based on the region’s accumulated skills and practices. Developing strategies that will have an impact on a given region’s competitiveness requires identifying the sources or potential sources of the region’s competitive advantage. In OECD countries, the targeting of cluster policies may be top-down (based on national policy), bottom-up (regionally driven) or a combination of the two. Top-down selection can provide a framework for generating coherence and synergies among the different policies supporting innovation nationwide. In some cases, national programmes provide only a general setting and rely on regions to identify target clusters in their jurisdictions as a way to detect and develop regional potential. Table 2.2 shows the main advantages associated with both approaches to cluster selection.

Table 2.2. **Advantages of top-down and bottom-up selection of clusters**

Identification of clusters	Main advantages
National top-down	<ul style="list-style-type: none"> • Policy coherence of the project with other strategic national policies (like S&T policy). • Possibility to select several sectors with synergies among them. • Option of targeting leading regions that significantly benefit the national economy or targeting lagging regions to overcome imbalances in performance across regions. • May prevent wasteful competition among regions that results in an overall welfare loss for the country. • Co-ordination at the central level can serve to increase an initiative's potential effectiveness.
Regional bottom-up	<ul style="list-style-type: none"> • Regional authorities may have more information and contacts than a central government with respect to target needs. • A territorial analysis may help to find untapped regional resources that would not be identified by national statistical methods. • Regions are better able to identify possible linkages among actors in the clusters or barriers to cluster development. • They may benefit more directly from the economic activity generated by successful clusters and have more chances to involve different actors in the strategy.

Source: OECD 2007b, adapted.

Because both selection processes have strengths and weaknesses, the articulation across levels of government often implies a shared responsibility between national and regional levels as a way to enjoy both the advantages of a national framework to support the general strategy and the ability to identify and mobilise local advantages embedded in the territory. Box 2.7 gives examples of this sharing of responsibilities for cluster selection.

As mentioned, in Chile, the emphasis on clusters is mainly a result of the country's economic structure, which is unusually concentrated around a limited number of industries (mostly exploitation of natural resources). The strategy for cluster selection has thus been top-down and focused on leading sectors. However, two new trends have emerged over the last couple of years:

- **Identifying further possibilities for diversification.** As discussed in Chapter 1, there is some agreement that Chile should not rely exclusively on the sectors that have driven growth so far, but must use these as a basis for developing new sectors and activities.
- **More active regional participation.** The emergence of Chile's regional development agencies and experience in other countries suggest that cluster policy can bring into play active participation by regional actors in both the public and private sectors (Di Meglio, 2008).

Within this context, the national innovation strategy, launched by the National Innovation Council, recognised that to grow steadily Chile needs a strategy based on two main axes: strengthening existing clusters mainly in natural resources (in which Chile is competitive today); and, on the basis of its acquired advantages, identifying and strengthening other sectors and

Box 2.7. Collaborative mechanisms for selecting cluster targets in OECD countries

A national policy for targeting clusters could rely on a different level of government (or on decentralised central government agents), or could share responsibility for the selection and funding of recipients. In **Sweden** the national government has asked regional governments to adopt regional growth plans that make explicit which areas of regional specialisation are most important for the region's economic development. Because the regions have better information on the regional economic situation, they can help the national level identify potential targets for their programmes. A similar strategy is used in **Germany** by the GA networking initiative. The *Länder* identify the most prominent networks as part of their regional strategy for funding under the GA programme. The **Japanese** Industrial Cluster programme relies on the national ministry's regional officers, in consultation with local and prefectural authorities, to identify the most promising projects for consideration. The **Czech** Klastry programme is administered by the national agency CzechInvest but has as an explicit goal to build regional capacity for supporting clusters. The regions are involved in the process of identifying and understanding their clusters, which are mainly composed of domestic SMEs. One of the main goals is to identify and support new sectors and sub-sectors with the potential and the will to improve their competitiveness. Several initiatives to engage regional actors (cluster facilitator training, support for cluster initiatives, incentive to incorporate at least one university) are an important feature of this programme.

Source: OECD 2007b.

activities in order to diversify the economy. To this end, the National Innovation Council carried out a study in 2007 to create a map of the most promising productive sectors for the next decade. The basic criterion was the interface between the potential of various sectors for global trade and the domestic effort required to develop them. So far eight clusters have been prioritised and policy instruments to promote their development have been designed by the government. They are: outsourcing; fish farming; tourism; copper mining and sub-products; pork and chicken farming; processed food for human consumption; primary fruit industry; and financial services. Most of these sectors are already mature, linked mainly to natural resources, which already have clear advantages.

This approach has much potential. The map of promising clusters made it possible to identify existing strengths, challenges and obstacles for these production areas to grow and to develop further. Several recommendations

were made for the development of each cluster and an implementation roadmap is being designed for each. Various horizontal needs were also perceived in the areas of human capital, R&D, access to international markets, a legal framework adapted to the clusters' needs, and clarification of environmental regulations and infrastructure, among others. However, more can be done to fully exploit regional productive advantages:

- It would be important to identify further possibilities for diversification and for adding value to currently developed sectors in order to transform static economic advantages into dynamic ones. With the exception of offshoring, the selected sectors are based in developed areas mainly linked to the primary sector. As discussed in Chapter 1, if the region's productive base is insufficiently diversified or if it depends too heavily on key large firms, there is a risk of vulnerability. Diversification will be important to protect Chile from fluctuations in global demand and world commodity prices. Similar challenges have been faced by other countries with a strong resource base, such as Norway (see Box 2.8).
- A regional bottom-up diagnosis may help to find untapped regional resources for diversifying the economy. It would also make it possible to take account of territorial spillovers among sectors and territorial dynamics. The cluster research carried out by the Innovation Council

Box 2.8. The challenge of diversification in Norway

In Norway, the discovery and extraction of oil and gas, including the development of related industrial activities in engineering and services have strongly affected the economy and have had a profound impact on the country's innovation and R&D system. Today, Norway has an economic structure that is still heavily dependent on natural resources, but efforts have been made to diversify the productive structure and to structure the economy in a more knowledge-intensive direction. A key strategic task for Norway has been to prepare for "life after oil". On the one hand, government research and innovation policy, building on dynamic entrepreneurship in certain fields, has been promoting the development of new industries. On the other, demand from the oil and gas sector for specialised goods and services has been seen as an opportunity for knowledge-intensive/value added businesses. In this regard, in the early development of the petroleum sector (before 1993), Norway required foreign investors to invest in R&D and thus to reinforce local technological learning. The challenge now is to ensure that this learning experience can benefit other sectors that can play a vital role in compensating for the future decline in oil-related activities.

Source: OECD Reviews of Innovation Policy, Norway (2008).

mostly had a top-down sectoral orientation and gave too little consideration to place-based spillovers and interactions. It identified potential national strengths and the feasibility of growth of exports. This perspective is useful for building clusters involving dynamic export-oriented industries in which Chile has clear comparative strength. Nevertheless, it lacks a regional approach and thus information about the accumulated skills, practices and assets embedded in the different territories as potential source of competitive advantage. A place-based orientation would allow Chile to seek out new potential sources of growth. The setting up of the RDAs is creating the means of transferring responsibility for the selection of the productive agenda to the regions.

Chile's regional development agencies

Over the last years, Chile has developed a complex productive development structure, with a wide range of programmes carried out by different national public agencies such as the Chilean Development Corporation (*Corfo*), the Chilean Export Development Agency (*ProChile*), the Technical Co-operation Service (*Sercotec*) or the Agricultural Development Institute (*Indap*) either from their national headquarters or through their regional offices, but always in line with the national programmes and guidelines.

Between 2006 and 2007 the Chilean government established regional development agencies, in order to move towards an integrated approach to regional productive development. Fifteen RDAs have been established, one in each region. The process was directed by the Chilean Economic Development Agency, *Corfo*, and was co-financed by the Inter-American Development Bank (IDB). One of the main roles of the RDAs is to develop bottom-up regional agendas for productive development based on regional assets, strengths and opportunities. In this process, the region and the various regional actors – public and private sectors, universities, civil society – becomes responsible for a long-term strategic view of the region's productive development. At the same time, the agencies become the institutional framework to co-ordinate at the regional level the wide range of programmes and agencies dealing with productive development, which often have overlapping objectives. Finally, the agencies aim to encourage public-private support for micro, small and medium-sized enterprises (MSMEs) by co-ordinating the efforts of actors and the instruments that can help to enhance the competitiveness of MSMEs (Box 2.9 describes the agencies' specific objectives). The process has generated high expectations, because the agencies will be the channel for transferring responsibility for productive development to the regions and will play a key role in Chile's decentralisation process.

Box 2.9. Specific objectives of the regional development agencies in Chile

According to Corfo, the strategic objectives of the RDAs are:

1. **To develop local skills and networks of knowledge for competitiveness.** The agencies are meant to find and to bring together the region's best skills in order to form highly qualified networks.
2. **To build, validate and promote regional agendas** for productive development. The agencies' task is to build and to validate a regional agenda for productive development based on local vocations and opportunities. This agenda should reflect the regional government's development strategy. Likewise, RDAs are responsible for establishing a monitoring system for the agenda, with periodical public accounting.
3. **To facilitate the co-ordination of different productive programmes,** initiatives and policies, either private or public. One of the main purposes of the RDAs is to stimulate agreements and commitments by public and private actors concerning initiatives related to improving regional economic competitive skills, strengthening productive clusters and other production-related issues.
4. **To strengthen the competitiveness of MSMEs.** The agencies will work to co-ordinate and link local actors and production support from public agencies to meet the competitive needs of regional MSMEs.
5. **To provide information and advice to regional actors about productive/business opportunities** in the region, and about entities that support the territory's productive development. To do so, the agency finances and operates an information service with access to accurate data.
6. **To favour a suitable environment for business.** To fulfil this role, agencies can seek expert management advice. At the same time, they can act as advisers to the regional government for the co-ordination of investments for the region's productive development.
7. **To develop intra-regional as well as international co-operation with other agencies.**

Source: Corfo.

Regional development agencies are common in OECD countries. Overall, they can be described as agencies that co-ordinate and drive economic development in a given geographical area and despite a great diversity in the details of their organisation and objectives, they generally share certain principal features and functions (Table 2.3).

Table 2.3. **Key functions of development agencies in OECD countries**

Development strategy	Both general and sector-specific for national authorities or for regional government, including task of managing stakeholder consultation process.
Responding to market failures	Related to specific economic actors or sectors or a general mandate to intervene in areas where market failures have been identified, usually on the basis of RDA action on economic intelligence gathering.
Business support infrastructure	Including incubators and other real estate for start-ups and new businesses.
Business support services	Provision of advisory services, often as delivery agents for national or regional business support programmes (<i>e.g.</i> mentoring programmes, one-stop shops for entrepreneurs, etc.).
Innovation awareness (technology transfer and diffusion)	Acting as liaison between local firms and the research community to help diffuse new technology or acting on behalf of national technology transfer bodies.
Financial services for SMEs	Providing loans or grants to small firms, usually as delivery agents for national programmes.
Attracting foreign investors	Engaging in marketing of the region, leading international outreach activities (trade fairs, etc.), preparing dossiers for potential investors.
Enterprise clubs and clusters	Animating clusters and providing support to build networking within clusters.

Like most regional development agencies in Europe, Chile's RDAs are structured as public or quasi-public bodies whose functioning and composition have close links with the private sector. They depend on the Chilean Economic Development Agency, *Corfo*. Yet, each agency is led by the region's intendant and is staffed by representatives of the region's public and private sectors. The agencies' Regional Strategic Councils have, at a minimum, nine representatives: four from deconcentrated national public bodies (the intendant and representatives of *Corfo*, *Sercotec*, and the regional representative of the Ministry of Economy), three from the regional private sector, and two from the regional public sector. The RDAs also have an executive director and support staff. In OECD countries even in publicly funded agencies, emphasis is often placed on their private-sector attributes (such as a private-sector style of management and approach, self-financing via user fees, joint ventures and public-private partnerships). This shows that these agencies are not simply offshoots of line ministries and that their functioning and approach are more akin to that of the private sector. As such, the governance structure of RDAs generally involves significant representation of the private sector and other non-governmental actors. In general, RDAs are expected to play a key role in improving relations between enterprises of all sizes and the public sector.

In addition to the national resources originally transferred to the agencies, *Corfo* transferred in 2007 the resources of several programmes⁵ to the RDAs. During 2008, additional resources for productive development will also be transferred to the RDAs to finance initiatives of specific public-private programmes for improved competitiveness (PMCs) based on the agencies'

regional agendas: the 2008 Chilean budgetary law indicated that at least 10% of the resources of national public agencies involved in productive development (*Corfo*, *Sercotec*, *SAG*, *Indap*, *Fosis*, *Conadi*, *Sence* and *ProChile*) should be directed to finance initiatives from the PMCs of the regional agencies. However these initiatives will receive additional support through agreements between the RDAs and private companies and research institutes. Finally, as of 2008, the National Fund for Regional Development (FNDR), the main national source of public investment for the territories, may finance initiatives emanating from RDAs (see Box 2.10). This shows the Chilean government's commitment to the RDAs as the institution for ensuring productive development in the regions. The aim is to co-ordinate the funding and activities of the deconcentrated public agencies involved through the RDAs. This will help to co-ordinate the diverse, and until now fragmented, sectoral initiatives in a common and coherent framework driven by the RDAs.

Box 2.10. Chilean RDAs' budget for productive development 2008

- Budget for RDAs' operations: USD 13 million (57% more than the preceding year).
- Resources to carry out the initiatives defined in the regional PMC: USD 67 million from the public agencies budget (*Corfo*, *Sercotec*, *SAG*, *Indap*, *Fosis*, *Conadi*, *Sence* y *ProChile*) (10% of their budget has to go to finance PMCs initiatives).
- The regional government through the FNDR can also finance productive development initiatives. These initiatives would not need to pass the social analysis of Mideplan.

This financing system is not very different from the one used in most RDAs in OECD countries. Their financing comes mainly from public sources, with the expectation that a successful agency will raise some revenue through user fees and that some funding from the private sector will come either as general support or through co-financing of specific projects or programmes. Some have an equity structure, with government bodies as majority shareholders, while others operate through direct grants from one or a combination of government sources. A review of development agencies across Europe shows a diversity of funding arrangements (though the EU stands out as principal funder of many, particularly in central and Eastern Europe). An important point made by the European Commission in its study of the functioning of such agencies is that the medium- to long-term nature of these

agencies' objectives implies that the funding must be predictable over a relatively long period.

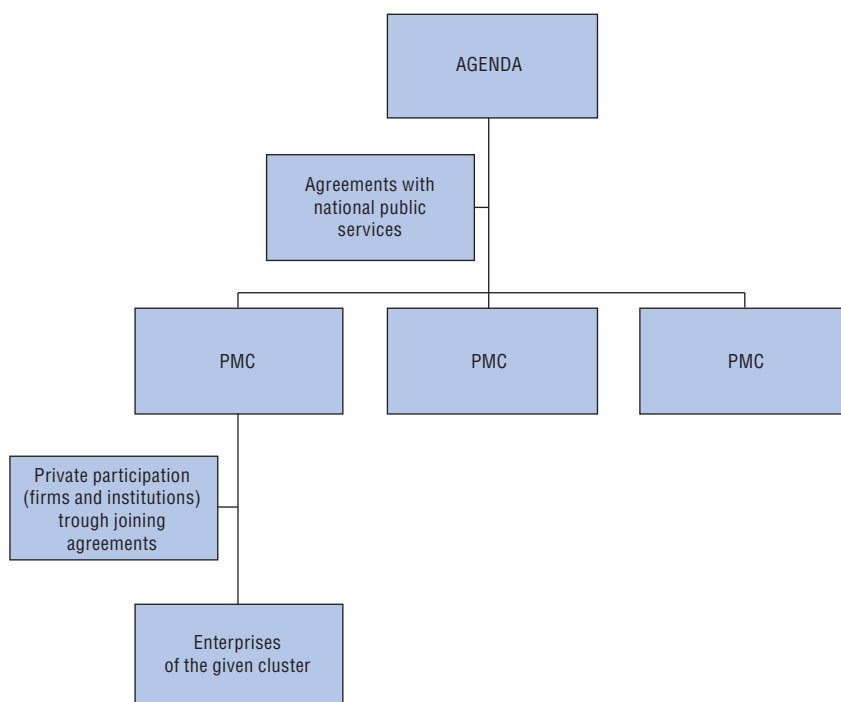
However, the number of employees currently working for the RDAs in Chile, contrast with the much higher figures observed in the RDA's of some OECD countries (Table 2.4). As noted, the Strategic Board of the Chilean RDA's is composed of a group of at least 9 people plus a team of technical support staff. The support staff has only 5 people per agency: an executive director, three professionals/ analysts, and an assistant. An increased group of professionals working for the RDAs will be necessary in the future in order to comply in an efficient manner with the different objectives of this new regional body.

Table 2.4. Funding for regional development agencies, selected examples

	Employees	Annual budget, EUR millions
One Northeast (United Kingdom)	250	400
SPRI – Basque Country (Spain)	92	53
Midi-Pyrénées Expansion (France)	27	3.1
ASNM Nordmilano (Milan)	30	9
NOM (The Netherlands)	50	13
Barcelona ACTIVA (Spain)	80	16

Need to move to more regionally oriented agendas

Regional development agendas are meant to plan strategic regional priorities based on regional strengths. During 2007 the Chilean agencies prepared their strategic development agendas, in which they identified regional opportunities, challenges for regional competitiveness, and plans to address and overcome these challenges. The role of these agendas is to define a set of productive axes for the region and serve as a basis for developing programmes for improved competitiveness (PMCs). By the beginning of 2008 each RDA had a productive development agenda which defines the priorities of its region for the short and medium term, which has been validated by the private sector, the public services and the regional community. The PMCs will identify a strategy and actions to improve the competitiveness of a subset of the prioritised clusters defined in the strategic development agenda. For prioritising the PMC the following criteria are to be taken into account: number and nature of the actors; competitive capacity of the area and its link with the export area; potential for clustering within the territorial productive chain; and sustainability of the business in the market. The PMCs will be implemented through a public-private partnership as defined in Figure 2.3. This represents a clear step towards integrating territorial spillovers and place-based dynamics in an integrated strategy for productive development.

Figure 2.3. **Regional strategic agendas and PMC**

Source: Corfo.

Once the RDAs are fully operational, one of their boards' responsibilities is likely to be the selection of the set of productive axes to be prioritised in the region on the basis of the following criteria:

- i) Clear expression of regional productive vocation.
- ii) Clear expression of the willingness of a relevant group of entrepreneurs from MSMEs to work together and in co-ordination with the main public and research institutions in the region.
- iii) Confirmation that the activity is viable from the financial and socio-environmental standpoints.
- iv) Participation of a sizeable number of smaller companies.

At the same time, the RDAs' activities will include actions related to the business environment, as well as cluster development *per se*. They will finance technical assistance and consulting services in areas such as cluster governance, management, and administration; training and business advisory services; technology support services; and marketing, market exploration, and exports. In addition, the PMCs will attract and co-ordinate finance and

programmes from other ministries and agencies. As of 2008 the regulations governing the FNDR have been adapted to allow it to finance initiatives emanating from RDAs.

At present, progress made in terms of the development agendas is irregular, with some promising initiatives. As Table 2.5 shows, the first regional agendas, launched at the beginning of 2008, include some innovative or value-added areas. This is the case for higher education, S&T and the

Table 2.5. **Targeted areas of the regional development agendas**

Regional agency	Prioritised area	Selected PMC (up to June 2008)
Arica-parinacota	High-technology agriculture; tourism; platform for International trade services.	
Tarapacá	Tourism; mining cluster (linked to SMEs); aquaculture; agriculture.	Tourism; mining; aquaculture.
Antofagasta	Advanced mining services; small-scale mining; aquaculture; tourism linked to fishing; biofuel; higher education.	Aquaculture and fishing; small-scale mining.
Atacama	Agriculture; aquaculture and fishing; tourism; mining.	Agriculture (grape); aquaculture and fishing; specialised tourism; mining.
Coquimbo	Agriculture (grape and derivative products); mining (small and medium-sized); tourism (astronomy); water resources; aquaculture and fishing; social services and higher education.	Agriculture (grape and derivative products); mining (small and medium-sized); tourism (astronomy); aquaculture/fishing (abalone; seaweed).
Valparaíso	Processed food; tourism; knowledge nexus; trade logistics; craft fishing; mining.	Primary fruit industry; specialised tourism; higher education.
Metropolitana	Specialised tourism; food industry; agro-industry; primary fruit and vegetable industry; supply of services for the mining industry; trade and services; offshoring.	Specialised tourism (Maipo route); offshoring; business tourism.
O'Higgins	Forestry and agriculture; tourism.	Wine industry; fruit industry; tourism.
Maule	Livestock; forestry; tourism; wine; fruits.	Tourism; wine; fruit.
Bío-Bío	Food products; tourism; fishing; forestry; metalworking; petrochemical and plastics; higher education (S&T); transport; energy.	Food products; higher education (S&T); tourism.
Araucanía	Forestry industry (furniture); agro-industry; livestock; fruit industry; tourism; aquaculture and fishing.	Agro-industry; fruit industry; tourism.
Los Ríos	Specialised tourism; forestry products; dairy products; high-quality meat; craft fishing, processed products; agro-industry.	Knowledge and cultural nexus; dairy products; high-quality meat; specialised tourism; agro-industry.
Los Lagos	Livestock (cattle; sheep); aquaculture (salmon); and fishing; forestry; horticulture; fruit trees; flowers; tourism.	Integrated tourism; dairy products; cattle meat.
Aysén	Tourism; aquaculture and fishing; livestock.	Tourism; aquaculture and fishing; livestock.
Magallanes	Tourism; livestock (cattle; sheep); aquaculture and fishing; forestry; horticulture; mining, energy; maritime logistic services.	Specialised tourism; livestock (sheep); maritime logistic services.

Source: Corfo.

establishment of a platform for international trade services. Some currently underdeveloped areas with much potential (e.g. specialised tourism) are also included. At the same time, some agendas seem to pay particular attention to synergies among the prioritised productive axes. However, progress by the regional agencies towards fulfilling their objectives is still very dependent on the commitment of the region's intendant. Additionally, in most cases the agendas have a cluster orientation which broadly reflects the study of the most promising sectors of production nationwide and the eight clusters prioritised in the national innovation strategy (Box 1.3). The agendas and PMCs selected so far are largely restricted to the sectors prioritised nationally (mainly mining, agriculture, fishing and primary fruit industry). These are mostly developed sectors linked to natural resources, which already have a clear impact in regions. While it is logical to take these sectors into account, one of the main values of the RDAs should be to plan development based on more diversified or value-added regional vocations and opportunities.

Qualified regional based strategic agendas will require an enlarged team of professionals working for the RDAs, with the capacity to make an in depth analysis of the different regional vocations and opportunities. It would also require a gradual evolution towards more territorially oriented RDA's. Likewise, there will be a need to further link the strategic agenda developed by the RDA's with the regional investment process. Currently the different public actors that intervene in the investment process are not required to consider the prioritised productive areas set in the regional agendas of the RDAs.

The challenge for policy makers is to balance support for key sectors with an approach that allows flexibility across regions. The articulation of the regional agendas with the national priorities is obviously important. But the mapping of key areas for regional development would be improved by searching for specific regional vocations that could be new sources of growth. If a more regionally focused orientation is followed, the process of setting the regional productive agenda and mobilising support for PMCs could be a very valuable exercise for the regions as well as for the central level. Drawing on regional knowledge and motivation is crucial, if a regional orientation to economic development is to be meaningful in Chile. This can also help to inform national policy making: the regions, with better information on the regional economic situation, would help the national level identify potential targets for programmes.

Improving co-ordination

If the RDAs are to play a stronger role as a catalyst of economic development at the regional level, they will need to strengthen links and improve co-ordination with the regional government. As of January 2007, responsibility for regional planning was transferred from the regional offices of the Ministry of Planning (Mideplan) to the regional government,

establishing the “third division” of the regional government. In this regard, it has been suggested that the RDAs will duplicate, when they do not diminish, the role of the regional council in regional development.⁶ Special care should therefore be taken to clarify the roles, responsibilities and interaction mechanisms of these two regional institutions, including an effort to strengthen links between the regional development agenda of the RDAs and the regional development strategy of the regional government.

The RDAs have started to improve regional co-ordination, a process that should go further. They are starting to develop agreements between public and private actors for initiatives directly related to business opportunities indicated in the regional development agendas, and the agendas are expected to encourage dialogue and consultation among the principal public and private actors. The fact that from 2008 at least 10% of the resources of national public agencies involved in productive development should finance initiatives from the PMCs of the RDAs should ensure negotiation and closer co-ordination. Finally, special care should be taken to link the representatives of the private sector in the strategic council of the RDA and the regional MSME community. This includes selecting qualified representatives from regional MSMEs and encouraging them to have regular contacts with the entrepreneurial community.

Micro, small and medium-sized enterprises

Internationally, SMEs are a key target for cluster and innovation policies and more generally for regional development policies. Although SMEs are a main source of national growth and job creation and key players in regional development, they appear to be under-represented relative to their contribution to national and regional economies. Chile is not an exception to this international trend.

A particular challenge for Chile’s regional economic policy is to involve micro, small and medium-sized enterprises, which play a crucial role in Chile’s economy. They account for more than 99% of firms and are responsible for more than 75% of jobs, yet they produce only 21% of national sales and only 4% of national exports (Table 2.6). Because productivity per employee in MSMEs is much lower than in bigger companies, their capacity to compete in national and international markets is limited.

The lack of skills and insufficient access to financial services or to innovation, among other factors (see Box 2.11) make it difficult for these firms to cope with the challenges of global competitiveness. These challenges are also common in OECD countries. The cluster approach has often focused on small firms because of the obstacles they typically face to grow and the clear scope for policy intervention. On the demand side, MSMEs need assistance in

Table 2.6. **Data on MSMEs in Chile**

Type of enterprise ¹	% of enterprises ¹	Economic weight (% of sales) ¹	Share in total exportations (%) ¹	Size of firms (in number of workers) ²	% of employees ²
Micro	85.3	3.2	1.3	1-10	47.4
Small	12.3	9.2		11- 50	16.5
Medium	1.7	8.4	2.6	51- 199	12.4
Big	0.8	79.2	96.1	More than 200	23.7
Total	100	100	100	–	100

Note: Percentages do not take into account businesses not assigned to any particular size category.

1. Source: SII and Aduanas. There is no unique definition of SMEs in Chile. SII defines micro enterprises as those with annual sales below 2 400 Unidades de Fomento (UF), small enterprises as those with annual sales between 2 400-25 000 UFs, and medium-sized enterprises as those with annual sales between 25 000 and 100 000 UFs. The UF is an indexed unit of account. The exchange rate between the UF and the Chilean peso is constantly adjusted to inflation so that the value of the UF remains. In May 2008, one UF was the equivalent of around CLP 20 000.
2. Source: CASEN 2003. The Casen survey defines the size of businesses in terms of number of workers.

Box 2.11. **Main problems of MSME in Chile**

- Weak labour and managerial skills and insufficient technical training for employees, especially in ICT.
- Inadequate regulation.
- Lack of access to basic scientific, technological and entrepreneurial information crucial for their competitiveness (especially for small businesses in remote areas).
- Limited access to credit.
- Limited quality and product differentiation.
- Weak export promotion strategies for products and image.
- Limited supply of infrastructure for product and process standardisation and technology development.
- Problems of co-ordination and co-operation for launching clusters and production chains in regions.
- Limited environmental responsibility.
- High proportion of Informal MSMEs.

Source: Alburquerque (2007).

formulating their needs. Their managers are often unaware of new technology, do not recognise the potential for improvements, or lack the financial, organisational and managerial capabilities to implement new technology. On the supply side, technology providers generally do not tailor

their products to local firms. The costs of reaching small firms with relevant information are quite high, as are the costs of tailoring equipment to their needs. Because technology markets suffer from problems of information asymmetry, transaction costs and a lack of scale economies, policy intervention is warranted (OECD, 2007b).

One main horizontal challenge for the MSME in Chile is their very limited capability to innovate. Most MSMEs are not part of innovation-oriented networks, yet many of those that would have incentives to develop linkages with other firms and knowledge institutions face several difficulties. The lack of trust in potential partners undermines the establishment of basic co-operative networks. This socio-cultural feature will only change slowly, but successful experience in balancing competition and co-operation can help to build trust. It would be useful to find ways to spread information about positive experiences in sectors with successful forms of collective action (OECD, 2007a). In the OECD area, for example, technology advice and transfer as well as the provision of non-financial services are used to tackle these problems. Advice on marketing, logistics, exports, accounting, etc., are often supplied by sector-oriented centres. There have also been some initiatives for using large firms to develop an innovative environment that can help to support local small firms with innovative ideas.⁷

A regional phenomenon requiring regional solutions

Chile's regions differ in terms of the creation and failure of small businesses (Crespi, 2003). Innovation and business support, services and training for MSMEs should be context-specific, taking into account both specific economic processes and the territorial background. Until very recently, national programmes supporting MSMEs in Chile were implemented with a national focus and did not take the regional dynamics of MSMEs into account. However, both government and business associations, such as the RDAs and the *Chile Emprende* programme, have started to take action to tackle problems facing MSMEs from a territorial perspective. The *Chile Emprende* programme is a very promising initiative that offers an integrated territorial approach to the promotion and development of MSMEs. It involves co-ordination of different public institutions, public-private partnerships, and a territorial view of MSME support (see Box 2.12).

The RDAs can also help to strengthen the competitiveness of MSMEs at the regional level by involving them in regional productive planning. These agencies are to play a special role in upgrading the capacities of MSMEs and thus their productivity. Taking regional vocations into account and offering MSMEs better access to skills, innovation and technology will add value to currently developed economic sectors in the regions and help to diversify the productive base. In this regard, attention should be paid to ensure that RDAs are

Box 2.12. Chile Emprende

Chile Emprende was launched in 2005, based on the earlier *Emprende Chile* (2001-04). Its main objective is to promote micro and small enterprises (MSEs) in specific territories through public-private partnerships involving the collaboration of various institutions in charge of development. The goal is to improve working conditions and wages of MSE workers and to develop the economy and competitiveness of Chile's regions through enhanced sales, economic diversification and consolidation of MSEs. It also aims to develop an institutional orientation favourable to public-private collaboration.

The initiative concerns 27 territories defined on the basis of their geographic, social, cultural and productive characteristics. Each territory is composed of one and frequently several *comunas*. The national directorate is headed by Sercotec with participation of several public agencies: Indap, Fosis, Sence, the Ministry of Economy and Subdere. There is also a presidential assessment commission with the participation of several ministries. Within each region there is a regional branch headed by the intendant which is composed of regional public, private and academic institutions related to MSEs which decides the strategic orientation of the programme in each region, and offers resources and facilities for its development. Finally, at the territory level, a public-private council co-ordinates and integrates the various activities. It is formed by representatives of municipalities and public and private agencies. Its work can be carried out by a manager with support from thematic working groups.

The programme was set up at the national level and some sectoral resources have therefore been allocated to the initiative. Additional resources are made available by the different public agencies (*Corfo*, *Sercotec*, *Indap*), municipalities, private investors and other participants in the territorial plan.

In each territory the public and private actors construct a territorial economic development plan as a shared agreement for the future of the region with goals, concrete actions to be carried out, resource commitments and evaluation criteria. A large number of initiatives have been established, including: support for diversifying primary sector economy; assistance to access to export channels; diversification of tourism circuits; establishment of links among agriculture, fishery, handicraft and tourism; and networks conducive to the diffusion of innovations.

Chile Emprende opens the way to integrated place-based policies that go far beyond the traditional sectoral orientation. It brings together the efforts and views of different ministries, public agencies and private actors in specific territories. At the same time it has a commitment to MSEs, as a basis for improving regional development and social welfare.

Source: Chile Emprende.

not dominated by the interests of large firms. Additionally, MSMEs are expected to find in the RDAs a good platform for articulating and setting out their particular requirements, for instance for their infrastructure requirements. Recent research (Albuquerque, 2004) points out that the provision of infrastructure in Chile is mostly determined top-down and by the presence of big firms and strategic economic activities. This situation is likely to complicate the link between the different local productive systems and among them and the main centres of economic activity and trade corridors. The RDAs should help overcome such obstacles to the competitiveness of MSMEs.

Finally, provincial offices for business development have been set up in underperforming locations, as a way to offer targeted support to local entrepreneurs and to trigger bottom-up processes of economic development. The provincial offices are also devoted to offer a single access point to public support for productive development. The initiative is still small in scope, but it offers an interesting approach to developing local potential for competitiveness in locations affected by specific contextual challenges (see Box 2.13).

Box 2.13. Provincial Offices for Economic Development

The Sub-secretariat for Regional Development of Chile (Subdere) launched between 2006 and 2007 three provincial offices for productive development in the provinces of Arauco (within the region of Bio Bio), Chiloé (Los Lagos Region) and San Antonio (Valparaíso Region). This is part of an effort to promote business development in particularly vulnerable locations, such as isolated zones or locations with high unemployment. These offices aim to: give specialised support to small and medium entrepreneurs; favour changes in the local conditions and context in order to generate a more competitive local framework; enhance the development of local productive systems; create a unified framework for accessing public support for business development and innovation and finance; and develop provincial development agendas. This initiative offers a better opportunity to conduct a process of endogenous economic development in underdeveloped locations and give them better opportunities to access the market in a better competitive position. It will be a way to tackle territorial disparities through bottom-up processes of local economic development.

Source: Subdere.

Overall, in spite of these promising programmes, there is still a need to co-ordinate efficiently the various initiatives and funds in support of MSMEs in an integrated spatial framework. Furthermore, additional research on each

region of the country is needed to identify the “territorial business network”: the links and interactions among SMEs and between them and service suppliers (input providers, companies selling their goods or services). The limits of these networks will often not be administrative (commune, province, region) but economic and productive. Identification of these territorial productive systems is necessary to know SMEs’ requirements (in productive, human capital and innovation terms) and to offer them adequate and efficient support (Alburquerque, 2007).

In this context, regional higher education and vocational training institutions are increasingly called upon to participate in public-private partnerships and to provide SMEs with human capital upgrading, technology, and business services and support. Human capital is a main target for regional development in the OECD area and, as mentioned, one of the main goals of public action in Chile’s national strategy for innovation.

2.3. Education and human capital as a priority target

Two of the main challenges pointed out in Chapter 1, competitiveness and income inequalities, have their roots in education and human capital. They also have a particular link with territorial issues. Investment in education and human capital can help create the basic conditions for innovation and assimilation of change, especially in less advantaged regions. International comparisons confirm that education plays a crucial role in fostering labour productivity and economic growth. Access to education and training adapted to regional assets and requirements is therefore a key element of regional competitiveness. In order to compete in the global knowledge economy, countries need more and more to invest in human capital at the national and regional levels. On the other hand, as pointed out in Chapter 1, income inequality in Chile is linked to inequality in access to quality education. This issue directly affects municipalities (which are in charge of public primary and secondary education): the current system tends to concentrate pupils from disadvantaged socio-economic backgrounds in public classrooms while not making available (until very recently) the financial or technical instruments needed to integrate them successfully.

Human capital and territorial competitiveness

In Chile, higher education centres of excellence are concentrated in few core cities, especially in Santiago, a situation that hinders regional development. There are some centres of excellence in regions that offer outstanding programmes of study related to regional economic assets. This is the case of the Universidad Austral in Valdivia, which is well known for its degree in forestry engineering and for its research related to the Chilean

native forest (a key regional asset). This is also the case of the Universidad de Concepción and its biotechnology centre, with qualified research in aquaculture, biofuels, phytochemistry, biotechnology applied to forestry resources and environmental microbiology. However, most opportunities for quality education are in Santiago. In 2006, close to half of student enrolments in higher education institutions were in the Metropolitan Region of Santiago. The development of a critical mass of professionals and researchers in regions is crucial for territorial development. It is also important for creating regional capacities and competences; this is a crucial element in the process of decentralisation (Waissbluth, 2006).

The presence of research institutions in the regions is not enough; there is a need for qualified research and education with a regional focus. Moving towards more regionally based education will be critical in Chile, both to develop knowledge-intensive jobs and to allow graduates to find local employment and remain in their home region. Traditionally, in Chile, as in most OECD countries, research and higher education institutions (RHEIs) emphasised the pursuit of knowledge based on national aims with little regard for the local context. A move towards more indigenous development, which emphasises regional skill formation, entrepreneurship and innovation, has helped to change this (OECD 2007e). Higher education with a regional focus can help to improve human capital and labour stability in the region by educating a wider range of individuals, ensuring that they are employable when they leave education, helping local employers by responding to new skills requirements, ensuring that employees go on learning by supporting continuous professional development, and helping attract talent from outside (see Box 2.14).

Going beyond education and research

Universities and research institutions in Chile have started to play an active role in regional development initiatives, a process that should go further. Currently universities participate in initiatives to promote innovation (for instance as partners in the regional scientific and technological centres), in business development programmes (collaborating with *Chile Emprende* regional programmes or participating in strategic councils of regional development agencies). However, these efforts are still limited. To play a regional role and contribute to regional competitiveness, RHEIs in Chile must expand their activity beyond education and research.

Universities are now expected to participate in public-private partnerships and contribute to regional development. They can be involved in specific actions such as: knowledge creation through research and technology transfer; knowledge transfer through education and human resource development; contribution to a region's comparative advantage in knowledge-

Box 2.14. The New University for Regional Innovation (NURI) in Korea

The National New University for Regional Innovation (NURI) was founded by the central government to enhance regional innovation and to ensure balanced national development outside the Seoul metropolitan area. The NURI project aims to develop curricula in terms of specialised areas which are closely aligned to characteristics of the regional economy. Learning programmes reflect regional issues and seek creative solutions over the medium to long term rather than seeking simply to meet the short-term need to train students to fill known skills gaps.

The Ministry of Education and Human Resource Development is providing USD 13 billion in grants to selected higher education institutions during a five-year period (2004-08). The NURI project has 109 participating higher education institutions which are implementing more than 130 programmes aligned on the characteristics of the regional economy. As part of the NURI project regional innovation systems have been established across the country.

The objective of the NURI project is to help local higher education institutions: to attract and retain talent in the regions; to improve educational conditions and develop workforce education and development programmes to help students acquire occupational skills; to build productive partnerships with local authorities, research institutions, business and industry; to provide skilled workers and advanced technologies to the industrial clusters in the regions; to play a leadership role in developing and maintaining effective regional innovation systems.

Source: OECD 2007e.

based industries and to its human capital base; helping to generate new businesses. Finally, RHEIs can also play a key role in bringing global players to a local setting in order to attract inward investment. The University *Jaume I* in Valencia, Spain, helped to transform the traditional SME-based ceramic tile industry into a global leader, and the University of Sunderland in the United Kingdom participated in an alliance that helped to make Nissan's new car plant the most productive in Europe (OECD, 2007e).

Regional higher education and vocational training institutions are increasingly called upon to link with SMEs to provide human capital upgrading and both technology and business services and support. In Chile, the issue is complicated by the need to extend services over a large area and to ensure that SMEs in more remote regions are able to access key services. Because market mechanisms are unlikely to provide effective and affordable

support, there is a clear role for public policy. At the same time, local SMEs do not always find it easy to co-operate with large RHEIs or to engage in the wider research issues raised in universities. Creating access points can enable this process. Case studies illustrate how this is done in the Knowledge House in England's northeast and at Georgia Tech (see Box 2.15).

Box 2.15. Knowledge House in England's northeast and Georgia Tech

Established in 1995, Knowledge House is a joint effort of the five universities in north-eastern England (Durham, Newcastle, Northumbria, Sunderland and Teesside) and the Open University in the North through the universities' regional association, Unis4NE. It helps companies access university skills, expertise and specialist resources. It offers expert solutions for developing ideas and solving problems through collaboration, consultancy, training and research. Knowledge House has a central headquarters and staff distributed at the partner sites. The network and its operations are supported by a web-based enquiry handling/project management and client relationship management system. Knowledge House receives over 1 000 enquiries from client companies and delivers around 200 client contracts a year. Business growth averages 25%. The cumulative economic impact of Knowledge House activity has been estimated at in excess of GBP 35 million (a six-fold return on the investment). In contrast to networks providing only signposting services, Knowledge House offers a cradle-to-grave service, stretching from the receipt and circulation of enquiries through project management and delivery to post-completion evaluation. It is also playing its part in the integration and consolidation of business support services in the northeast through formal agreements and joint appointments with other, non-university business support agencies such as the Business Links service and the Regional Development Agency.

Started in the 1940s, Georgia Tech's Economic Development Institute (EDI) is one of the strongest university-based economic development programmes in the United States. EDI serves businesses with a staff of more than 100 professionals and 13 regional offices located throughout the state. Most staff in the regional offices holds engineering degrees have worked in the private sector and live in the communities they serve. EDI provides a comprehensive set of services designed to help Georgia companies become more productive and competitive. It provides technology-driven solutions in quality and international standards, energy and environmental management,

Box 2.15. **Knowledge House in England's northeast and Georgia Tech** (cont.)

lean enterprise transformation, information technology, government contracting, trade adjustment assistance, and marketing and new product development. Its service portfolio includes workshops and seminars, short courses, certifications, information dissemination and extension services. In the future, EDI aims to focus more on product development, marketing and attracting financing. After the initial period, firms are charged fees for services. In 2004, EDI served 1 889 customers through projects, technical assistance, counselling sessions and information requests. Companies assisted by the Procurement Assistance Centre gained contracts worth USD 500 million; EDI helped attract or retain USD 112.5 million in investment and created or saved 450 jobs; 11 778 jobs were created or saved in companies. Firms pay for an increasing portion of EDI services, about one-third of the total cost, with the federal and state governments sharing the remaining two-thirds. Georgia Tech is a member of the Manufacturing Extension Partnership (MEP), a national network of technical assistance centres that help small- and mid-sized manufacturers. MEP is the largest federal sponsor for EDI.

Source: Innovation Associates Inc. (2005); OECD (2007e).

Finally, this expanded role calls for upgrading higher education staff and ensuring quality tertiary education at the regional level. Within the OECD area, measures have typically included: incentives for continuous learning; appropriate provisions and incentives for production of high-quality, relevant applied research; enhanced exchange with foreign universities, education institutions and business; internal quality assurance mechanisms combined with external validation; adequate follow-up procedures; increased international comparability of the education system.

The role of vocational training

Chile's insufficient post-secondary technical training and deficiencies in the training of technical instructors are problems that must be faced (OECD, 2004). In Chile enrolments in technical training at the post-secondary level have declined progressively to reach 36.1% of total post-secondary level enrolments in 2005. This runs counter to trends in most OECD countries, where an average of almost 50% of enrolments are in vocational centres. In Chile, the absence of relevant vocational education and training (VET) policies has affected programme quality and their low social standing has also contributed to the decline in enrolments. Additionally, the need for self-financing has severely affected these institutions, which receive students with limited economic resources and must offer costly industry-related programmes. This has led to the spread of cheap, low-quality

programmes associated mainly with the services sector. The training of professional-technical teachers is also inadequate.

The Government of Chile, concerned with the lack of links between the different sub-systems involved in technical education, labour training and adult education, implemented in 2002 a lifelong learning and training programme, *Chile Califica* (Chile qualifies) which seeks to articulate the supply of technical and vocational training with the productive needs of the country (see Box 2.16).

Box 2.16. *Chile Califica*

This programme aims to overcome a number of failures in the traditional system of education in Chile with a special focus on technical and vocational training and working adults. The target beneficiaries are the poorest members of the population, who need to upgrade their basic education or vocational skills to gain access to better employment opportunities. *Chile Califica* also targets young adults. This programme proposes:

- To improve job training and job-related skills for poorly educated workers and to offer opportunities to upgrade their studies and training.
- To improve the quality and integration of technical training at every level and extend technical training at the post-secondary level.
- To enhance regional networks between firms, technical education and training institutions.
- To develop a comprehensive lifelong learning and training system that offers people lifelong opportunities to acquire the labour competencies and technical training necessary to access, remain in, re-enter and develop in the labour market, incorporating new skills and receiving social and professional recognition.
- To set the foundation for a national system of skills standards to facilitate workforce development, employment and productivity.

This programme was launched jointly by the Chilean Ministries of Economy, Education and Labour, but it is implemented at the regional level. *Chile Califica* has promoted networking between technical training and the regional labour market. These networks are intended to help educational institutions, enterprises and workers develop a lifelong learning and training process based on regionally prioritised projects. *Chile Califica's* main challenge consists of developing a set of instruments to provide flexible training and competence certification paths that are accessible and useful, especially to the poorest members of the population, as a way to improve their participation and mobility within the workforce.

Source: Chile Califica Programme.

In OECD countries, human capital policies have increasingly shifted towards a broad concept of education linked to the labour market in a lifelong learning framework. This requires well-organised pathways between education and work. The growing importance of knowledge and information for competitiveness in general and in the labour market in particular gives increased significance to lifelong learning. A lifelong learning framework comprises the demand for and the supply of learning opportunities as part of a connected system of all types of formal and informal learning. The prospects for smooth transitions between the education system and the labour market are better when programmes of learning are designed within a lifelong perspective and there are effective connections to post-school destinations, whether work or further study. Within this context, enhancing the status of VET and upgrading its quality becomes crucial. Removing academic obstacles to entrance to general upper secondary education and allowing access to tertiary education from vocational programmes, as Sweden and Norway have done, would be a good way to increase the attractiveness of the vocational option in Chile. This, along with improvements in the quality of training programmes throughout the country may help to engage students who dislike academic learning and provide them with practical and profitable labour market skills.

Towards quality education accessible to all

In Chile, evidence provided by the national System for Measuring Educational Quality (SIMCE) during the 1990s revealed that the education system is based on a socially stratified structure, with performance highly dependent on the socio-economic conditions of the student's family. The social stratification problem is particularly clear in primary and secondary education where students from disadvantaged socio-economic backgrounds are over-represented in the municipal school network, creating a financial and technical challenge for these schools and for the municipal administration.⁸ Improving access to education of high quality has become one of the priorities of the current government.

The difficult role of municipal education

The decentralisation process initiated in the early 1980s transferred the administration of public schools to municipal governments. At the same time it opened the way to private-sector participation as a provider of publicly financed education. Since then, the municipalities have been the main agents for delivering primary and secondary school publicly funded services.

A public voucher system is the main instrument for financing primary and secondary education. Parents receive vouchers from the government for each school-aged child, which they can use at the school of their choice. There

are three categories of schools: municipal, subsidised private and fully private. Only the first two types of schools are entitled to receive voucher payments. The government transfers the per-student subsidy directly to the private subsidised school or to the municipality in which the public school is located. Through the voucher scheme, public and private subsidised schools compete for students as a way to enhance efficiency in service delivery. However, empirical evidence suggests that the impact of competition on school performance in Chile has been limited. Moreover, it points to increased social segmentation of the school system, with overconcentration of children from social disadvantaged backgrounds in municipal public schools (OECD 2007c; OECD, 2004).

As a result, municipalities face several interrelated limitations affecting their management of the devolved responsibility for education:

- **School financing:** Vouchers are clearly not sufficient to finance primary and secondary education. Municipalities therefore have to supplement the national voucher with local resources. Larger and wealthier municipalities have the resources to have a well-qualified staff, while smaller and poorer municipalities, with fewer pupils and vouchers, find it more difficult to finance public education and manage and meet technical needs of the school system. A municipality's wealth does not necessarily guarantee good performance, of course, but lack of resources makes management of education very difficult. The subsidised private schools can rely on both state funding and fees from parents. There are thus both intermunicipal and intramunicipal disparities. This inequality affects the availability of financial resources and thus the capacity to develop educational and technical skills.
- **Students selection:** Along with the dynamics of demand involved in school selection (the principle of choice), private subsidised schools are allowed to select students (testing their skills/knowledge, applying high fees, among others). In general private schools tend to avoid students with learning or behavioural problems, thus reinforcing the over-representation of students from disadvantaged socio-economic backgrounds in municipal schools.
- **Management restrictions:** A number of important decisions regarding human resources in municipal schools are subject to the national Ministry of Education under the Teacher's Statute. These include regulations on teacher's contracts and remuneration. By contrast, private schools are allowed to hire and dismiss teachers directly and to determine their compensations as long as they respect the (relatively lax) labour code.

The combination of these factors and the joint impact of family preferences in choosing schools and the shared funding scheme has led to an increased socio-economic stratification of schools, leaving municipalities with

the difficult task of serving the most disadvantaged children with fewer human and financial resources than subsidised and private schools (World Bank, 2007).

However, there is no evidence suggesting that municipal management of education leads to worse performance: SIMCE results reveals that when socio-economically homogeneous groups are compared, differences in learning performance among schools with different administrative systems (municipal and private-subsidised) are minimal and do not always favour private education. Yet, even if the administrative system (municipal, private-subsidised) is not the reason for performance outcomes, close to 70% of primary and secondary students belonging to the poorest income quintile attend municipal schools (Casen, 2006), creating a highly stratified, inequitable structure which weakens municipal education. The trend towards concentration has strengthened over time: while in 1987, 29% of children from the wealthiest quintile attended municipal schools, in 2000 only 11% did. This move away from municipal schools has even affected middle-income sectors (the fourth and third quintiles): in 1987, 54% of their children attended municipal schools, while in 2000 just 38% did.

Therefore, the challenge is twofold: to make available specific tools for overcoming municipal financial and performance gaps and to increase the impact of policies aimed at expanding access for the poorer groups and improving their performance. This administrative, financial and equity challenge has recently been addressed by several government reforms. Among these, President Bachelet announced in May 2008 an increase of 15% in the education subsidy for urban schools and of 25% for rural schools. Additionally, the recent approval of the Preferential Scholar Subsidy aims to improve equity of access to education by increasing the financial and technical resources for the most vulnerable students and improving the planning of education management.

Targeting public investments in education to the poorest sectors of the population

Chile has deep socio-economic inequalities, which appear largely linked to education. Yet, until very recently, the per-student subsidy was disassociated from students' socio-economic background. In an effort to tackle this issue, the bill creating the Preferential Scholar Subsidy (*Subvención Preferencial*) was approved in January 2008. It introduces a differentiated voucher scheme for pre-primary, primary and lower-secondary education that enables an increase of funding for schools hosting students from socially disadvantaged backgrounds (see Box 2.17).⁹ This targeted increase in funding is added to the general increase approved in May 2008. Municipalities will benefit the most from the

Box 2.17. Preferential Scholar Subsidy

The main objective of the preferential scholar subsidy is to help correct the inequality of access to education due to socio-economic background.

This is an additional subsidy added to the regular subsidy and involves financially and technically strengthening the school and the school operator. This new subsidy is divided into two kinds of grants: one per number of disadvantaged students (preferential scholars receive an additional 50% voucher), and one delivered to schools in which socially disadvantaged students are overrepresented. To receive the subsidy, the school operator (municipality or private operator) engages in an agreement with the Ministry of Education, through which it commits to developing a plan to improve education (*plan de mejoramiento educativo*), with a strategy to be implemented in the following four-year period. The plan is to be agreed upon between the operator and the school and approved by the Ministry of Education. To design the plan, the operator can draw on specialised staff of the Ministry of Education and on external experts. Eligible schools will be classified into three groups based on their performance. This classification will affect their degree of autonomy to manage resources, the commitment that the school needs to make, and the support and supervision offered by the Ministry of Education. Schools receiving this subsidy will not be allowed to select students in pre-primary and primary education. Finally, the new subsidy is accompanied by stronger supervision, linking the delivery of resources to reaching specific educational goals annually. Thus, for the first time school operators are accountable for the results achieved with the public subsidy. Schools' outcomes will be made public and will serve both as an incentive and as a performance indicator.

The reform of the financing system was based on evidence provided by SIMCE which revealed that, under comparable conditions, students from the poorest families obtain lower results and that schools with a high proportion of socially disadvantaged students had poorer learning outcomes. Some 700 000 pupils are expected to benefit during the first four years of application of the law.

Source: Ministry of Education.

new preferential subsidy, since students from disadvantaged backgrounds are overrepresented in the public schools they operate.

The preferential scholar subsidy is a clear step towards addressing the problem of social inequalities in access to quality primary and secondary education, and, in addition, towards tackling the challenge of income inequalities. It gives municipalities more instruments, assessment and financial resources to improve education. It makes available not only

resources but also helps in designing plans to enhance performance. However, it is important to ensure that the additional resources allocated to municipalities through the differentiated voucher scheme do not replace locally raised funds, leaving overall spending unaltered. To prevent this from happening, a matching-grant mechanism could be considered in parallel with the introduction of differentiated vouchers (OECD, 2007c). At the same time, the performance of the new system and its effects on educational outcomes should be monitored and adjustments made, where necessary, to improve its efficiency. Once the new system is fully implemented and the initial results assessed, the possibility of extending the differentiated voucher to upper-secondary education should be considered.

In addition, it will be important to grant municipal schools greater managerial autonomy. Under the current Teachers' Statute, personnel and financial issues (wages, hiring, dismissing of personnel) are regulated on a centralised, nationwide basis. Owing to various restrictions on management, it is difficult for schools to use their main inputs to improve performance, which is at odds with the spirit of the voucher system. Moreover, as municipalities are the main operators, it would be helpful for the Ministry of Education to give an active role to the Chilean Association of Municipalities in negotiations relating to public primary and secondary education.

While the preferential subsidy opens the way to improvements in access and performance in primary and secondary education, there remain substantial quality and equity challenges for making pre-primary and higher education accessible to the lowest income quintiles. The *OECD Review of National Policies for Education in Chile* and the *OECD Economic Survey of Chile* (OECD, 2004; 2007c) emphasise the need to remove barriers to pre-primary and tertiary education for vulnerable social groups. For pre-primary education, an extension of public provision is often constrained by the budgetary effort required. This is the case even in the wealthiest OECD countries. Yet, the evidence suggests that pre-primary education is crucial to women's participation in the labour market. For higher education, although there has been an important increase in enrolment rates and in the number of scholarships, there is room for raising government spending from a level that is currently well below the OECD average and below that of comparator countries in Latin America. For instance, the Excellence Scholarships (*Beca de Excelencia*), which are currently granted to the top 5% of performers in upper-secondary education who belong to the first four income quintiles and have attended municipal or subsidised private schools, could be further extended.

Reaching rural and isolated localities

Mechanisms to avoid exclusion would also need to include mechanisms for reaching acceptable minimum standards throughout the country: poorer

and isolated localities and rural areas generally have less access to quality education. Moreover, the share of students who drop out before secondary school is significantly higher in rural areas. As mentioned, the general increases in the education vouchers approved in May 2008 discriminate positively in favour of schools in rural areas. Additionally, the Preferential Scholar Subsidy recognises the specificity of rural areas and will provide rural schools special support in designing and implementing the educative improvement plan. Further mechanisms applied in OECD countries to promote more equitable access in remote or marginal areas include:

- Expanding distance learning using the advantages of information technologies.
- Regional learning centres to cover education needs in targeted areas of the country.
- A second chance for those who lack basic education and skills through literacy training, primary and secondary education, work-based programmes and arrangements to recognise informal learning.
- Programmes for re-qualification that take account of the characteristics of regional labour markets and of demand for different occupations and qualifications, to bridge the gap between education and the labour market.

Instrument such as adult training and vocational education should also be considered in order to improve human capital, job prospects and the competitiveness of the different regions and the country as a whole. Adaptation of these policies to regional economic characteristics would strengthen the process of regional economic development.

2.4. From agriculture to rural development

The agricultural sector, in conjunction with related downstream activities, has played a key role in Chile's economic success. As pointed out in Chapter 1, agriculture is a key sector in Chile's economy, especially in some regions. However, incomes have grown somewhat more slowly for agricultural households than for non-agricultural households. At the same time, poverty rates are higher among agriculture-dependent families than among non-agricultural households (OECD, 2008c).

Multi-activity offers an opportunity for agriculture workers. Non-agricultural activities, basically in manufacturing and the services sector, offer an alternative or complementary source of rural income. Diversification of activity reduces rural inhabitants' vulnerability to declines in agricultural prices and the impact of climatic shocks. Close to half of rural households in Chile (49%) are employed in non-agricultural activities.

In Chile rural development is widely identified with agricultural promotion. Rural development programmes are focused on agricultural development in poorer areas. The Ministry of Agriculture is responsible for the design, implementation and management of national policies related to agriculture, livestock, forestry, food and rural development. Yet, there are neither national nor regional rural development strategies but several programmes largely focused on agricultural promotion.¹⁰

Agricultural policies have a crucial role to play in the economy of the country and particularly in the economy of some regions. Their effect will be greater if they are part of a multi-sectoral perspective. Agricultural policies are likely to be better targeted if they are framed in an economy-wide context, closely linked to: active labour market policies with improvements in workers' skills, the creation of new market opportunities, improvements in education, alternative uses of land (both within and outside agriculture), protection of the environment, improvement of the quality of life, and the provision of services and infrastructure, among others (OECD, 2006b). This would require measures to improve the co-ordination of sectoral institutions and policies at the central and regional government level.

National institutions dealing with rural development would need to evolve from a narrow focus on agriculture towards a broad concept of rural development. This will be in line with the rural development strategies introduced by several OECD governments, which increasingly seek to identify and exploit the varied development potential of rural areas. This perspective privileges places over sectors and strategic investments to promote regional competitiveness over subsidies (see Box 1.4).

Diversifying activities

Rural development goes beyond agriculture. Opportunities for rural development depend both on linkages with urban centres and on linkages between agriculture and other sectors. Rural areas need to develop manufacturing and services sectors as complements to existing agriculture activity. The development of rural/urban linkages is essential for diversifying the economic base of rural areas.

Certain emerging sectors offer rural regions excellent investment opportunities. Renewable energy, which is for the most part rural, could mean higher prices for producers, land rents for wind and solar facilities, jobs in construction, operations and maintenance, and a future for young people in rural areas (see Box 2.18). Tourism represents another significant alternative for some regions. Given Chile's rich rural heritage, there are many unexploited opportunities in the tourism sector and potential sources of growth through exploitation of the rich natural resources of rural regions. Investment in

Box 2.18. Renewable Energy in Germany

The village of Jühnde, Germany in combination with the Interdisciplinary Centre for Sustainable Development (IZNE) is currently becoming the first bio-energy model village in Germany. This involves the generation of energy from domestic energy sources such as wood, straw, liquid manure, energy crops and other biomass which are particularly abundant in rural communities. The advantage to using biomass is advantageous in its storage ability and constant availability. The project instigated by IZNE choose Jühnde for its large number of farms while the ten full-time agricultural businesses in the area supply liquid manure and garden waste for the biogas plant. The project has already involved the population of Jühnde in the planning process and has motivated the population to become involved in the implementation of the project. The primary aim of the project is to implement the use of a sustainable, renewable energy source and demonstrate that through the participation of the local rural population, it is possible to supply energy to an entire village through renewable raw material located within the rural region.

In Germany, renewable energy sources account for 170 000 in jobs, 16 billion EUR in revenue, and 4.1 billion EUR in exports. The greatest growth in renewable energy is coming from wind and biomass generation. In 2003, 8% of arable land was used to cultivate renewable raw materials. In 2005, bioenergy made the largest contribution of all renewable energy sources to final energy consumption in Germany while biogas electricity generation, and biofuel sales doubled during this year.

Source: OECD (2006), Rural Policy Review, Germany.

promoting rural amenities has created tourism attractions in several OECD regions which generate new income opportunities for the local population (see Box 2.19). In all these cases, local involvement and entrepreneurship are important to ensure that the area produces value added for itself.

Business and financial services are essential to stimulate rural job creation and reinvigorate the rural economy. The evidence from rural areas in both OECD and non-member countries shows that regional development agencies, banks and other financial institutions can play a key role not only as providers of credit but also as advisers, sources of seed capital, trainers, evaluators, etc. The knowledge, expertise and resources of these institutions can substantially increase the effectiveness of local partnerships and the feasibility and success of rural development projects. Moreover, a deep and broad-based rural financial system can address rural poverty by improving the access of poorer households to financing and can boost growth by

Box 2.19. Rural tourism in OECD countries

Many successful rural regions have been able to draw on public or quasi public goods such as a clean environment, attractive landscapes and cultural heritage (including food). Rural areas have a range of natural and cultural assets that can be harnessed for economic development. Their increasing value is related to improved transport links that make recreation in rural regions increasingly feasible as well as offering more affordable residential locations. But most of all, it has to do with both a growing demand for rural areas on the part of urban dwellers and a local capacity to co ordinate economic actors to supply and promote local collective goods.

Relying not exclusively but largely on its rural amenities, **the Italian province of Siena** has been able to improve its position relative to other Italian provinces in terms of per capita income through an effective policy to promote local products (nearly 70% of Siena's farms produce at least one certified product) which has also induced impressive employment creation (OECD Territorial Review of Siena, 2002). Siena is far from an isolated case: Tiroler Oberland (Austria), Mugla (Turkey) and Tasman (New Zealand) are regions that thrive on the tourism industry. Regions such as Engadina Bassa (Switzerland), Alpes de Haute Provence (France) or Dare County (United States) also attract workers, enterprises and retirees.

Rural tourism in Spain is growing faster than tourism overall; it accounts for almost 6% of all national guests and 1% of foreign guests. Typical houses in small rural villages are offered to urban tourists through the Internet, tourist guides or travel agencies as an attractive alternative to traditional hotels and an interesting opportunity for additional income for rural inhabitants. This emerging phenomenon has enabled the development of associated tourism services in and around rural villages. The system has been supported by a steady process of public and private investment in improving the quality, services and infrastructure of rural locations and rural houses.

The **Cheese Route Bregenzerwald, Vorarlberg, Austria**. This was a strategic project for the LEADER II programme in Austria's westernmost province. The aim was to build on a well-established local product – cheese – in ways that ensured the livelihood of the rural population, reduced commuting and helped to create new jobs in tourism and trade. The concept involved multiple and multi-sectoral beneficiaries, a strong public-private partnership and co-operation between different sectors, including agriculture, dairies, accommodation providers, alpine pasture managers, trade and commerce. It has led to innovative products (such as Käsezwickel, Käseträger and Käse&Design) and the establishment of a new high-quality regional “brand”. It has helped to maintain traditional alpine farming and the quality of the cultural landscape.

Source: OECD (2006), *The New Rural Paradigm*, adapted.

ensuring that rural enterprises are positioned to participate in new markets and opportunities.

The potential prosperity of increasingly diversified rural regions will be determined by drivers such as human capital, entrepreneurship, innovation, renewable energy, technology, creative industries and competitive farming. However, the path for diversifying activities depends largely on the capacities, attributes and attractiveness of the rural locality – education and skills, infrastructure, and availability of services, among others. The dynamics of non-agricultural activities are mostly determined by demand originating outside the rural sector (Reardon et al., 2001). Therefore, the rural locality's assets and its links with urban centres are basic.

The role of public policies to promote rural development

Public investment can play an important role in improving the conditions and capacities of rural localities. Public investment in innovation plays a basic role in the development of rural and sparsely populated areas if it is adapted to the characteristics of these areas. Traditionally, theories of innovation focus on innovation within firms, high-technology products and R&D activities mostly carried out by experts in urban areas. However, as revealed in the proceedings of the 2006 OECD Rural Conference in Edinburgh, innovation can also involve investing in the local capacity to assimilate knowledge spillovers (see Box 2.20). This links directly to the significance of investing in education and human capital in rural areas. Isolated localities and rural areas in Chile generally have less access to quality education. The recent education reforms recognise the specificity of rural areas, and this is a good step forward. Further measures could include: improvements in the work training programmes, improvements to bridge education and local labour markets, regional learning centres to cover education needs in targeted areas of the country, among others.

Finally, improved transport networks can play an important role in easing the burden of remoteness and lack of accessibility of Chile's rural areas. Regional development strategies and the spatial distribution of transport and ICT services affect accessibility, which in turn affects regional competitiveness. Improving the connectivity of rural regions to other regions in the national territory as well as improving connectivity in peripheral border rural regions to neighbouring countries is essential to developing the economy of rural regions. Investment in infrastructure concession projects tends to concentrate in urban core areas, especially around the metropolitan region. Public-private partnerships in which the risk is shared between the government and the private sector, such as the build-operate-transfer concession (BOT), may be a way to increase transport networks in rural areas (OECD, 2008c).

Box 2.20. Innovation in rural areas

To take informed, strategic decisions regarding regional investments in rural areas the following distinctions must be made:

- First, innovation is not just about new products, it is also about processes and thus about doing old things in a new way. In rural contexts, this can mean opportunities to carry out traditional activities, such as farming or tourism, in a more productive way thanks to technology.
- Second, innovation is about the way governments act and interact with other sectors and players. Institutional innovation is a key issue in rural development. Innovative governance tools can be key drivers worth investing in to develop these areas.
- Third, even when talking about production of technology, there should be a clear distinction between emerging and mature technologies. Analysis of patent applications shows that while urban areas have a competitive advantage in producing emerging technologies because of thicker markets and knowledge spillovers, rural regions can compete by improving mature technologies. There are several examples of world-class innovative rural SMEs in mature technology sectors in Finland and Canada. A critical part of the process is the combination of internal and external competences and knowledge.
- Finally, a distinction should be made between the production and the assimilation of innovation. There is strong evidence that while R&D investment has become a paradigm of innovation for some regions, investment in education and training is more important in many rural areas. Rural development can often be triggered more effectively by investing in the local capacity to assimilate knowledge spillovers than by investing in knowledge production. To increase the chances of generating R&D, creating innovation through R&D and assimilating innovation it is wise to invest first in human capital (Rodriguez-Pose and Crescenzi, 2006).

Source: Proceedings of the 2006 OECD Rural Conference in Edinburgh.

However, improving the transport networks can also increase the exposure of non-competitive firms or areas to external market forces. Therefore, it is necessary to connect and co-ordinate transport to overall policies to improve the assets and capacities of rural areas and enhance their competitiveness. The potential of infrastructure policy will only be fully exploited if territorial synergies exist with other economic development policies.

Towards a broad territorial approach to rural policies

In order to stress the necessary links between rural development and broad local economic development it is important to consider the regional dimension of rural development policies and programmes. A territorial approach can adapt to the multidimensionality of rural territories and take specific local characteristics into account while integrating the diverse productive aspects and processes that affect the development of a rural community. At the same time, a place-based perspective enables strengthening the links between rural and urban areas, based on a recognition that a great deal of opportunity for rural economic activity depends on links with urban centres (FAO, 2004).

A broad concept of rural policy would require co-ordination among the various sectoral policies affecting rural areas at regional and local levels. It would also require co-operation and co-ordination among local actors – farmers, private firms, investors, education and research institution and different levels of government. This co-operation has positive externalities both for agriculture and non-agriculture sectors of the rural economy and has been a basis of some successful programmes implemented in OECD countries such as the EU's Leader+ (see Box 2.21). The LEADER program shows that the territorial dimension of rural development can go beyond administrative boundaries, involving for instance a micro-region or a group of municipalities sharing common socio-economic characteristics.

In Chile, the Ministry of Agriculture has implemented a Strategy for Territorial Economic Development (*Estrategia de Desarrollo Económico Territorial – EDT*) for 2006-10 (see Box 2.22). This is a good step towards introducing a place-based perspective on rural development. It involves the co-ordination of several state agencies belonging to different national ministries and clearly facilitates institutional co-ordination. It offers a way to implement policies for territories with similar socio-economic characteristics which are not restricted by administrative boundaries. However, several recommendations may be made in line with the new paradigm of rural development described above:

- The criteria for selecting the *comunas* for the different territories were mainly based on the share of rural population and the poverty rate of the different municipalities. Other socio-economic criteria could have been taken into account, among them the economic structure of the *comunas*.
- Participation of regional actors: In some of the EDT's territorial agendas analysed, the regional management team in charge of the diagnosis and the selection of the strategy was composed only of representatives of public institutions of the central government; it did not include representatives of the regional government or municipalities involved. Additionally, in most cases, neither RDA representatives nor representatives of the private sector

Box 2.21. The LEADER+ Programme

The LEADER Programme of the European Union aims to bring an integrative approach to rural development. It attempts to use subsidies to encourage public-private and inter-governmental co-operation in a particular geographic area encompassing many municipalities through innovative multi-sectoral projects. It has gone through three stages, LEADER I which started in 1991, LEADER II which was carried out from 1994 to 1999, and the current LEADER+, from 2000 to 2006 and from 2007 to 2013.

Three main elements characterise the implementation of the programme: i) inter-municipal co-operation: programmes are carried out in territories comprising several municipalities, with similar socio-economic characteristics but sometimes belonging to different regions; ii) an integrated multi-sectoral strategy relying on an endogenous approach and innovative actions; and iii) a local action group (LAG) which manages the programme which is characterised by decentralised financing, co-operation and partnerships between public and private stakeholders.

The governance of the LEADER programme consists of a complex multi-tier administrative scheme. The European Commission elaborates the regulatory framework and provides most of the public financial resources. National and regional administrations establish subsidiary application norms and contribute with a smaller share of the financial resources. Finally, the local action groups, formed by public and private stakeholders, define the strategy and manage the subsidised projects. The LAGs play a key role as the “crossroads” of the complex system of vertical and horizontal relationships. Their functions, which are outlined in the collective agreement undertaken by the central and regional administrations, can be summarised as follows: managing the programme and its funds; developing local development plans; handling the final beneficiaries’ requests and carrying out the payments to them; and analysing, selecting, and following up the projects. The LAGs are held accountable for the efficiency of the results achieved in each specific zone and have often had a positive influence on local governance dynamics.

Source: OECD (2006), *The New Rural Paradigm*.

participated. In many cases, as a second step, once the agenda and strategy were developed, the EDT’s regional team organised participative workshops to validate them. This procedure does not seem to take sufficient account of the regional and economic aspects that are basic to a rural territorial programme. Co-ordination should be improved by engaging qualified representatives of the regional government, the municipalities and the RDAs and by establishing close contact with representatives of the main agriculture and non-agriculture economic sectors of the territory.

- Agriculture bias: Even if some non-agriculture activities are considered in some strategies (mainly rural tourism and environmental issues), many take a narrow view of rural development. Off-farm activities or productive promotion of rural areas could be further developed.

Box 2.22. Strategy for Territorial Economic Development of the Ministry of Agriculture of Chile

The Strategy for Territorial Economic Development is one the priority lines of action of the Ministry of Agriculture. The main goal is to contribute to the process of economic development of several rural territories with high poverty rates through place-based development. It has three main objectives:

- To improve the integration of activities and resources of each service delivery agency within the Ministry of Agriculture in order to contribute to the development of the selected territories.
- To improve the utilisation of geographical information in the allocation and distribution of public resources in the selected territories.
- To strengthen the capacity of the Ministry of Agriculture and its service delivery agencies to apply a territorial approach and to introduce new management procedures.

The strategy is carried out in micro-regions formed by several municipalities with similar rural conditions and poverty rates. The regional teams consist of the regional representative of the Ministry of Agriculture and the regional heads of the main national agencies related to agricultural issues (Indap, SAG, CONAF, INIA). During 2007 they developed the first territorial agenda with a diagnosis of the current status of the region and a proposal for a strategy to be implemented in order to develop the regional agriculture system. This initiative belongs to the Management Improvement Programme of the Ministry of Agriculture.

Source: Ministry of Agriculture of Chile.

In sum, the Ministry of Agriculture's Strategy for Territorial Economic Development is a good first step towards co-ordination of rural development with a territorial approach. However, further work is needed to integrate other local public and private actors. Co-ordination of the EDT team, the regional government, the RDAs and programmes such as *Chile Emprende* is crucial. Moving towards a broader concept of rural development should include further consideration of non-agricultural aspects, access to innovation, education and infrastructure in rural areas, and rural-urban links, among others. Initiatives and programmes like the EDT or the RDAs represent an opportunity to identify prospects for economic diversification in the different

rural territories and to integrate the different rural development axes (agricultural and non-agricultural) in a coherent way. Regional agendas could usefully view rural development in a broader perspective by including a wider variety of productive opportunities.

2.5. Towards comprehensive territorial infrastructure planning

Chile's challenging geographical and topographical position raises a number of challenges for developing and managing the country's internal connectivity. Development of infrastructure networks has always been considered essential for regional economic development. However the effectiveness of such networks calls for the co-ordination of infrastructure policies with parallel measures to improve regional conditions, performance and attractiveness (promoting innovation, improvement of education and working skills, among others) and thus for an integrated policy to reduce distances between backward localities and the main knowledge and economic centres and to improve regional economic performance.

Under Chile's concession programme, the transport infrastructure network was substantially improved; however the needs of peripheral regions have yet to be met. In 1993, Chile started an innovative concession programme based on public-private partnerships focused on a number of highway network development projects. These were mainly through build-operate-transfer (BOT) arrangements whereby 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. Most contracts include minimum revenue assurance by the government in the event that toll proceeds fall short of the agreed amount. The country's road network has been substantially improved since the beginning of this programme. However, as observed in Chapter 1, most investments remain concentrated around Santiago, so that infrastructure needs in the peripheral regions have not been met.

In Chile, as in many OECD countries, there is a trade-off between improving the competitiveness of the most dynamic regions and improving the accessibility of lagging areas which needs to be addressed in order to avoid deepening interregional disparities (see Box 2.23). Connectivity with peripheral areas of Chile needs to be improved, but care must be taken not to focus solely on inter-city linkages. Improving the connectivity of the peripheral and remote regions of the country is a key to raising local productivity. At the same time, as mentioned above, connections between urban centres and rural areas are crucial to greater rural development. Incentives and alternative mechanisms should therefore be explored to attract infrastructure investments in remote and peripheral regions.

Box 2.23. Trans-European networks

The development of Trans-European networks (TENs) (mainly information and communication, transport and energy networks) across the European Union had two principal aims:

1. **Strengthening the international competitiveness of the European Union's economy:** The development of TENs was to provide facilities and cost savings for businesses and encourage private investment, making it possible to exploit fully the opportunities opened up by the single market.
2. **Increase the potential competitiveness of peripheral regions by improving their accessibility:** This was meant to promote inter-regional integration and cohesiveness.

Nevertheless, the practical results of the infrastructure investment policy and specifically of the TENs over the Union's territory may have contributed to increasing regional disparities, by strengthening European central regions and large metropolitan areas to the detriment of the periphery and small and medium-sized towns. In this regard it was suggested (Amin and Tomaney, 1995) that in the EU's infrastructure policy measures for promoting growth and productivity have been inherently biased towards places where demand is greatest, where there is already strong growth, and therefore where traffic flows are already substantial, that is, towards the core regions.

Concession programmes based on shared public-private risk should be used for projects with high social returns, such as those to extend the infrastructure network in peripheral areas. When private returns are high, the infrastructure project can be carried out privately, without government guarantees. In general, government guarantees should be given if there is a discrepancy between social and private returns associated with projects that are not profitable (OECD, 2005c).

There is a need to further develop infrastructure networks with border countries. The Regional Infrastructure Integration in South America (IIRSA) initiative promotes a network of transport corridors – road and rail infrastructure as well as rivers – across Chilean border regions (Figure 2.4). This programme, operating from 2000, involves Chile and several other Latin American countries. In addition, it will facilitate the use of Chilean ports for the growing exports of other Latin American countries to Asia. Thus far the bigger crossing point “*el paso de los Libertadores*” (connecting Santiago and Valparaíso with the city of Mendoza in Argentina) receives near 60% of the goods entering and leaving the country and suffers from frequent closing times and delays during adverse weather conditions. Further initiatives and co-operation efforts are needed to reduce congestion in this crossing point

Figure 2.4. **Integration of regional infrastructure in Latin America**

Source: Foreign Investment Committee of Chile, *Invest in Chile an Opportunity*, January 2007.

and develop alternative trans-border routes in peripheral regions. This measure will benefit the commercial export sector in general, and has the potential to improve the connectivity of remote and peripheral regions.

Transport infrastructure and the need for territorial co-ordination

Links between advanced and backward regions do not always benefit the poor region. Better transport infrastructure would give local products easier access to external markets, but would also create greater competition from external products. In general, better transport infrastructure helps local businesses that are inherently competitive, but increases the exposure of non-competitive enterprises to external market forces. In this regard, co-ordination between transport infrastructure and other economic development policies in Chile is crucial to improve the conditions, capacities and competitiveness of the different regions. Investment in infrastructure can facilitate development and help to diminish regional disadvantages. However, parallel measures (promoting innovation, investment incentives, or the improvement of education and working skills) will also be needed to ensure that a region, especially a lagging region, can take full advantage of the opportunities that improved infrastructure creates (Vickerman, 1991, 1995).

In Chile, because several institutions play a role in infrastructure planning and development, territorial co-ordination between them is critical. Recent evidence (Waissbluth, 2006) points to the complexity of synchronising intermunicipal roads (the task of the Ministry of Public Work) with municipal

streets (the responsibility of the government's Housing and Urbanisation Service – SERVUI). The example of Prince Edward Island in Canada shows how agreement between the central government and a sub-national government can lead to territorial co-ordination of several infrastructure projects and funds (see Box 2.24). In Chile, recent initiatives towards inter-ministerial

Box 2.24. Prince Edward Island's Umbrella Governance Framework for Infrastructure

In 2005, the Government of Canada announced that it would provide provinces and territories with infrastructure funding in an amount equivalent to the national excise tax on gasoline. The Gas Tax Fund (GTF) is provided to each province and territory for at least five years for the purpose of supporting environmentally sustainable municipal infrastructure, such as projects that improve the quality of the environment and contribute to reduced greenhouse gas emissions, cleaner water or cleaner air.

Recognising that infrastructure initiatives are best implemented on a province-by-province basis to address the varying needs and realities of their communities, the Government of Canada proceeded in 2005 to sign bilateral agreements with each of the provinces regarding the GTF.

Given that the national government had already in place several other infrastructure-related funding programmes, the Province of Prince Edward Island and the Government of Canada proceeded with a bilateral five-year agreement in April 2005 that seeks to provide governance over four major national infrastructure funds:

- The GTF.
- The Canada Strategic Infrastructure Fund funds projects of major federal and regional significance in areas that are vital to sustaining economic growth and enhancing quality of life. This fund involves equal investments by the Government of Canada and the Government of Prince Edward Island.
- The Municipal Rural Infrastructure Fund supports smaller-scale municipal infrastructures such as water and wastewater treatment, or cultural and recreation projects, for smaller and First Nations communities. This fund involves equal investments by federal, provincial and municipal governments.
- The Public Transit Fund supports investments in public transit infrastructure in cities and communities; it is funded 100% by the federal government.

Under this agreement, federal, provincial and municipal leaders are mandated to plan and implement infrastructure projects delivered through these four national infrastructure-related funding programmes. The UGF is not an agreement with funding attached; it is an agreement existing solely to outline the governance approach. Having one governing body for development and for the separate initiatives was seen as a mechanism for providing a more co-ordinated delivery of infrastructure projects.

Box 2.24. **Prince Edward Island's Umbrella Governance Framework for Infrastructure** (cont.)

While Infrastructure Canada is the national department responsible for all four of the funding programmes, Atlantic Canada Opportunities Agency (ACOA) was directly involved in the development and preparation of the Umbrella Governance Framework (UGF) at the request of the province. The UGF also established a Partnership Implementation Committee. The agreement identifies the specific members of the committee, as opposed to having each level of government appoint their respective member(s). In the UGF, the Committee consists of the Prince Edward Island's Deputy Minister of Intergovernmental Affairs, the Deputy Minister of Community and Cultural Affairs, ACOA's Vice-President of Prince Edward Island and Tourism, and a senior official from Infrastructure Canada. This prescribed approach ensures a consistent senior-level engagement around the table from all parties. The creation of this committee demonstrates a keen interest among all parties for building a structure for long-term partnership and collaboration with respect to infrastructure.

Source: ACOA Canada.

agreements such as the Infrastructure for Competitiveness plan suggest some progress (Box 2.25). Yet, the top-down method adopted and the macro-regional framework used may have missed some important information regarding projects to be implemented in the region. Including regional and local institutions (local and regional governments and RDAs) in such initiatives is important in order to improve the information available on regional requirements and to make local actors embrace and feel part of the project.

Box 2.25. **Chile's Infrastructure for Competitiveness plan**

In 2006 the Government of Chile announced Infrastructure for Competitiveness 2007-10, which entailed a USD 115 million increase in public spending on infrastructure in 2007. The initiative is a public-private partnership with tax incentives to stimulate private investment in public roads. The main objective of this strategy, which is directed by the Ministry of Public Works, is to encourage territorial productivity. This plan is based on the research carried out by the National Innovation Council, which defined four different macro-regions and identified the economic sectors and clusters with the greatest growth potential and the infrastructure requirements necessary for their development. For instance, for the Austral macro-region (Including regions X, XI, and XII, and the new region of Los

Box 2.25. Chile's Infrastructure for Competitiveness plan (cont.)

Ríos), the study linked the requirements of the salmon and trout cluster and the development of a tourism corridor. The plan includes improvements to the harbour infrastructure and to the fleet, as well as the development of new maritime routes and tourism corridors (including some cross-country routes with Argentina).

The initiative matches infrastructure investments to requirements for promoting territorial productivity. It focuses resources on planned and targeted projects and achieving synergies through co-ordination of the different investment initiatives. At the same time it implies opportunities for regions far from the centre, such as Aysén or Magallanes, to improve their connectivity. Finally, the programme includes trans-border infrastructure projects, not only to improve connections between Chile and Argentina, but also to merge the advantages of bordering regions. This initiative could be an example for other border areas.

Urban transport planning

An adequate territorial planning process is necessary in order to obtain the maximum benefits from infrastructure investment. Urban planning is a significant challenge in big cities like metropolitan Santiago, where the fragmentation of the functional city into different *comunas* (greater Santiago encompasses 35 communes of the metropolitan region) undermines the spatial co-ordination of responsibility for urban transport. The routes of city buses cross several *comunas* and there is no single municipal administration to co-ordinate and manage urban transport in a global and comprehensive way. The national Ministry of Transport deals with Santiago's urban transport system. The recent problems faced in the transition from a non-integrated public system operated by microentrepreneurs to the current integrated public transport system serving the metropolitan region of Santiago, *Plan Transantiago* (see Box 2.26), reveals the need to:

- Define a functional spatial planning system at city scale (for greater Santiago).
- For infrastructure planning, provision and enforcement, find the right balance between what should be done at the local level (of each *comuna* within greater Santiago), and what is best undertaken at the regional and national levels.
- Discuss the establishment of a single local/regional authority able to deal with challenges affecting big urban conurbations formed by several *comunas*. Such an authority would have better information, planning and negotiation capacity to deal with the complex challenges and requirements of greater Santiago (urban transport, among others).

Box 2.26. The Transantiago Plan

The Transantiago Plan was designed to modernise Santiago's public transport services. It involved a complete restructuring of the city's bus routes, dividing them into axis and feeder services and the introduction of new international-standard buses to increase travellers' safety and comfort and offer better working conditions for bus drivers. The new transport network has been designed to reduce the length of the average route, cut substantially the number of buses (replacing the many competing private operators that previously offered uncoordinated bus routes and services), and improve connections between subway, buses and suburban trains. All of this should considerably reduce traffic congestion and air pollution in the city; since buses account for close to 40% of all particle contamination in Santiago, the upgrading of the bus fleet will help to improve air quality significantly. At the same time the system seeks to rationalise and integrate urban bus routes with existing metro services under a single electronic payment system using smart cards.

However the system had a difficult start in early 2007, and the transition to the new system has presented a number of challenges:

- The new integrated axes leave some zones in several Santiago's suburbs previously covered by private operators without public transport.
- The passenger flows of the traditional operators were underestimated, so that the new system was unable to meet all of the demand for urban transport.
- Lack of enough information regarding changes in payment systems caused problems, especially during the first months while clients became accustomed to the new smartcard ticketing system.
- Traditional and informal bus operators resisted the corporatisation of bus services.

The example of infrastructure clearly demonstrates the need for partnership and collaboration among different levels of government (multi-level governance arrangements) and among different policies that affect the territories. This calls for moving towards building long-term governance structures to carry out regional policies. In Chile this will require raising regional governments' ability to be an active player in the discussion, planning and co-ordination of regional development policies.

2.6. Regional economic objectives and public investment mechanisms

In Chile line ministries and public agencies have traditionally formulated policies top-down. This has started to change in the past few years, and the

government has made efforts to include regional content in some support programmes and to create institutional incentives to enhance a place-based approach to economic development. Initiatives with a regional component include Corfo's Integrated Territorial Programmes (PTI), the Innova Bío-Bío programme and Chile Emprende. There have also been initiatives designed to improve access to finance for MSMEs through Banco Estado and the Small Business Guarantee Fund (*Fondo de Garantía para Pequeños Empresarios – Fogape*). These programmes are available nationwide but are expected to have the greatest impact in non-core regions. At the national level, the Territorial Management Programme (GT) was included as one of the basic areas of the national Management Improvement Programme (PMG)¹¹ (see Box 2.27); this shows the priority the national government gives to incorporating a comprehensive territorial perspective in the different public services delivered by national institutions.

Box 2.27. Territorial Management Programme

The main objective of the GT is to promote synergies and convergence among initiatives developed by various public institutions (including regional governments and deconcentrated public agencies) operating in the regions. This scheme offers a clear institutional incentive to the different public actors in the region (intendant, regional government, provincial governors, Seremis, and directors of public services) to plan their activities and formulate their policy proposals in an integrated way, taking into account complementarities with other sectors in the territory. Each public institution is to develop its annual programme of work on this basis. To comply with the plan, the targeted institution has to design a document which covers four steps: diagnose the current situation and the needed improvements; design a programme of work; monitor the execution of the programme of work; evaluate and propose improvements. This instrument seeks to support the regionalisation and decentralisation process by strengthening the capacities of the regional government and improving the co-ordination mechanisms. Subdere is the institution responsible for the process nationally, and regional governments are in charge of co-ordinating the system in the regions.

Source: Subdere.

Subdere's support for regional development and decentralisation and Corfo's programme-based initiatives to develop regionalised policy instruments suggest a change in approach. The regional development agencies are a clear expression of the desire to plan and co-ordinate

productive development in the different regions. At the same time, Corfo's Integrated Territorial Programme (PTI) is another example of recent cross-sectoral initiatives to improve co-ordination at the regional level. It aims to foster regional competitiveness by improving co-ordination of the different actors and policies in the targeted territories. These regional initiatives have involved co-operation between Corfo and different ministries, such as the Ministry of Public Works, on overall strategy and on programme implementation. The programme beneficiaries may be public or private entities linked to the territory. Currently there are 18 PTIs in operation; among them are the strengthening of the salmon cluster in southern Chile, developing tourism infrastructure in the port area of Valparaíso, and promoting sustainable tourism in Magallanes (Box 2.28).

Box 2.28. PTI: The salmon and wine clusters

The salmon cluster is in the southern regions of Los Lagos and Aysén. The main goals of this initiative are: to focus public resources on the critical aspects of the salmon value chain; to detect the key areas for R&D investment; to develop cluster networks; to launch public-private co-ordination and co-operation arrangements among the main actors operating in the salmon cluster: industrial managers, workers associations, producers, suppliers. This public-private programme promotes research and innovation as part of an overall effort to improve the quality and efficiency of production.

The goal of the wine cluster in el Maule region is to foster regional development and productivity and improve the cluster's competitive position in the national and international market through a co-operative and multidisciplinary R&D endeavour (firms, universities, R&D institutions) that maximises the use of available resources to: conduct applied research in viticulture and oenology; collect and disseminate technical and economic information; and develop patentable technological products specific to the wine industry, among others.

Other opportunities being promoted in particular regions are sustainable regional tourism, traditional culture, mining cluster, metalworking, and the fruit industry.

Source: Corfo.

However, as noted in previous sections, most efforts seem to be constrained by an agenda largely designed at the central level, with insufficient consideration and participation of regional institutions. A strengthened institutional framework at the regional level is needed to give

coherence to public support for economic development. The large number of programmes dealing with economic development run by different ministries and agencies lack an institutional setting for reaching stable co-ordination agreements and achieving territorial synergies. Moreover, initiatives that attempt to exploit the benefits of a territorial orientation still face institutional obstacles, which are reinforced by the sectoral orientation of the National Investment System which makes it difficult to finance regional multi-sectoral initiatives.

Regionally decided investments: the FNDR

Regional governments do not have an independent budget for carrying out regional investment. Investment going to the regions follows two main channels: sectoral investments by the line ministries and regionally defined investments (IDR), with regional governments intervening in the distribution process. Four sources of investment have traditionally been considered IDR in Chile: i) the FNDR; ii) the Local Assignment of Regional Investment Programme (IRAL); iii) the Regional Assignment of Sectoral Investment (ISAR); and iv) programming agreements. These four types of regionally defined investments come from central government resources and are managed, to some extent, by regional governments. National ministries control the specific orientation and technical aspects while regional governments are involved in decisions regarding how to distribute and where to locate these resources. The FNDR represents the main source of regionally defined investment. It represented 65% of IDR in 2006 and its weight has tended to increase (see Box 2.29).

According to data from Mideplan, the share of central government public investment set aside for regionally decided investment (IDR) increased during the 1990s to a peak of 33% in 2001 (Table 2.7). Since then, it has gradually declined. In 2006, the IDR accounted for 24% of central government investment. In terms of municipal investment plus IDR, investment regionally or municipally defined represents 30.5% of total public investment in Chile. Thus, a significant share of the national investment is defined on a sectoral base, without the participation of the regional or municipal governments. Nonetheless, in the last ten years regionally defined investment funds have more than doubled, largely owing to a rise in the FNDR.

Regional distribution of the FNDR

From a social perspective, some backward regions seems to be underfinanced by the FNDR. The FNDR has traditionally sought to compensate for regions' socio-economic and geographical disadvantages. Regional funds are allocated annually according to a formula that distributes 90% of the resources according to socio-economic criteria.¹² Within this 90%, different poverty variables account for 55% of the distribution. Additionally, the size of the

Box 2.29. **The FNDR**

The FNDR (Fondo Nacional de Desarrollo Regional) is the main direct mechanism for distributing resources to municipalities, territories and regions. Since 1975, the FNDR has functioned as a public investment programme for compensating disadvantaged territories and for targeted infrastructure financing. Funds are distributed to the regions, which channel them to the municipalities to finance local investment needs in a broad range of fields, including education, health, sanitation, roads, electric power, rural telephone service, embankments, and fisheries. Funds are allocated among regions according to socio-economic criteria and particular territorial handicaps, following a formula that includes several socio-economic indicators (population in poverty conditions and indigence in absolute and relative terms) as well as regional indicators (such as size of the region or differences in the cost of paving and construction). The nation's annual budget law establishes the objectives and regional distribution of each FNDR budgetary allocation. The regional governments determine the concrete projects to be financed. There are two different forms of FNDR: "FNDR of free disposition", which relies on the regional government to select the projects, and "Provisiones", which give regional governments less control over the project and over the territory within the region to which these investments will be allocated. The government's funds have been supplemented by a series of loans from the Inter-American Development Bank (IDB), the World Bank and the German Bank.

Source: Subdere.

Table 2.7. **Public investment**

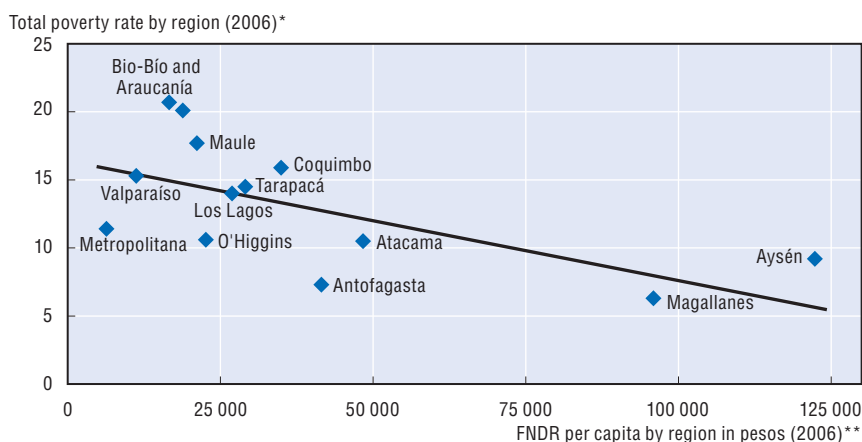
Millions of current CLP

	1996	2000	2001	2002	2003	2004	2005	2006
Central Government Investment	943 391	1 057 762	1 121 875	1 252 397	1 341 788	1 476 290	1 743 698	1 811 947
IDR (m. of pesos)	195 381	343 209	368 669	382 812	357 465	347 683	378 700	435 860
IDR %	20.7%	32.4%	32.9%	30.6%	26.6%	23.6%	21.7%	24.1%
Sectorial Investment %	79.3%	67.6%	67.1%	69.4%	73.4%	76.4%	78.3%	75.9%
Municipal investment	100 593	157 417	128 973	152 892	154 921	215 193	165 732	167 801
Total public investment	1 043 984	1 215 179	1 250 848	1 405 289	1 496 709	1 691 483	1 909 430	1 979 748
IDR+ Municipal Investment %	28.4%	41.2%	39.8%	38.1%	34.2%	33.3%	28.5%	30.5%

Source: Mideplan.

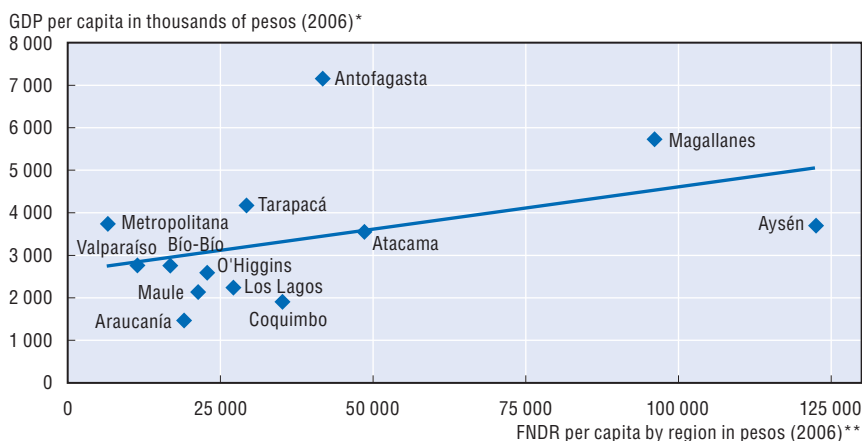
region accounts for 30%. The result reveals a paradox: as shown in Figure 2.5: certain regions with high poverty rates (*Región del Maule, la Araucanía, or Bío-Bío*), are among the least favoured in terms of FNDR per capita, while others (*Aysén, Magallanes, Antofagasta*), are highly favoured. A similar result is obtained for GDP per capita (Figure 2.6).¹³ This situation seems to be the result of a size-related bias in the FNDR formula: some of the regions with the highest poverty rates are among the smaller ones (*Bio-Bío, Araucanía, Maule and Valparaíso*), while other more developed regions (*Antofagasta, Magallanes*) are among the biggest (see Table 2.8).

Figure 2.5. **FNDR and the poverty rate**



Source: * Mideplan based on Casen survey (preliminary data); **Mideplan CLP at current prices.

Figure 2.6. **FNDR and GDP per capita**



Source: * Central Bank of Chile in CLP at constant prices (2003); **Mideplan CLP at current prices.

Table 2.8. **Regional allocation of the FNDR**

	Area	Poverty (2006)*	Gdp per capita (2006)**	Population (2007)***	FNDR per Capita****
ANTOFAGASTA	126 049.1	7.3	7 155 228.9	554 773	41 582
MAGALLANES ¹	116 437.4	6.3	5 731 344.8	157 032	95 926
AISÉN	108 494.4	9.2	3 697 634.7	101 523	122 368
ATACAMA	75 176.2	10.5	3 550 205.0	274 436	48 395
LOS LAGOS	67 013.0	14	2 239 785.5	1 180 168	26 932
TARAPACÁ	59 099.0	14.5	4 175 753.2	481 729	29 112
COQUIMBO	40 579.9	15.9	1 906 385.6	687 659	34 970
BÍO-BÍO	37 068.7	20.7	2 757 047.1	1 996 099	16 625
ARAUCANÍA	31 842.3	20.1	1 469 182.7	945 544	18 869
MAULE	30 296.1	17.7	2 136 343.1	983 396	21 175
VALPARAÍSO	16 396.1	15.3	2 766 232.5	1 701 293	11 244
O'HIGGINS	16 387.0	10.6	2 593 662.5	857 677	22 665
METROPOLITANA	15 403.2	11.4	3 740 934.6	6 676 745	6 392

1. Regional area does not consider the Chilean Antarctic territory.

Source: *Mideplan; ** Central Bank of Chile In CLP at constant prices (2003); ***INE; ****Mideplan.

Geographic extension is not an effective criterion for distributing funds among the different regions. The especially high values of the FNDR per capita in regions such as Magallanes and Aysén, are partly explained by their small populations¹⁴ and special needs due to their particularly difficult geographical location.¹⁵ The investment per capita needed to deal with the particular infrastructure needs of these regions will logically be high. Yet, the size of the regional territory is not the best criterion to use to calculate the investment needed. At the same time, this indicator works against certain “small” regions with significant socio-economic disadvantages. An in-depth analysis is needed to choose a group of variables which, taking into account the special characteristics of sparsely populated regions in a difficult geographical location (with high per capita cost of any investment), does not prejudice backward regions because of their smaller size.

The efficiency-enhancing criterion accounts for 5% of the regional distribution formula. It would be useful to undertake an in-depth analysis to determine if this variable is currently acting as a driver to encourage regional good practices and if regional governments perceive this incentive to be strong enough to encourage efficiency-driven investments.

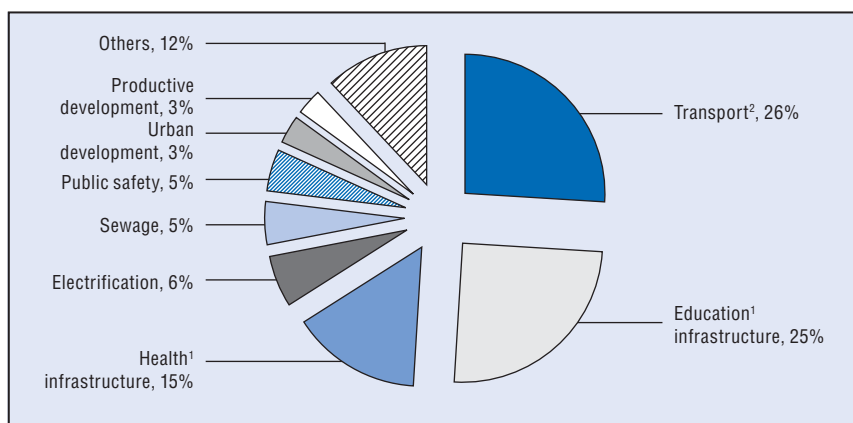
From sectoral subsidies to integrated grants

A gradual transition from sectoral subsidies to integrated grants can pay off. As mentioned at the beginning of this chapter, the new paradigm for regional development policy currently applied in most OECD countries has shifted from subsidies to integrated development projects to mobilise

underutilised regional resources. These projects are territorial rather than sectoral. They extend beyond the administrative limits of the municipality and frequently involve a group of localities with common characteristics or the whole region. Different levels of government are involved and sub-national public and private actors play a role in the design and management of the project.

Subdere has been closely involved in trying to move FNDR from a compensatory fund focused on infrastructure provision towards a territorial development fund with more comprehensive goals (Subdere, 2006). Despite some improvements, this shift has not yet been achieved. The FNDR can finance productive development in a broad sense, but this still only represents 3% of the FNDR allocated in 2006. Most FNDR resources remain committed to covering basic municipal infrastructure gaps in a broad range of fields, including transport, education, health, or electrification (see Figure 2.7). From 2008, initiatives included in the development agendas of the RDAs can apply for financing by the FNDR. This promises to give a greater role to productive development initiatives to promote endogenous growth. Yet, for this to happen, special attention should be paid both to developing strategic agendas and PMCs based on regional vocations and opportunities, and to strengthening the links and co-ordination between the RDAs and the regional government.

Figure 2.7. **FNDR resources assigned by sector 2006**



1. Primarily public building and IT infrastructure.

2. Mostly urban and regional roads.

Source: Subdere.

Most of the projects submitted to the FNDR still have a municipal basis. In 2007, 83% of the FNDR funds went to municipal projects, 4% to provincial initiatives, while 12% of the total financed regional proposals. It is possible for

the FNDR to cover investment projects involving more than one municipality (with common problems, opportunities or demands) but this is hampered by the lack of legal status of associations of municipalities. A project covering several municipalities can be presented and administered by a single municipality (for the group), but this is extremely unlikely. In this regard, a municipal reform under way has among its main targets to give legal personality to associations of municipalities and to offer them support. This is likely to help enable the creation of associations of groups of localities with common characteristics and the presentation of multi-municipal investment initiatives.

Finally, regional governments (and the deconcentrated public agencies) are allowed to present multi-municipal or regional initiatives to the FNDR, but, as the data show, the FNDR mainly finances individual municipal projects. This demonstrates the traditional lack of regional planning attributions of regional governments. The recent devolution of the responsibility for regional planning from the Ministry of Planning to the regional governments and the establishment of a specific regional planning division to manage it, is a promising initiative. However, it would need to be complemented by parallel measures to strengthen the capacity of the regional governments to arbitrate in the co-ordination and planning of comprehensive regional initiatives (to be discussed in more detail in Chapter 3).

The National Investment System

The National Investment System (SNI) establishes the norms and procedures that govern the Chilean public investment process (including those of the FNDR). In this regard, it determines the involvement of different levels of government in the design and management of initiatives to be presented for FNDR funding and the allocation of investments among regions. The objective is to improve the quality of public investment and increase the country's net efficiency. The SNI is headed by Mideplan and by the Ministry of Finance (through its budgetary arm, Dipres). The Ministry of Finance determines the budgetary framework, establishes the capacity of expenditure of each institution and assigns resources to the investment entities. To assign resources to a project, Dipres must verify that the project has been approved by Mideplan's technical and economic analysis: since 1988, all investment initiatives proposed by public agencies (including those financed by the FNDR) are subject to an *ex ante* evaluation carried out by Mideplan to guarantee the socio-economic merit of the different initiatives to be financed by the SNI (Box 2.30).

Even if national and regional sectoral coherence is considered in the technical and economic analysis of Mideplan, each project is examined individually. This works against a more in-depth consideration of the

Box 2.30. The technical and economic analysis of Mideplan

This process is administered by Mideplan through its central unit and regional offices (Serplacs). The evaluation aims to ensure the socio-economic value of all investment initiatives. A standard methodology is applied to analyse the costs and benefits (in financial and social terms) of individual projects and their technical feasibility. At the same time, some horizontal criteria are now integrated in the evaluation process:

1. National and regional coherence: The individual initiative should be articulated with the strategic orientation of the sector and with the national and regional interventions.
2. Citizen participation: Mideplan has started to incorporate citizen participation in certain investment initiatives.
3. Gender equity: This is to be applied in investment initiatives in which the main subject is affected by a gender criterion.
4. Environment impact: Investment initiatives that are expected to generate environment effects are obliged to undergo an environmental impact assessment.

Source: Mideplan.

territorial synergies of complementary interventions in a region. Mideplan's Technical and Economic Analysis is a useful framework for offering a minimum standard for crucial horizontal aspects such as gender equity, environmental impact or citizen participation in which nationwide coherence offers a clear social benefit. However, when analysing the costs and benefits of investment initiatives (in financial and social terms) a comprehensive regional perspective should be taken into account.

The FNDR investment process starts with the general guidance offered by the intendant in the regional development plan. The different requesting entities (municipalities, provinces, regions, the regional development agencies – from 2008 – and deconcentrated public agencies) submit their proposals to the intendant who selects a first portfolio. The following step is the evaluation and technical approval of the individual initiatives by the regional Serplac/Mideplan. When the initiatives receive a favourable technical recommendation, a third selection process starts in the regional government which decides which initiatives will be forwarded to the National Budgetary Secretary (Dipres). When deciding on this group of initiatives, the regional government has to take national priorities and guidelines into consideration. The FNDR has to follow the broad sectoral lines earmarked as national priorities. Dipres can validate or comment on the initiatives before sending

them back to the regional government. To conclude the process, the regional government sends the resolution on the assignment of funds through the national budgetary process which ends with ratification of the national budgetary law. This process is summarised in Annex 2.A1.

Benefits/challenges of the National Investment System

Several factors play a role in the results and improvements that can be achieved through public investments: the precision, flexibility and speed with which they react to investment needs, the institutions and actors that play a role in their allocation, and territorial co-ordination among these actors and among the initiatives to be financed in the regions. In Chile, most of these factors depend on the National Investment System (SNI).

This system ensures strong control over fiscal expenditures, with a focus on efficient use of public resources for investment. It has made possible a fiscal surplus and a strong framework to avoid corruption. At the same time, investment initiatives undergo a rigorous process of social, financial and technical evaluation by Mideplan to select the initiatives considered most valuable for society as a whole. All this gives national coherence to the investment process. However, the system faces certain challenges, especially regarding the lack of an integrated approach to regional investments. Funds, including those from the FNDR, are allocated across sectors. There have been initiatives to promote integrated planning in the national investment process (e.g. the preliminary draft on regional investment, the ARI; see Box 2.31). Subdere has also been involved in trying to move FNDR towards becoming a more integrated territorial development fund. Yet, as long as investment for the regions is designed and carried out within a sectoral approach there will be an obstacle to the development of integrated programmes.

The process lacks flexibility to adapt to specific territorial circumstances, making it difficult to achieve regional synergies. From the municipal point of view, requests for funds have to pass through a complex set of filters in which regional governments, the Ministry of Planning, and finally the Ministry of Finance intervene. Though this can give coherence to the investment process, the process lacks the flexibility and speed needed to meet certain municipal demands for investment in basic services. From the regional perspective, financial requests come mainly from municipalities, and regionally defined investment (IDR) is largely the sum of local demands adapted to national guidelines. An overall view of regional needs and opportunities is lacking. Because requests for funding go through *ex ante* analysis on a project-by-project basis, it is very difficult to achieve synergies between investment projects. The steps in the approval process for funding of initiatives and the various actors with a say in the process leave regional authorities, and especially regional councils, with only a secondary role.

Box 2.31. Preliminary draft on regional investment, ARI (Anteproyecto Regional de Inversiones)

Since November 2005 the preliminary draft on regional investment (ARI) is recognised by law as the necessary first step in the budgetary process at the regional level. The preliminary draft is designed with the participation of the main public actors in the regions in order to estimate the different regional investment proposals and identify the projects and the analyses to be carried out and their expected costs. The ARI has to be considered as a basis for the formulation of the budgets of regional governments and of the different line ministries. Potential divergences in ARI content have to be resolved in discussions among these actors. Through this process a mechanism for co-ordinating public investments in the region is promoted. Once the annual budgetary law is approved, the ARI becomes the public programme for regional investment (Propir). Within a period of 60 days, line ministries have to inform the regional governments about the precise investment programmes to be carried out in their region.

Recent evaluations (Valenzuela, 2006) found mixed results for the implementation of the ARI: the quality of co-ordination has varied among regions; the power of the intendant to negotiate is limited and linked to his personality and political influence; Dipres has the final word, and its decisions regarding investments in the regions follow national/sectoral guidelines. Nevertheless, the elaboration of the ARI offers a valuable exercise in co-ordination, discussion and sharing of the different investment intentions in the region.

Source: Subdere.

There is no necessary link between regional and municipal strategies and regional investment. Neither the intendant nor the different actors that operate in the investment process are required to follow the guidelines established in the municipal or regional development strategies. Moreover, there is no requirement to take into account the guidelines of the regional agendas or the PMCs of the RDAs regarding productive investment. This creates a disincentive for regional and municipal planning.

OECD experience suggests the importance of moving away from sectoral subsidies towards integrated place-based development projects in order to mobilise under-utilised regional resources. In Chile this would require adapting the national investment system to a territorial logic that makes it possible to finance integrated, multisectoral projects. Initiatives from sub-national governments that seek to take a regional approach are hampered by the sectoral orientation of the financial system. Initiatives with a territorial orientation such as Chile Emprende depend on national public agencies'

voluntary agreements. The move towards funding initiatives included in the regional development agendas of the RDAs through the FNDR is a step forward. However additional measures are needed. In this regard, regional governments' role in planning the development strategies should be strengthened and further taken into account as a framework to guide the investment planning process from an integrated approach. This will probably require strengthening the capacities and role of the regional government.

Conclusion

This chapter looks at the main arguments in favour of introducing or reforming regional policies in Chile. In particular, it shows how moving towards a comprehensive regional approach to development can help to achieve regional and national goals.

In Chile, economic development strategies are mostly decided from the centre and are focused on a few sectors mainly based on natural resources. Innovation, R&D and the leading higher education institutions are concentrated in the capital, Santiago. Chile should seek to establish an innovation system that both supports action at the regional level and maximises the diffusion of outcomes from the core of the national system in Santiago to the regions. Chile must also seek to increase access to quality education and vocational training throughout its territory and to the underprivileged segments of population in order to improve the conditions and potentialities of its different regions. This will require improving the technical and financial resources available to municipalities (which are in charge of public primary and secondary education). At the same time, strengthening the links between the regional labour market and higher education and training centres would help close the gap between education and employment portfolios and give graduates a better chance to find local employment and remain in their home region. All this favours a regional approach to education: human capital policies have to be sensitive to the characteristics of the regional labour markets and the regional productive environment.

Beyond making innovation, education or productive development more accessible to the regions, there is an additional challenge related to the coherent co-ordination and integration of the different policies and programmes. This chapter argues that the territorial approach to development offers several advantages. In the case of productive development, regionally driven productive agendas are likely to have advantages for targeting regional needs and opportunities and for creating new prospects for the diversification of production. This would help transform static regional economic advantages into dynamic ones. The advantages of an integrated perspective are also

observed in the case of transport infrastructure policy; as pointed out, its potential will only be fully exploited if territorial synergies exist with other economic development policies. Finally, a comprehensive rural strategy (with agricultural and non-agricultural elements and the integration of rural-urban links) would allow for a policy framework adapted to the diverse socio-economic and productive aspects and processes that affect the development of a rural community.

Aware of these challenges, Chile has made some progress towards a territorial approach to regional development. Some institutional initiatives (the RDAs), programmes (such as the Regional Scientific and Technological Centres, the Strategy for Territorial Economic Development of the Ministry of Agriculture, *Chile Emprende* or *Chile Califica*), and governance reforms have gone in this direction. Yet efforts to exploit the benefits of a regional approach face institutional obstacles. First, the agenda for regional development remains largely designed at the national level, with insufficient participation by regional governments and institutions in its design and co-ordination. This constrains the ability to find potential regional productive opportunities based on accumulated place-based assets. Second, the financial system, which is driven by the National Investment System, has a sectoral logic that hinders it from financing comprehensive initiatives. Third, the reforms and moves towards a territorial approach collide with the lack of an institutional framework at the regional level able to co-ordinate on a regular basis the different policies, instruments and actors involved in economic development.

All these issues affect the capacity to provide a coherent framework for generating regional synergies among the various policies and programmes for regional development, and consequently affect the productivity and competitiveness potential of the different regions, and of the country as a whole.

Moving towards an integrated territorial development approach would require changes in the governance system in order to strengthen the institutional framework at the regional level. In Chile this will involve increasing the capacities and attributions of regional governments so that they can become active players in the discussion, planning and co-ordination of regional development policies. Within this framework, a decentralisation debate has emerged in Chile. The governance and institutional implications of this debate are discussed in Chapter 3.

Notes

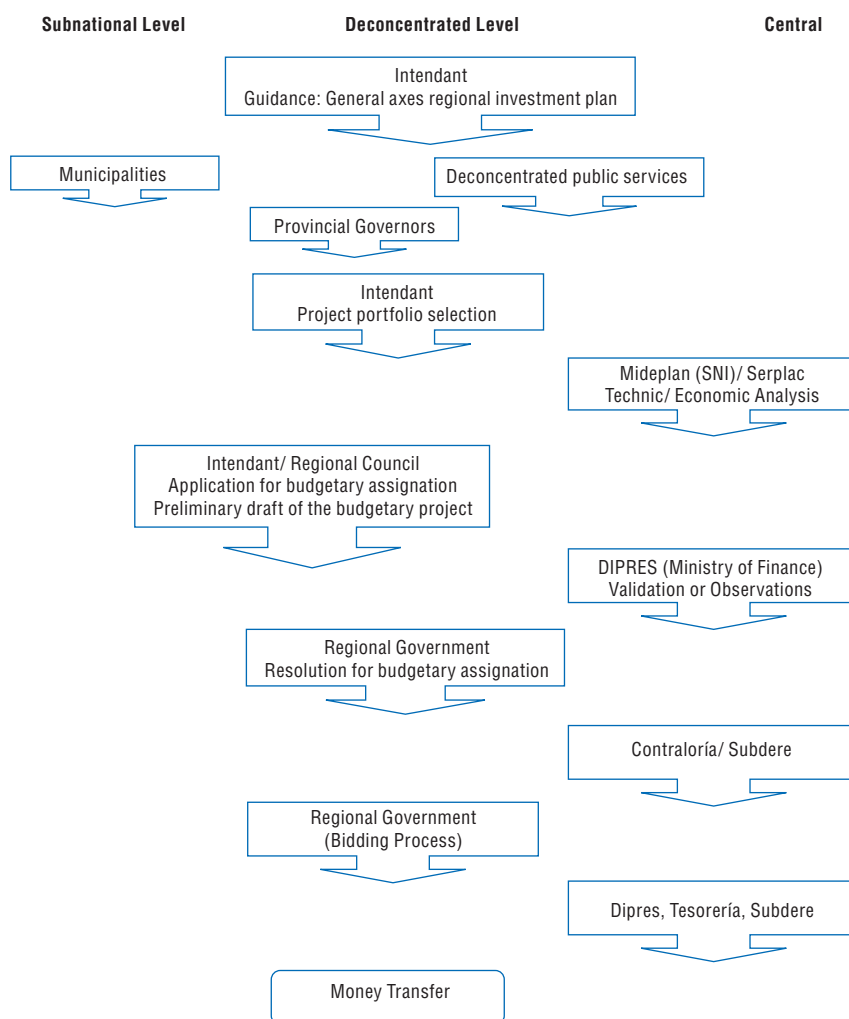
1. Yet, noteworthy research is carried out in some universities in other regions, such as the Catholic University of the North, the Austral University of Chile and the University of Concepcion.
2. Data on private investment in R&D from 2002 show that close to three-quarters of R&D spending was carried out by firms in the metropolitan area of Santiago (OECD, 2007a).
3. These advantages are recognised by Chile's central government in the National Innovation Strategy (Volume II, pp. 25-27).
4. Productive development policies can be broadly defined as policies that aim to strengthen the structure of production of a given national or regional economy.
5. At present, the programmes whose resources have been transferred are: Programa de Desarrollo de Proveedores; Proyectos Asociativos de Fomento, Programas de Fomento a la Calidad and Programas de Preinversión en Áreas de Manejo.
6. Some regional actors consider the regional planning division of the regional government as the only legitimate regional body for dealing with regional development issues, particularly now that a reform is under way to elect the regional council directly through democratic elections. This comment was often made by regional actors to the OECD review team during missions to Chile.
7. See the example of the Oulu Growth Agreement and cluster development in Finland (OECD, 2005b).
8. A comparison of the SIMCE results reveals that under comparable conditions, students from socially or economically vulnerable backgrounds have poorer results. The difficulties associated with their education process make it more expensive (Ministry of Education, 2008).
9. Eligible students will be identified on the basis of household participation in Chile Solidario, a well-functioning conditional, means-tested income transfer programme to fight extreme poverty; additional information available from the Ficha de Protección Social (the instrument used by the authorities to measure the socio-economic characteristics of the population); and the income classification system used by FONASA (the public health insurance provider).
10. These programmes are mainly implemented by the Institute for Agricultural Development (Indap) with a series of subsidies to improve the agricultural productivity of specific poor areas, and by the National Corporation for Indigenous Development (Conadi) via land purchases for indigenous people. Combined resources from Indap and Conadi account for 15% of budgetary transfers to agriculture.
11. The PMG is a management control system for ensuring the efficient allocation and use of public resources in the Chilean public administration. The government adopted the concept of results-based budgeting and gives a performance bonus to public institutions based on the fulfilment of several performance indicators. GT is one of the horizontal areas of the PMG framework.
12. Plus 5% for efficiency criteria, and 5% for disaster expenses.
13. Even if it is not a variable in the distribution formula, it is a valuable indicator of the development of the region.
14. Close to 100 000 inhabitants in Aysén, and 150 000 in Magallanes.
15. In the southernmost part of the country, and outside continental Chile.

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ANNEX 2.A1

The FNDR Process

Source: Subdere.

Chapter 3

Institutional Reform: Improving the Effectiveness of Policy Delivery

Introduction

The characteristics, assets and economic performance of Chile's regions are particularly diverse, and their potential for growth will largely depend on how public policies are adapted to their diversity and integrate their different synergies, attributes and assets. Enhancing the productivity and competitiveness of specific regions and sectors requires agile, responsive institutional arrangements that can make targeted efforts to improve the quality of specific public investments and services. This chapter considers the multi-level governance system required to support a better match between public policies and territorial needs in the search for better regional performance. The first part of the chapter (Section 3.1) looks at how fiscal and administrative limitations on sub-national governments may undermine the feasibility of moving towards a territorial approach to economic development. This possibility has led to a debate in Chile regarding the use of decentralisation to improve regional performance and competitiveness. Section 3.2 discusses some issues that could make a difference to the effectiveness of Chile's governance reforms. Efficient decentralisation reform will require a clear definition of the roles of the different actors and instruments for achieving co-operation and co-ordination among them. In addition, national institutions will need to have confidence in the soundness of the reform and in the competence of regional institutions. Capacity building and the use of performance indicators could help in this respect. Strengthened multi-level co-ordination and co-operation arrangements and bottom-up participative mechanisms will be also needed to manage co-operation and co-ordination among the different actors. All these elements appear to be crucial for strengthening the legitimacy, coherence and effectiveness of the reform process. The section concludes that the creation of a governance structure capable of context-sensitive responses requires strengthening the reforms undertaken by the current government and developing a solid and enhanced governance structure at sub-national level.

3.1. A centralised system engaged in a reform debate

Chile is a unitary state with a fairly centralised structure: from the capital, Santiago, the central government exercises control over Chile's territories. Chile is currently divided into 15 regions, which are further divided into 52 provinces and 345 municipalities (*comunas*). Each level has its own

governance structure. The regional level has two categories of actors: deconcentrated and decentralised. The former are representatives of the national government and include: an intendant (the direct representative of the President of the Republic in each of the regions), ministerial regional secretaries (SEREMIS), and regional representatives of the national public agencies (*Corfo*, *Indap*, *Fosis*, among others) involved in delivering key public services. The decentralised regional government (GORE) consists of the intendant and the regional council. The intendant heads the regional council, acting both as the main representative of the central government and as co-ordinator of regional policies. Members of the regional council are elected indirectly by the municipal councilmen of the provinces, although there is a reform under way to elect them directly. The composition, organisation and functions of the different levels of governments are summarised in Table 1.1.

Two-thirds of OECD countries are considered unitary states. Yet, the administrative structure of OECD countries is far from homogeneous; there are different degrees of allocation of responsibilities to sub-national administrative tiers so that they range from unitary to regionalised to federal countries (Table 3.1). What defines both federal and regionalised countries is the existence of a regional, directly elected tier of government with constitutional status and wide-ranging autonomy and legislative powers relative to the administrative territory. What distinguishes federal states is the co-existence of sovereignties: the regional tier exists in its own right and cannot be abolished or restructured by the federal government (OECD, 2001).

Table 3.1. **The administrative structure of OECD countries**

State structure	Total	Country
Federal	8	Australia, Austria, Belgium, Canada, Germany, Mexico, Switzerland, United States.
Regionalised	2	Italy, Spain.
Unitary	20	Czech Republic, Denmark, Finland, France, Greece, Hungary, Iceland, Ireland, Japan, Korea, Luxembourg, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Sweden, Turkey, United Kingdom.

Centralisation has traditionally been associated in Chile with economic efficiency and political stability. However, administrative and fiscal limitations on regional and municipal governments may be undermining their ability to carry out some of their responsibilities efficiently, thereby creating a failure to take advantage of specific regional and local opportunities. This has led to a debate in Chile regarding the changes that can be made in the governance structure to improve the performance of sub-national governments.

Administrative and financial challenges for sub-national governments

Administrative challenges

Within the current centralised system, the main regional public actors remain largely bound by national guidelines. The head of the regional government, the intendant, is named by the President. The intendant's main role as head of the regional government is to work to develop the region. Yet, as the president's representative, he is also responsible for implementing national policies and guidelines. Decisions regarding the official designation or removal of intendants are political in nature and this sometimes affects how they manage their region. The problem of divided loyalty (to the central state and to the region) also exists among deconcentrated public servants in the regions: even if they are called to assist the intendant in all matters of preparation, execution and co-ordination of policies within their purview, they mainly follow the guidelines of their respective national agency.

Co-ordination of the different actors and policies in the regional government is a main challenge for the system. The regional government still does not have enough institutional strength to manage and co-ordinate a common strategy for the region that draws the various agencies and actors together. For example, intendants sometimes learn about projects to be carried out by a national agency in their region only when these are about to be implemented. This situation affects the capacity to provide a coherent framework for formulating regional policies.

In recent years Chile has undertaken several reforms and has made progress towards a more territorial approach to economic development through a number of programmes and initiatives. However, these attempts are hampered by the lack of an institutional framework at the regional level for co-ordinating territorial policies, by insufficient participation by regional actors, and by the tight framework established by national guidelines. Most of the programmes designed to promote economic development in the regions are designed at the national level, with insufficient participation by the regional governments and institutions in their design and co-ordination. Furthermore, some initiatives with a regional orientation such as the regional development agencies (RDAs) still appear fairly constrained by the national productive agenda.

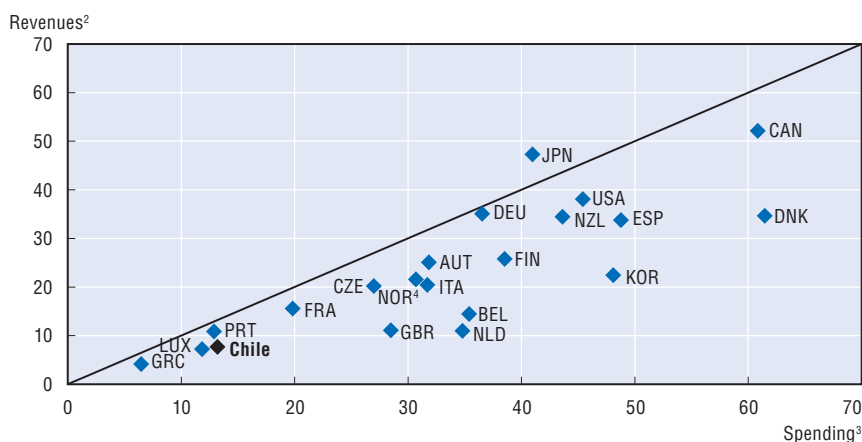
The role of the regional government should be further strengthened. On the one hand, regional management should be more clearly distinguished from national representation. There is also a need to strengthen the links between and co-ordination of the deconcentrated national agencies and the regional government in order to develop harmonised regional agendas. Multi-level governance arrangements would be crucial in these efforts (see the discussion in the following sections).

Financial challenges

Sub-national governments in Chile depend largely on central government transfers for their budgets as they have few autonomous sources of revenue. Municipalities are the only sub-national unit with the ability to collect revenues from taxes. Sub-national revenues in Chile account for only 8.1% of total government revenues and sub-national expenditures amount to 13.2%,¹ very low figures in comparison to OECD countries where, on average, one-third of public expenditures and one-quarter of public revenues occur at the sub-national level. Only Greece and Luxembourg have less sub-national fiscal autonomy than Chile (see Figure 3.1).

Figure 3.1. **Fiscal decentralisation OECD countries and Chile**

Share of sub-national government in general government revenues and expenditure, 2005¹



1. Or latest year available: 2003 for Canada and New Zealand, 2004 for Japan and Korea.

2. Excluding transfers received from other levels of government.

3. Excluding transfers paid to other levels of government. Figures for Chile are estimations based on IMF, *Government Finance Statistic Yearbook*.

4. The share of sub-national revenues is expressed as a percentage of total government mainland revenues.

Source: OECD National Accounts database; Statistics Norway; Statistics Canada; US Bureau of Economic Analysis; Chile: IMF, *Government Finance Statistic Yearbook*.

Municipal government budgets depend largely on resources from national transfers (especially for education and primary health care, their main devolved responsibilities) and on inter-municipal transfers from a municipal equalisation system, the Inter-municipal Common Fund (FCM) (see Box 3.1). Locally collected taxes represent on average only 36.9% of total municipal revenues (only 17.5% if national transfers for municipal education and basic health are included) (Table 3.2).²

Box 3.1. The Inter-municipal Common Fund (Fondo Común Municipal)

How the money is collected: Municipalities contribute a fixed share of the revenues collected from the main taxes: 60% of the property tax (65% in the four richer municipalities), 62.5% of the motor vehicle tax, 50% of the tax for vehicle transfers, and 100% of traffic fines. The four municipalities with the bigger income also contribute between 55 and 65% of the revenues from fees for commercial licences. The national government's contribution to the fund is fixed annually. In 2006 it only accounted for 1.5% of the FCM.

How the money is distributed: In 2008 a law defining new criteria was approved. The distribution is as follows: i) 25% is equally divided among the communes; ii) 10% is given in proportion to the poor population of the commune, weighted as a share of the country's population; iii) 30% goes in direct proportion to the land or properties exempted from territorial taxes; and iv) 35% goes to the municipalities with the smallest municipal permanent income per habitant (mostly municipal taxes).

Source: OECD based on information provided from Subdere and Asociación Chilena de Municipalidades.

Table 3.2. Main sources of municipal revenues (2006)

Percentage		
Source	Share	Share including national transfers to health and education
Autonomous revenues – municipal taxes	36.9	17.5
Business tax	(15.8)	(7.5)
Property tax	(15.9)	(7.5)
Municipal rights, traffic tickets, etc.	16.9	8
Inter-municipal transfers: FCM	38.6	18.3
External transfers	7.6	3.6
National transfers to education and health municipal system	–	52.6
Total	100	100

Source: National System of Municipal Indicators (SINIM) based on BEP.

Small and poor municipalities with few sources of local revenue are very dependent on the FCM. According to the National System of Municipal Indicators (SNIM), only 48 municipalities (out of a total of 345) receive more than 50% of their budget from their own permanent or long-term resources. By contrast 147 receive 20% or less from their own resources (i.e. 80% comes from national transfers and the FCM). Additionally, an important share of municipal revenues (15.9%) comes from the property tax, but the high

percentage of exempt (low-income) properties³ in the poorest *comunas* means low permanent revenues for these localities.

The FCM acts as a municipal redistribution fund to compensate for the wide disparities among Chilean municipalities. Its main objective is to ensure that all of the country's municipalities can fulfil their objectives and function adequately. This fund also compensates municipalities for the land or properties exempted from the property tax (as the exemption significantly lowers municipal revenues, especially those of poorest localities). Yet some observers suggest that the resulting transfers are still insufficient to cover their operating costs adequately (Zegras and Gakenheimer, 2000).

Sub-national governments in Chile (both municipalities and regional governments) have additional limitations on their access to resources. They cannot request private credits or negotiate loans from international organisations (even if loans from international organisations negotiated by the central government are used in regions/localities). Moreover, sub-national governments do not have the right to introduce additional taxes. This creates a high degree of sub-national dependence on external transfers and thus budgetary uncertainty because the amounts received vary from year to year.

These financial limitations undermine the ability of municipal governments to carry out their devolved responsibilities efficiently. Ideally, the assignment of responsibilities to municipalities should be accompanied by a concomitant allocation of the resources, competences and organisational flexibility needed to carry them out efficiently. One of the main goals of the proposed municipal reform (discussed below) addresses this important issue.

Poorer municipalities have neither the resources nor the incentives to invest in local economic development initiatives. Only the richer localities can afford to use their autonomous resources in this way. Most of the locally available resources of the poorest localities go to municipal education and health systems to complement transfers from the national level,⁴ leaving few resources available for additional investment measures. A system of incentives (linked to the FCM) or a special development fund might be considered to encourage investments in local economic development initiatives and promote endogenous growth in underperforming municipalities.

The resources of regional governments largely come from transfers from the central government (see Box 3.2). One of the regional government's main roles is to oversee annually determined national transfers for regionally decided investments (mainly the FNDR), most of which finance local initiatives. As pointed out in Chapter 2, while the regional government is an actor in the assignment process, allocation of the resources is regulated by the national budget law. The budget of the regional governments is largely financed by sectorally driven national grants, and this tends to inhibit the

Box 3.2. Regional government resources

- **Transfers from the central government (FNDR).**
- **Taxes, special regional rights and fees collected and distributed by central government agencies** and directed to the regions, among them:
 - ❖ Mining patents: 50% of the income from mining patents is added to the share of the FNDR of the region to which the patent is assigned.
 - ❖ Tax on gambling casinos: 50% of the revenue from this tax goes to the region in which the casino is located (to finance development of public works). The other 50% goes to the *comuna*.
 - ❖ Revenue from the sale of public physical properties: 65% goes to the budget of the regional government in which the property is located.

presentation and financing of territorial investment initiatives. Additionally, the framework of the National Investment System makes it difficult to move towards a multi-annual budgeting/planning framework for implementing local/regional policy. A gradual shift towards more comprehensive regional investments would require adapting the investment process to a territorial logic and to a multi-annual budgeting planning framework. Moreover it would require evolving towards a solid regional governance structure able to create a coherent framework for economic development.

The fiscal and administrative limitations on regional and municipal governments described above may undermine the feasibility of a territorial approach to economic development. The question in Chile seems to be how to secure an efficient allocation of responsibilities and resources to the sub-national governments that allows place-based policies to improve the competitiveness potential of the different regions, without compromising the institutional and financial stability reached in recent years. It is in this context that the debate on decentralisation has emerged in Chile.

The decentralisation debate

Historically, the Chilean deconcentration and decentralisation process has been guided more by efforts to improve the central state's control over the regions than by an attempt to transfer responsibilities to the regions and municipalities. During the last 30 years the process mainly involved deconcentration of functions to territorial units, yet several responsibilities, particularly primary and secondary education and basic health, were devolved to municipal governments:

- **Between 1974 and 1976**, some steps towards deconcentration were taken: division of the country into regions, provinces and municipalities, all of

them headed by a person appointed by the *junta militar*; transfer of certain responsibilities to the municipal level, especially for public education and health. Yet the main objective of the territorial administration was to maintain tight control over the territories. The intendants came from the military and had few links to the regions to which they were appointed.

- **With the arrival of democracy** in 1992, municipal governments became democratic: mayors and councillors were elected democratically. In 1993, a constitutional law created the regional governments. The intendant was still appointed by the president, but a regional council with members elected by municipal councilmen of the provinces was created to supervise the intendant.

During recent years, however, efforts have been made to further decentralise in order to improve the efficiency of public management. This is part of a worldwide devolutionary trend. Most OECD countries have introduced significant decentralisation measures since the 1970s. As of the early 1980s, Spain moved towards strong regional autonomy; Italy gave new responsibilities to regions, including some legal powers; France launched two decentralisation “acts”, the second of which entailed a change in the constitution; the United Kingdom strongly modified its institutional organisation by devolving an important level of autonomy to the “nations” that are members of the Kingdom, especially to Scotland (see Box 3.3); Sweden

Box 3.3. Decentralisation in the United Kingdom

Government in the United Kingdom is centralised but the past decade has seen significant devolution of decision making. Directly elected assemblies have been set up in Scotland, Wales and Northern Ireland, and London now has its own assembly and mayor. Changes in the eight regions of England outside of London (each with populations of about five million) have been more complex and more pragmatic, but demonstrate strong recognition of the importance of regional development. Institutions differ from one region to the next, and the number of administrative levels is not the same in urban and rural areas. Thus, the “nations” under the responsibility of the government at Westminster have elected regional structures: Scotland, Wales (no legislative powers) and Northern Ireland. This level of government is not elected in the regions of England itself, however, where there seems to be little demand for greater regional democracy: in a recent referendum, a proposal to introduce an elected regional assembly for the North-East (Newcastle region) was overwhelmingly defeated.

A hybrid structure has evolved, based initially on three organisations in each region:

- A government regional office (GO), headed by a senior civil servant from the central government.

Box 3.3. Decentralisation in the United Kingdom (cont.)

- A Regional Development Agency (RDA), set up and funded by the central government and overseen by a board of directors from the region led by the private sector.
- A Regional Assembly, comprising about 100 nominees from local government, academic institutions, business and voluntary organisations. These have proven unwieldy, however, and current proposals include smaller regional boards representing major interest groups.

Meanwhile, the government developed the concept of regional strategies, setting out key aims and investment plans for the economy, spatial planning and public investment in housing. Leadership of these has been spread across the RDAs, GOs and regional assemblies, and their integration and compatibility have met with mixed success. A government objective to reduce disparities in regional rates of economic growth has also had mixed success, in part owing to the exceptional economic performance of London and the south-east region. In 2007 the government began a new “sub-national review”, building on this experience. It aimed to clarify roles and to support policy making at the most effective spatial scale to enable regions and localities to reach their full potential.

New reforms were initiated in 2007 under four main headings: empowering local authorities to promote economic development and neighbourhood renewal; supporting local authorities to work together at sub-regional scale; strengthening the regional level; and reforming central government’s relations with regions and localities.

These reforms are intended to simplify and clarify and to recognise the principle of subsidiarity in decision making. In practice, the key regional functions for economic, spatial and housing strategies will now be brought together under the RDAs, suitably reconfigured. One major success of the RDAs has been the introduction of “single pot” funding by the central government, by combining the financial contributions of several central departments and allowing RDAs wide discretion in how the total is used to meet regional priorities.

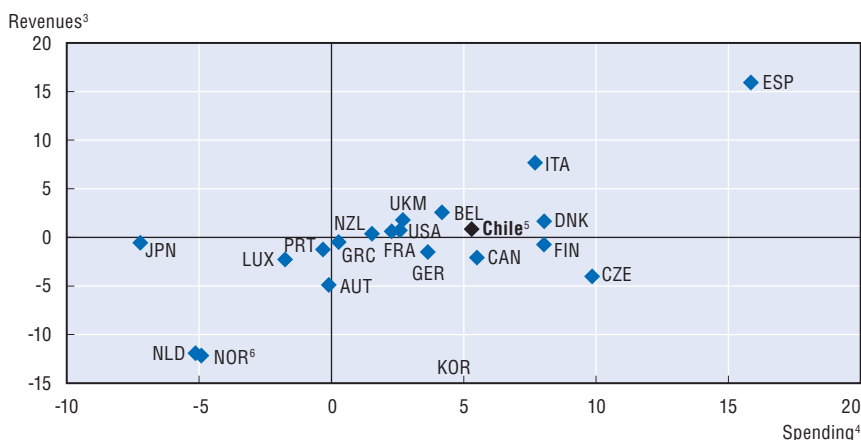
A further important innovation at regional and local levels has been the introduction of local area agreements. These are negotiated between regional government offices and local partnerships led by municipalities, and provide financial allocations to meet agreed objectives within locally initiated strategies. They combine output targets that reflect both national and local priorities.

Source: UK Commission for Rural Communities.

established in 1999 four pilot regions based on “old” county councils or on federations of municipalities. Fiscal decentralisation in OECD countries has risen over time: from 1995 to 2005, most OECD countries increased both sub-national revenues and expenditures or at least sub-national expenditures (see Figure 3.2). During the same period, Chile’s fiscal decentralisation

Figure 3.2. **Changes in the share of sub-national government contributions in total public revenues and spending in OECD countries and Chile**

In percentage points, between 1995¹ and 2005²



1. Or earliest year available: 1996 for Japan, 1999 for Portugal, 2000 for Greece and Hungary.
2. Or latest year available: 2003 for Canada and New Zealand, 2004 for Japan.
3. Excluding transfers received from other levels of government.
4. Excluding transfers paid to other levels of government.
5. Figures for Chile are estimations based on IMF, *Government Finance Statistic Yearbook*.
6. The share of sub-national revenues is expressed as a percentage of total government mainland revenues.

Source: OECD National Accounts database; Statistics Norway; Statistics Canada; US Bureau of Economic Analysis; Chile: IMF, *Government Finance Statistic Yearbook*.

increased by 1.1 percentage points on the revenues side, and 5.3 percentage points on the expenditure side, showing a slightly rise in expenditures, which was unaccompanied by a parallel raise in revenues.

Chile's current government has set high priority on decentralisation with the aim of providing sub-national governments with the tools, capacities and legitimacy to improve their autonomy and performance. Reforms under way to this end (see Box 3.4) include election of the regional council directly instead of indirectly by the municipal councilmen of the provinces, which will create a democratically elected body for managing regional development. Also, responsibility for regional planning has been transferred from the National Planning Ministry (Mideplan) to the regional governments, and a new regional planning division (the third division of the regional government) has been established to manage it (see Box 3.5). These changes are expected to increase institutional legitimacy and may help bring citizens and regional authorities closer together. However, in spite of the decentralisation efforts, progress is still modest and the territorial agenda remains still largely controlled from the centre.

Box 3.4. Recent developments and prospects of the Chilean decentralisation process

Recent decentralisation reforms are part of a general strategy to be implemented from 2007 to 2010, which has five main axes:

1. **Municipal reform.** It comprises the reform (under way) of the organic constitutional law of municipalities (LOCMUN) with three main objectives: i) to modernise municipal organisation, liberalising the administration of human resources at municipal level and improving the skills of municipal staff; ii) to make the organisation of municipalities more adaptable: among other measures, giving legal personality to associations of municipalities and offering them support; iii) to give more autonomy and further responsibilities to municipalities: modifications to improve municipal fiscal revenues, and a redesign of the FCM, among other measures.
2. **Democratisation of regional councils.** A reform that is under way will allow direct election of regional councillors and thus create a more democratic body with closer ties to citizens. This reform was approved by the chamber of deputies in January 2008 and is following the legal procedure for approval by the Senate.
3. **Devolution of responsibilities to regional and municipal governments.** As of January 2007, regional planning responsibilities were transferred from Mideplan to the regional government, establishing the third division of the regional government. Further responsibilities for training and tourism are to be devolved in the near future. Additionally, a reform under way will transfer certain functions to the regional governments: development of the regional zoning plan; design of regional productive development policies (innovation, business competitiveness and capacity building, among others); proposal of programmes for social risk sectors. Finally the implementation of some social programmes has been transferred to the municipal governments, e.g. *Programa Puente*, *Programa Vínculos*.
4. **Creation of two new regions.** In December 2006, the Chilean congress passed a law creating two new regions: Los Ríos (formed by the province of Valdivia, previously part of the region of Los Lagos, and now the XIV region) and Arica y Parinacota (on the northern border with Peru, formerly part of the region of Tarapacá and now the XV region). These regions were added to the previous 13 regions. The new regions became operative in October 2007. The main objective of the change in the political division of the country (which had not been modified since the creation of the regions in 1974) was to set up a new public framework for the new regional institutional model. The new regions begin with greater autonomy; regional planning has already been transferred to them and is executed through the new regional planning division of the regional government. Finally, the new regions emerged to satisfy local demands for more representation in the Senate and better administration of public funds.
5. **Improve the skills and institutional capabilities of sub-national governments.** This will be done through processes of accreditation, incentives and continuous learning. The objective is to strengthen the management capacity of sub-national governments.

Source: Subdere.

Box 3.5. The third division of the regional government

A process of transferring the responsibility of regional planning from the regional offices of Mideplan (Serplac) to regional governments started in 2007, and a specific division devoted to managing regional planning was created within regional governments. This process required the regional governments to satisfy three prerequisites. The first was a document specifying the responsibilities to be transferred, why this would be beneficial to the region, the human resources needed, and the different steps involved. This document required approval by the regional council. The second was to set up an institutional development plan in which the regional government established the vision, strategic plan, human resource policies and administrative procedures of the new division. This strategic plan has to be approved by each intendante following a participatory process involving various stakeholders. The third document was the work plan for the next two years. It had to be approved by the planning ministry (Mideplan). All regions (at different stages) carried out the procedure. Subdere led the process and allocated the financial resources. At the same time, in conjunction with Mideplan, Subdere carried out a training programme in regional development management for the staff of the new regional branches. The transfer process continues in 2008.

The main targets of Chile's decentralisation process

There are several reasons for the current reforms. Special emphasis was placed on improving democracy and participation through decentralisation, but there were also references to economic development and public management. Subdere's *"El Chile Descentralizado Que Queremos"* (Ministerio del Interior, 2001, pp. 25) described the general objective of decentralisation in Chile as "to contribute to the development of the country, by promoting institutional reforms to recognise the right of regional and local citizens and institutions to decide and plan their territorial affairs, especially those concerning economic, social and cultural development". More recently, regional competitiveness has emerged as one of the main purposes of the proposed decentralisation reforms. The overarching goal is better distribution of opportunities around the country and greater equality. In this regard, the government's decentralisation reforms have three principal objectives: stronger democracy and greater participation, more efficient public management and improved regional competitiveness.

Stronger democracy and greater participation

One of the main goals of Chile's decentralisation policy is to bring the public decision-making process closer to citizens. With the arrival of

democracy in Chile, decentralisation was seen as a way to extend democracy to the different territories, giving citizens a more active role in civic affairs. Most empirical evidence and OECD countries' experience (OECD, 2008a) demonstrate that under certain circumstances (see Box 3.6) decentralisation may enable citizens to hold local public officials accountable through the use of elections, collective action and other democratic means. At the same time, social participation and the interaction of public, private and social groups will help the local government plan and implement public services more effectively by improving information transfer, trust building, negotiation and deliberation and by reducing intra-territorial tensions. All these link democratic decentralisation to more effective administration.

More efficient public management

Devolution will make it possible to adapt public policies more closely to regions' specific needs and to respond better to local demands. In this way, decentralisation can help the public administration become more efficient. Sub-national governments have an advantage over central governments in terms of making use of local knowledge in local decision making and problem solving. However, the relationship between decentralisation and administrative efficiency in Chile, as in most OECD countries, is complex. First, it is important to consider the nature of the specific collective goods and services. For some it may make sense for the municipal or the regional government to take increased responsibility for reasons of proximity or local knowledge, while for others it may be the central governments that for reasons of scale or capacity are in the best position to provide them efficiently. Second, the achievement of administrative efficiency through decentralisation reforms is likely to depend on the institutional capacity of the decentralised units to act autonomously. Third, as already observed, efficient public management in a decentralised context requires consistency between the devolved responsibility and the financial and administrative means to carry out that responsibility. Finally, most responsibilities and services require the intervention and co-ordination of the different levels of government, which in turn require multi-level governance arrangements. These key issues are examined below.

Economic efficiency: improved regional competitiveness

Decentralisation is usually seen as a means to improve regions' development, innovation and business creation. Devolved institutional management can be better matched with the opportunities offered by the different territories and make it easier to respond in a timely, flexible and differentiated manner to their requirements and economic opportunities. In Chile, this perception is combined with concern among some public actors

Box 3.6. Decentralisation, democracy and participation

In spite of the mixed evidence, most empirical studies that rely on observations over time find a positive correlation between decentralisation and government responsiveness (Faguet, 2004; Bossert et al., 2003; Fisman and Gatti, 2002; Shah, 1998). However, decentralisation does not always further democracy even when local leaders are democratically elected: in societies with severe political and economic inequalities, decentralisation may exacerbate these inequalities if the reforms result in less effective constraints on local oligarchies (Bardhan and Mookherjee, 2000; Platteau, 2004; Larson, 2003). Some specific factors and conditions may help make the relationship between decentralisation and democracy stronger: i) democratic local elections; ii) popular participation and forums for inclusive decision making; and iii) transparent decision making.

- i) **Democratic local elections:** Several authors have pointed to the importance of competitive and contestable local elections as an institutional mechanism to counter corruption and prevent the capture of local politics by elites (Ribot, 2002; Blair, 2000, Agrawal and Ribot, 1999; Crook and Manor, 1998; and Fisman and Gatti, 2002). Moreover, the rules of the democratic process and proximity to the local citizenry can produce strong incentives for local politicians to respond to local concerns, needs and preferences.
- ii) **Popular participation and access to forums for inclusive decision making:** Other researchers have focused on the demand side of democracy and argued that downward accountability is helped by a strong and well-organised civil society (Grindle, 2007; Cabrero, 2007; Putnam, 1993; Bowles and Gintis, 2002, Andersson and van Laerhoven, 2007). Organised citizen groups (NGOs, unions, associations of small and medium-sized entrepreneurs, among others) should be in a position to engage in partnerships with government and to monitor local officials and hold them accountable. This places agency in the citizens and their ability to organise and interact with the formal political structure, but it calls for legal dispositions that give a role to these associations (regional development agencies or municipal councils for instance) in the development of the territory. This perspective seems particularly important in Latin America, with its strong corporatist traditions, powerful executives, and historically stronger upward, rather than downward, accountability mechanisms. The existence of a participatory decision-making forum can make a big difference for strengthening democracy at the local level. The main purpose of such forums is to open up the decision-making process in the sub-national government administration by inviting a broader range of stakeholders to take part, including some social or economic groups that are normally not represented.
- iii) **Transparent decision making:** For downward accountability to be possible, the local decision-making process needs to be open and transparent. Ways of promoting transparency include publishing information about decisions, actions and results of publicly funded activities. Another is the organisation of open town hall meetings where citizens have a chance to ask their elected officials questions about what the local government has done or plans to do about issues of concern to citizens.

that further decentralisation may entail a risk for the country's current economic and fiscal stability (mainly because of the lack of capacities of sub-national units; the main arguments of the opponents of decentralisation in Chile are provided in next section).

The literature and case studies abound with arguments for and against decentralisation as a means of promoting economic growth, as shown in Box 3.7 and as illustrated in Annex 3.A1. In spite of the empirical ambiguity, existing research suggests that decentralisation outcomes are driven by a number of interacting contextual factors: supportive local networks, national and sub-national institutional frameworks, governance arrangements, and types of decentralisation, among others (see Annex 3.A2). The importance of each will vary according to the particular context. Yet, governance systems with institutions of high quality and legitimate sub-national governments will

Box 3.7. **Decentralisation and economic growth**

Opposing theoretical views have provoked a great deal of interest in the links between decentralisation and economic performance. However, the many empirical studies conducted over the past two decades have not significantly reduced the uncertainties associated with decentralisation and its economic impacts. Economists who favour decentralisation often assume that it leads to better resource allocation and a more productive, and possibly smaller, public sector (Oates, 1972, 1999; Shah, 1998). Their logic is that locally determined policies are better able to take account of local conditions for the provision of public goods, such as infrastructure, health and education. Others assume that decentralisation will produce healthy competition among different levels of government, which in turn will promote lower tax rates and the efficient delivery of public goods and services (Brennan and Buchanan, 1980). Yet others have argued that decentralisation may also give local governments incentives to innovate in the production and supply of public goods and services (Vasquez and McNab, 2003, cited in Thornton, 2007).

Some theories point out that the arguments that link decentralisation and economic growth are often based on the assumption that the decentralised units have sufficient institutional skills to carry out the delegated responsibilities, but that this is not always the case. These theories do not reject the potential benefits of decentralisation, but focus on the capacities of sub-national governments to execute the devolved responsibilities. In this regard, some research reveals the potential reinforcement of territorial disparities as a result of decentralisation owing to pre-existing inequalities, especially when decentralisation is not accompanied by allocation of funds and institutional and technical support to match the new responsibilities (Rodriguez-Pose and Gill, 2004).

Box 3.7. Decentralisation and economic growth (cont.)

Economists who are more sceptical about the economic benefits of decentralisation argue that it creates many difficulties for managing macroeconomic policy, especially in terms of ensuring fiscal co-ordination and implementing stabilisation policies (e.g. Prud'homme, 1995; Tanzi, 1996). More specifically, several studies question the desirability of transferring responsibility for revenue and expenditure functions to local levels because a tax assigned to local governments might be more efficiently managed centrally. A second worry is that sub-national governments would have an incentive to spend excessively on public consumption rather than on public investment, which would lead to suboptimal levels of expenditure.

be in a good position to improve administrative and economic efficiency through decentralisation.

The challenge for central governments seeking to improve decentralisation outcomes is to work towards achieving a governance structure capable of context-sensitive interventions that respond to local particularities in terms of strengths, weaknesses, opportunities and problems. As mentioned, some measures taken by the Chilean government go in this direction, such as the devolution of responsibilities for regional planning to the regional governments and the democratic election of the regional council. However, there is a need to go further in developing an adequate governance framework capable of overcoming the current fiscal and administrative limitations on sub-national governments underlined above. The next section reviews areas that could make a difference in the effectiveness of the decentralisation reforms in Chile, within the context of a shift towards a territorial approach to development.

3.2. Making decentralisation reforms work

While there is no ideal degree of decentralisation, ways to make it work in establishing a territorial approach to development can be recommended. Experience shows that decentralisation has to be tailored to a country's institutional history, structure and culture. With a focus on Chile's specific governance characteristics and political context, several issues might be addressed to ensure the efficiency of the current decentralisation reforms in improving public support to regional development:

- **The scope for reform and implementation.** Identification of the constraints, the feasibility and scope of decentralisation is a key to success.
- **A judicious reallocation of responsibilities.** Targets in terms of the reallocation of responsibilities must be well defined as must the means for reaching them.

- **Arrangements for co-ordination.** Regionally based policies require a certain degree of decentralisation, which also requires developing a solid institutional framework for co-ordination and specific arrangements among the various sectoral actors and the different levels of government.
- **Capacity building at sub-national level.** Sub-national skills and institutional strengths are crucial to guarantee that decentralised units will have the capacity to act autonomously and efficiently.
- **Citizen participation:** There is strong evidence that the extent to which decentralisation will improve public service outcomes depends on the creation of institutions for participation and accountability.

The scope for reform and implementation

The political economy of reform is essential to the viability of the reform. It is important to identify and react to the challenges policy makers encounter when designing and implementing reforms. One common reason for the lack of success is insufficient attention to the groups that resist change, the reasons for their resistance, and the mechanisms for managing and reducing or removing this resistance. As a first condition of any political reform, it is necessary to see clearly both the resistance to and the support for the reform. Once this is established, the path of the reform can be set, the role of the different actors can be defined, and the arrangements among them and their responsibilities under the new governance framework can be established.

Resistance to change in Chile

Chile's proposed decentralisation reforms have received mixed reactions from actors within the society. Even within the central government there is a broad spectrum of opinions regarding the decentralisation process. Decentralisation sceptics rely on four main arguments:

- **Sub-national actors' lack of capacity to handle the new governance responsibilities.** Because of Chile's long history of centralisation, sub-national officials tend to have less formal education and training than their national counterparts. At the same time, regional and municipal governments might lack the institutional capacities to deal with public policies as efficiently as their national counterparts. For this reason, some critics argue that sub-national units would lack the capabilities to assume further responsibilities.
- **Threats to fiscal discipline.** Opponents to the reform argue that decentralisation may destabilise Chile's public finance system by effectively relaxing the principles of fiscal discipline. These principles, the argument goes, can only be preserved if the central government, and the Ministry of Finance in particular, retains full control over the country's public finances.

This position is based on the view that if sub-national governments are allowed to define some of their tax rates in order to finance locally provided public services, they may impose inefficient tax rates that result in underfinancing public investments. Along the same lines, if they are allowed to take out loans to finance public investments, they might default on their loan payments, with implications for a balanced national budget at the aggregate level. These fears, have taken proposals for fiscal decentralisation off the current policy agenda of the central government.

- **Jeopardy of economic growth.** Related to the two former assumptions there is some concern among some central government officials that any change to the current system, which has brought about considerable economic growth and political stability, would put these achievements at risk. Advocates of this position often refer to the inferior economic and political performance of neighbouring countries that have pursued more aggressive decentralisation reforms and use this as evidence in support of their argument that Chile ought to stick to its centralised model of public policy. Such an argument fails, however, to consider the possibility that the current system underperforms in terms of efficient and effective responses to local needs, concerns and opportunities.
- **Insufficient local democracy.** Some opponents of decentralisation fear that further devolution to sub-national governments could leave local public affairs in the hands of local and regional oligarchies. If political and economic elites control the decision making, decentralisation might exacerbate existing asymmetries in both politics and economics. Such an outcome would be bad for democracy and equality, two of the central government's priority policy objectives. While there is some evidence that local elites continue to exert some influence over local political affairs in some Chilean localities, there is no proof that this has had an effect on equality and even less on democracy at the local level. On the contrary, a 2004 survey (Mas Voces, 2005) found that municipal governments represent one of the three main organisations (after the family and neighbourhood organisations) to which Chileans turn for help in solving the problems that they are most concerned about. This high level of perceived legitimacy of the local government bodes well for downward accountability in Chile.

Some local government representatives have also expressed concerns about the likely effects of decentralisation. In particular, they may fear that the reforms are likely to lead to more responsibilities at local levels without the necessary funds and decision-making power to handle these new governance responsibilities. An unfunded mandate, they argue, may further complicate local government affairs.

The expression of these opinions about decentralisation is not a sign of the weakness of the Chilean policy reform process. On the contrary, the ongoing debate is healthy because the resistance forces reformers to make a clear and convincing case for reform. It also challenges the reformers to take on the arguments against decentralisation reforms and demonstrate how the government proposes to avoid the potential risks associated with it.

Initiating the reform

Resistance to change makes it crucial to identify tools for removing barriers. Every reform or transition process has inherent obstacles. Resistance comes particularly from fears about unexpected outcomes. Other possible obstacles are linked to resistance to the engagement of new stakeholders in decision making and in defining strategies. Reform is also resisted by social groups or administrative officials that fear the loss of acquired rights. The evidence from some OECD countries reveals several means of facilitating reforms. These were outlined at the Global Forum on Governance held in Rio de Janeiro in October 2007 (OECD, 2008b) and may provide a useful reference for Chile (see Box 3.8).

In Chile, the main resistance to giving more relevance to sub-national actors seems to be a fear of jeopardising the macroeconomic stability achieved during the last decades. This requires an effort to better communicate the expected outcomes of the move towards place-based policies, with special emphasis on the potential medium- and long-term efficiency gains to be obtained from this reform in terms of the productivity and competitiveness potential of the different regions and of the country as a whole. In particular, there is a need to show that the benefits of reform outweigh its costs and that the results, in terms of growth and welfare, are greater than under the previous policy. This requires assessing the impact of the “new” regional policy.

A judicious reallocation of responsibilities

Establishing the roles

The responsibilities of the different levels of government must be clearly presented. In Chile, the laws that define the responsibilities of regional and local governments are the organic constitutional law of municipalities (LOCMUN) and the organic constitutional law of regional government and administration (LOGGAR), respectively. They establish the main functions of regional and local governments (see Table 1.1 in Chapter 1). Yet, as of now, as in many OECD countries, concurrent responsibilities across Chile's different levels of government create ambiguity. This is the case, among others, of the responsibility for productive development. Even if this is an area for which both municipalities and regions have delegated responsibilities, national

Box 3.8. Measures used in OECD countries to enable reforms

Building positive expectations for the outcomes of decentralisation reforms among different national and sub-national stakeholders is both a challenge and an opportunity. It is essential to communicate the objectives and expected outcomes of the reform process in a clear manner, with special emphasis on the search for efficiency, and to allow the different stakeholders to participate. For example, the speed of the Danish reform of local government depended on the ability to convince different stakeholders that changes would improve service quality.

Building trust and co-operation among levels of government is important for effective multi-level governance, as is identifying with whom or where final decision-making power lies. Building trust is fundamental when wishing to move past the status quo during transitional periods. One means to accomplish this is to discuss and work out among the different actors a set of rules and agreements regarding the path of change. This national political consensus was crucial during the transition to democracy in Spain: an extended dialogue was promoted among the different political parties and between the central government and the regions (all of them with different positions on decentralisation) about the objectives and scope of the process. Additionally, a line of responsibility among the different levels of government was included in the 1978 constitution which identifies where final decision-making power rests. The constitution was elaborated by representatives of the main political parties. It received popular legitimacy through a referendum in which citizens gave it their strong support. Co-operation can also be important for balancing outcomes for reform “winners” and “losers”. When shifting from the old to the new fiscal equalisation system, Switzerland established a temporary cohesion fund so that no poor canton would be a net loser in the first years of the change. Additionally, wealthy cantons, which bore the costs of the new equalisation system, were compensated by increased spending power (a shift from earmarked to general-purpose non-earmarked grants).

Capacity building. Investing in capacity building can assuage the fears of national officials about sub-national governments’ lack of skills and experience to execute the devolved responsibilities or to participate in multi-level government agreements. As capacity building requires a certain amount of “learning by doing” it may be that sub-national governments need to have responsibilities transferred to them in order to undergo this learning process.

Performance measurement can also play an important role in a decentralisation environment. Indicator systems can reduce information asymmetries between central and sub-central actors, help the central government transfer knowledge across sub-central authorities, contribute to monitoring a decentralisation process, reveal sub-national capacities, and encourage performance improvements at sub-central level. In addition, they can provide information for assessing the progress and impact of decentralisation and other reforms.

Source: OECD (2008b).

ministries and national public agencies also play a key role. This makes it especially important to define clearly the role and responsibilities of each level of government: vaguely defined coexisting mandates may compromise the implementation of key services.

To reach a national agreement regarding the scope of decentralisation will be crucial. Targets in terms of the reallocation of responsibilities must be clear as must the path and means to reach them. This requires a clear presentation of the responsibilities of the different levels of government. At the same time, to ensure service delivery, decentralisation should be implemented along with administrative and financial arrangements that enable the execution of the devolved competences.

Establishing a governance structure adapted to place-based policies

As noted, the reforms and moves towards a territorial approach in Chile suffer from the administrative and financial limitations on sub-national governments. A main challenge is to develop a governance structure capable of context-sensitive interventions that respond to local particularities in terms of strengths, opportunities and challenges. OECD countries have made a wide variety of decentralisation choices and have adopted different institutional arrangements to govern the relationships between levels of government. The administrative structure in different countries is the result of their specific history and the institutional arrangements adopted with a view to efficient public management, yet the degree of autonomy transferred to sub-national entities normally requires a balance between at least two forces:

- Proximity helps to understand and adapt the response to specific local demands/opportunities. This pleads for giving powers of decision to lower levels of government, which are closer to citizens.
- Retaining control at the central level helps to reach national goals and ensure territorial coherence.

The balance struck between these opposing forces depends on the nature of each service and the specific characteristics of each country. It is not always easy to find a good balance. This is very evident in Chile, where recent decisions to delegate regional responsibilities to regional bodies have been affected by the control that national units still exercise with a view to national efficiency and coherence. In spite of notable differences in their governance structures, most OECD countries try to combine the aims of achieving national policy goals and of ensuring national coherence with sufficient autonomy for sub-national units so that regions can improve their competitiveness. In this regard, a common element is the re-emergence of a territorial policy approach. Countries have recognised both the need for comprehensive regional approaches in order to generate growth and competitiveness in their

regions and the crucial interdependencies between regional development and national growth and cohesion (OECD, 2007a).

Regional competitiveness requires context-sensitive responses which in turn require a certain degree of decentralisation. Regionalisation of national policies is not enough; some decentralisation is also necessary. Specific place-based strategies can exploit local opportunities in a way that is consistent with the strengths and weaknesses of regions. In some countries, the centralisation of regional policy or hierarchical control over its implementation is considered a good way to ensure consistency but it risks losing sight of regional and local strengths and opportunities. As underlined in Chapter 2, this is the case in Chile, where, despite recent progress, the agenda for territorial development, largely designed at the national level, undermines the capacity to further exploit regional opportunities. The search for regional competitiveness must be supported by the identification of regional opportunities to be exploited. For this, the role of the regional government in Chile should be further strengthened.

Strengthening the regional institutional framework

Moving towards an integrated territorial approach in Chile will require evolving towards a solid and enhanced governance structure at the regional level that is able to generate a coherent framework for economic development. This presents several challenges. On the one hand, the role of the regional development strategies of the regional government, as a guiding framework for investments in the regions, should be reinforced. Regional governments are responsible for designing regional development strategies and establishing the main socio-economic guidelines for regional development for a period of six to ten years. Yet in terms of investments, neither the intendant nor the different public actors that present initiatives, or that intervene in the investment process, are required to follow the guidelines set in the regional development strategies or in the regional agendas of the RDAs. This creates a disincentive for regional planning. Additionally, as observed in Chapter 2, the agenda for regional economic development remains largely determined by the national agenda. The articulation of regional strategies with national guidelines and priorities is obviously important. But the mapping of key areas for regional development would be improved by seeking specifically regional vocations and regional synergies. Institutionally reinforced regional development strategies, linked to the national investment process, would be necessary to give the regional government and the new planning division the opportunity to play a greater role in guiding regional development in a comprehensive way. This would require adapting the investment process to a territorial logic that makes it possible to finance integrated, multi-sectoral initiatives and to a multi-annual budgeting/planning framework for

implementing local/regional policy. A multi-annual budget would allow for better management of investment projects. It would also help policy makers to see more clearly the longer-term consequences of their spending decisions.

There is a need to increase the institutional support to regional governments and to give them greater powers so that they can become active players in the discussion, planning and co-ordination of regional development policies. In recent years a special effort has been made to devolve responsibilities to regional governments (including for regional planning). However, in any decentralisation process, the assignment of new responsibilities requires new governance arrangements and an appropriate allocation of responsibilities and the legal mandate to carry them out. In this regard, national institutions and agencies, especially the regional representatives of national public services and line ministries, should reinforce their links and co-ordination with regional governments. Institutionalised channels of communication should be strengthened. This will be crucial for giving regional governments the elements and capacity to carry out their enlarged mandate (especially their responsibilities for regional planning) efficiently. At the same time, there is a need for greater co-ordination between the regional bodies dealing with territorial issues, mainly the regional government and the regional development agencies. Attention should be paid to clarifying the responsibilities and strengthening the interaction mechanisms of these two institutions. These developments call for greater trust on the part of the national institutions in the competences of regional institutions. It also calls for greater co-operation between levels of government. Contracts, co-ordination agreements and other mechanisms, such as capacity building and performance indicators, could help in this process by raising regional governments' capacities and strengthening the legitimacy, coherence and effectiveness of the reform.

Within this context the central government has a key role to play: greater decentralisation does not mean that the central government should leave sub-national governments alone. Central governments need to set the general legal framework to enable virtuous relations, vertically among the different levels of governments and horizontally among the different national sectoral policies and among the different regions or municipalities. This legal framework should target inter-regional disparities and should regulate fair and effective fiscal relations among the different levels of government. Central governments may help local governments carry out their new mandates by offering technical support, co-ordinating the creation of economies of scale in the production of some local public goods and services, and perhaps most importantly in monitoring and evaluating the performance of sub-national governments. A functional combination of the strengths of both national and sub-national structures calls for multi-level governance arrangements.

Co-ordination arrangements

Moving towards a comprehensive approach to regional development in Chile will require developing a regulatory framework able to co-ordinate, on a continuing basis, the efforts of the different actors and instruments involved in economic development. As noted, a certain degree of decentralisation is necessary, but decentralisation in itself does not ensure co-ordination and policy coherence: several decentralised countries have severe co-ordination problems at the regional level, with different regional secretaries and programmes working with central agencies in an uncoordinated fashion without a common integrated strategy.

There is a need for effective multi-level governance arrangements. A crucial and not always easy task when implementing integrated policies is to arrange good co-ordination and achieve coherence among the different levels of government and among the different actors operating in the territory. As mentioned, even in centralised countries many services require the intervention of different levels of government (national, regional and local). Interdependencies between levels of government also exist because individual public actions at one level of government affect other levels of government. Finally, the assignment of responsibilities to different levels of government also requires multi-level governance arrangements for co-operation. However, efforts to co-ordinate vertical ministerial organisations can sometimes face resistance because they threaten sectoral interests and sectoral budget lines. This could lead vertically organised ministries and secretaries to resist inter-sectoral place-based approaches. Different measures and mechanisms can be applied to promote co-ordination.

Co-ordination from the centre

More efforts are needed in Chile to strengthen the territorial orientation of central government programmes. In addition to better co-ordination among levels of government and to greater involvement of sub-national governments in regional planning, it will be important for central policies on regional development to have a territorial dimension. As noted in Chapter 2, there have been a number of agreements to finance comprehensive economic development initiatives with resources and support from several public agencies (e.g. *Chile Emprende*), but these have been mostly *ad hoc* efforts. At least three key conditions for promoting integrated territorial approaches to regional policy at the central government level should be considered:

- A territorial development approach that promotes place-based rather than one-size-fits-all policies at the central level should have high visibility/priority on the political agenda.

- Efficient administrative and fiscal mechanisms for inter-ministerial co-ordination require procedures for financing multi-sectoral investments as well as further encouragement of collaborative mechanisms among different ministries and public agencies.
- The involvement of local actors (including local and regional governments or regional development agencies) in the design and co-ordination of national initiatives to be carried out in the regions would improve information on regional requirements and regional synergies and help to see how the initiative fits with other projects being carried out in the territory.

Collaboration between ministries and public agencies should be strengthened, as should the role of the Sub-secretariat for Regional and Administrative Development (Subdere) as “arbiter” to facilitate and foster integrated place-based approaches. In Chile, Subdere is the national unit in charge of promoting regional development. It is under the Ministry of the Interior and has a great degree of autonomy to deal directly with different ministries on issues under its responsibility. Subdere focuses its activities on four main areas: i) administration of public investment programmes (especially regional allocation and oversight of resources linked to the FNDR and the Municipal Common Fund (FCM); ii) design of decentralisation policies; iii) analysis, monitoring and evaluation of the decentralisation process and regional performance; and iv) support for institutional strengthening at the sub-national level. Subdere also supports initiatives to incorporate a regional vision in the activities of other central government institutions. However, it is currently very difficult for Subdere, in practice, to act as the national co-ordination unit. On the one hand, as pointed out in Chapter 2, public investment going to the regions is regulated by the National Investment System and is delivered on a sectoral basis. On the other, different initiatives proposed by national ministries and public agencies normally follow a top-down approach, sometimes without enough consultation and co-ordination with Subdere.

Co-ordination and arbitration on regional development policy at the central level is a challenge throughout OECD countries, but some options have emerged. The spectrum of instruments ranges from bodies charged with co-ordinating the activities of sectoral ministries, to ministries with broad responsibilities and powers that encompass traditionally separate sectors (see Box 3.9).

The contractual approach

OECD countries use contracts as a useful way to improve the efficiency of relations between levels of government, in contexts where public policies are

Box 3.9. Co-ordination of regional policy in OECD countries: various models

In OECD countries there are several different models for improving the co-ordination of territorial policies at the national level. The simplest and most common instrument is co-ordination through inter-ministerial committees and commissions. Some co-ordinating structures are relatively informal, others are more structured. Austria, for example, has developed an informal approach that emphasises consensus building among ministries, while Switzerland uses a more formal approach in which ministries dealing with territorial development issues have to convene regularly in an inter-ministerial body.

Several countries augment cross-sectoral co-ordination mechanisms through special units or agencies that provide planning and advisory support to help ensure policy coherence across sectors. In Norway, the Regional Development Unit of the Ministry of Local Government and Regional Development has responsibility for co-ordinating the regional dimension of policies of other government departments, principally through inter-ministerial groups. In the United Kingdom, the Regional Co-ordination Unit – currently in the Office of the Deputy Prime Minister – was set up to implement cross-cutting initiatives and to advise departments. In Japan, the National and Regional Planning Bureau in the Ministry of Land Infrastructure and Transport has developed a new view of territorial/regional policy and provided a network for local authorities as well as other local actors. In France, the DIACT (Délégation interministérielle à l'aménagement et la compétitivité des territoires) is an inter-ministerial body directly linked to the Office of the Prime Minister (it co-ordinates national territorial policy and handles planning contracts and the European structural funds) and receives information from the different ministries regarding their regional priorities and the strategic objectives identified by the regional prefects.

These co-ordination bodies also function as the interface with regional governments in the area of economic development – allocating funding, setting the guidelines for drawing up regional strategies, advising on and authorising the strategies, and ensuring value for money.

Source: OECD (2005), Building Competitive Regions.

co-produced by different levels of government. A contract is any arrangement that reorganises the rights and duties of the different levels of government other than by way of the Constitution. The contract establishes the set of norms and “rules of the game” by which the parties commit themselves to follow a mutually agreed mechanism (OECD, 2007a). These arrangements offer several

advantages for regional development policies: they allow for customised management of interdependencies; they are useful tools for dialogue that can be used for clarifying responsibilities and making mutual commitments explicit; they open possibilities for judicial enforcement; and they can be used as learning mechanisms. Contracts are used both in unitary and federal states. In some unitary states, contracts are often used in the framework of decentralisation as a way to complement (or implement) the constitutional delegation of authority. Yet, to enter into a contract the parties need to have certain level of autonomy.

Contracts are tools that can be used to explore new governance mechanisms, to transmit skills and to clarify responsibilities among the different levels of government. In some cases, successful contracting arrangements can lead to constitutional reforms if both parties have clarified or discovered a good assignment of responsibilities and good co-ordination rules between them. Alternatively, a successful contract between levels of government can lead to its replication in similar relationships between other parties or between the same parties but on another topic. Because of their capacity to be adapted to specific contexts and promote shared objectives and references (especially when accompanied by indicator systems) contracts might be considered a possible tool for reforming traditional practices in the governance of public policies in Chile, in particular for regional development. They would solve various kinds of issues: a framework for multi-level co-ordination, a tool for learning and capacity building, identification of relevant projects for competitiveness at the regional level, territorial customisation of competitiveness policy.

In Chile, programming agreements (*acuerdos de programación*) are a main tool for co-ordinating regional and sectoral priorities through multi-level agreements (see Box 3.10). A main advantage is that these investment initiatives allow multi-year budgeting. At the same time, they allow the regional government to take an important role in the design of these projects (integrating them in the framework of the regional development strategy). However, to date, the use of programming agreements has been mainly restricted to large infrastructure initiatives. Moreover, a common complaint is that the initiative and leading role in these agreements come largely from the line ministries, which use the system to carry out projects that would have been implemented anyway, with the added advantage that under this scheme the expenses are shared. As a result, the projects mostly reflect the priorities of the line ministries (*Ministerio del Interior*, 2001). An enforced and clarified role for regional governments and more institutionalised co-ordination between them, the line ministries and public agencies would be necessary to move the programming agreement format beyond large infrastructure initiatives to other areas, projects or parties. Within this expanded contract

Box 3.10. **Programming agreements in Chile**

A programming agreement is a formal agreement between one or more regional governments and one or more ministries, detailing measures and procedures to be undertaken in projects of common interest over a specified period of time. These agreements can also integrate other public or private national, regional or local institutions. It allows for carrying out multi-annual projects of one to five years. 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 region's development strategy; ii) the signing of a protocol of purpose which initiates negotiations with the ministries; 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, its approval and signing. Projects are carried out using the resources of both line ministries and regional governments (FNDR resources). On average, regional governments contribute 33% of the resources and line ministries make up the remaining 66%. The bulk of the projects are carried out with three line ministries: public works, housing and health. They are mostly designed to implement large Infrastructure projects.

Source: Subdere.

setting a shared assessment could be established in order to disseminate the “lessons learned”.

Local government co-ordination in metropolitan areas

Co-ordination is essential to efficient service provision in any metropolitan area. This is a common challenge in most OECD countries, both because several public institutions are involved in the regulation, provision and oversight of public services, and because functional metropolitan areas normally integrate several municipalities. In Chile, as noted in Chapter 2, urban planning is a significant challenge, particularly in Valparaíso, Concepción and in metropolitan Santiago, where the fragmentation of the functional city into different municipalities affects the overall co-ordination and management of urban public services, such as public transport. Greater Santiago is composed of 35 autonomous municipalities. There is no single municipal authority with jurisdiction over the entire city. The provision of local public services is normally a task for national institutions: national

ministries (for instance, the Ministry of Transport deals with Santiago's urban transport system), regional directorships of national ministries (e.g. the Housing and Urban Development Department – SERVIU), or public agencies (e.g. the National Commission for Environment – CONAMA). Additionally, each municipality has exclusive responsibility for enforcing all measures regarding transport, for implementing provisions regarding construction and city planning, and for the planning and urban regulation of the municipality. Municipalities also share responsibilities for social housing. Within this disaggregated context, the areas of responsibility of the different authorities are not clearly defined (Dockemdorff, Rodríguez and Winchester, 2000). It is thus essential to establish the role and line of responsibilities of each institution.

A co-ordinated local governance structure is required in big cities like Santiago. This is especially necessary for ensuring that different sectoral policies implemented in the metropolitan area are correctly integrated; different municipal areas (e.g. housing, land use planning and economic development) are connected to the urban economy and require cross-sectoral coherence. In parallel, co-ordination of the delivery of public services across several municipalities within a metropolitan area (for instance, public transport) also calls for establishing a metropolitan governance system.

It would be good to start discussions on the establishment of a local planning institution able to deal with the challenges affecting big urban conurbations formed by several municipalities. Such an authority would have better information and the capacity to deal with the complex challenges of delivering public services in the greater Santiago area. OECD countries use different institutional designs to improve co-ordination in the delivery of public services in urban areas in which the functional area is larger than the administrative boundaries (see Box 3.11).

In Chile, as a result of the establishment of the integrated public transport system for the city of Santiago, Transantiago (see Chapter 2), attempts were made to establish a metropolitan co-ordination unit: the “*co-ordinación general del transporte de Santiago*” and the “*directorío de transporte de Santiago*”. However these institutions were formed almost exclusively with central government institutions (different ministries and under-ministries), without any representation of local government on the institution's board. At the same time these units had only a consultative role. Several cities in OECD countries opt for a single metropolitan institution or authority to co-ordinate the main urban issues, such as urban transport. Representatives of the main local parties give this authority better information, planning and negotiation capacity. The regional transport authorities of Chicago and Frankfurt offer useful examples (see Box 3.12).

Box 3.11. Types of metropolitan governance in OECD countries

Many cities have placed greater emphasis on voluntary instruments for co-ordination and co-operation. The discussion of how to manage metropolitan areas better revolves principally around a spectrum of models that range from relatively “heavy” to relatively “light” in terms of the scope of the reform they imply.

- i) At the relatively heavy end are functional models whereby governance structures are reshaped to fit or to approximate the functional economic area of the metropolitan area. Examples include the creation of a metropolitan government and the amalgamation of municipalities.
- ii) At mid-position are a wide range of co-operative arrangements through inter-municipal joint authorities, most often on a voluntary basis, such as sectoral or multi-sectoral agencies whose main functions generally include transport, urban planning or economic development (sometimes on *ad hoc* basis).
- iii) At the light end 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.

Source: OECD (2006).

Finally, the specific structure and the mandate of a urban planning institution for Santiago (either a global urban planning unit or a specific transport authority) would be key factors in its success. An efficient urban co-ordination unit would need to have the necessary authority (established either through a specific contract or by law) that would clearly define its tasks, responsibilities, mandate and mode of interaction with the different sectoral institutions, the regional government and individual municipalities. In addition, such a unit should represent the main public parties but it should also be able to carry out its tasks efficiently. The large number of municipalities that comprise greater Santiago and the variety of public actors involved in the delivery of urban public services in Chile makes this a challenge. To tackle this challenge, some transport planning institutions established in OECD countries have decided to reduce the direct representation of municipal public officials on the institution’s board and appoint professionals with expertise in areas relevant to the institution’s role. The Vancouver transport authority offers an example (see Box 3.13).

Box 3.12. Transport authorities in Chicago and Frankfurt

The Regional Transportation Authority (RTA) operates as the second-largest public transportation system in North America, providing financial oversight and regional planning for the three public transit operators in north-eastern Illinois: the Chicago Transit Authority (CTA), Metra commuter rail and Pace suburban bus. Created in 1974 as a special-purpose unit of local government and a municipal corporation of the state of Illinois, it provides more than 2 million rides daily and oversees assets valued at more than USD 27 billion. The origins of RTA can be traced to 1974, when residents of six counties in north-eastern Illinois – Cook, DuPage, Kane, Lake, McHenry and Will – approved its creation in a referendum.

In terms of governance, the RTA's Board of Directors provides oversight responsibility and approves an annual budget and two-year financial plan. The 16-member RTA Board consists of 15 directors who are appointed from within the six-county region: five directors by the Mayor of the City of Chicago; four directors by the suburban members of the Cook County Board; one director by the President of the Cook County Board (from Suburban Cook County); and one director each from DuPage, Kane, Lake, McHenry and Will counties, who are appointed by the chair of their respective county board. The chair, its 16th member, is elected by at least 12 of the 16 appointed members. The RTA Board is required annually to review and approve a five-year capital plan, which is a blueprint for the capital activities to be funded by the RTA and executed by the CTA, Metra and Pace. The levels of service, fares and operational policies are left to the discretion of the respective boards of the CTA, Metra and Pace. Currently the RTA conducts regional mobility analysis, enforces paratransit guidelines, researches intelligent transportation systems (ITS), and administers a regional discounted fare programme for senior citizens and the disabled.

The Frankfurt Rhein Main transport authority (RMV) organises public transport in the area of Rhein Main, which comprises two-thirds of the state of Hessen. RMV also co-ordinates the regional public transport system in close co-operation with the local transport organisations. Decisions about transport facilities and tariffs are made at the political level, and the RMV and the local transport organisations implement these decisions. Transport enterprises such as the national railways or bus enterprises are answerable to the RMV through performance contracts. The 130 enterprises within the territory of the RMV are allowed independence in carrying out their contracts and achieving the required performance levels. Although the RMV does not have its own rail network or materials, it can plan for the construction of new rail networks, stations and material. One of the priorities when the RMV was first created in 1995 was to harmonise about 100 tariff systems that existed in the area it covered. It created one universal tariff and a single ticket that can be used on all the means of public transport, no matter how many transfers are made. The price is set depending on the number of tariff areas crossed. Every December, the schedules of regional transport in the RMV area are adjusted. The RMV informs the public about any changes in the 14 local transport systems and the one regional transport system.

Source: OECD Territorial Reviews, Cape Town, South Africa (2008).

Box 3.13. Transport authorities: Vancouver's TransLink

TransLink is the organisation responsible for the regional transport network of Metro Vancouver in British Columbia, Canada, including public transport and major roads and bridges. TransLink was created in 1998 (then called the Greater Vancouver Transportation Authority, or GVTA) and fully implemented in April 1999 by the Government of British Columbia to replace BC Transit in the Greater Vancouver Regional District (now Metro Vancouver) and assume many transport responsibilities previously held by the provincial government. TransLink is responsible for various modes of transport such as bus, rail and ferry services in the Metro Vancouver region, covering 21 municipalities (2 077 square kilometres) and serving more than 2 million people. Some of its operations extend into the Fraser Valley Regional District (FVRD). On 29 November 2007, the province of British Columbia approved legislation changing the governance structure and name of the organisation. With the new governance model, TransLink will be looking to expand its services beyond Metro Vancouver, potentially reaching as far north as Pemberton and as far east as Hope, based on municipal agreements. This is to meet the transport needs of the rapidly growing population of Metro Vancouver and its surrounding region.

In place of elected officials, the TransLink Board is now comprised of 11 appointed professionals, with expertise in areas relevant to the management of TransLink, such as finance, transport and labour relations. The Board is appointed by the Council of Mayors and is responsible for hiring and monitoring the performance of the CEO, and providing oversight of TransLink's strategic planning. The Council of Mayors is composed of the mayors of the 21 municipalities within Metro Vancouver. Under the previous structure, fewer than half of the municipalities of the GVRD were represented on the TransLink. In addition, an independent Regional Transportation Board has been nominated to deal with fare increases above inflation, TransLink's plans for annual satisfaction surveys, its customer complaint process and any proposed sale of major assets. Most importantly, the Commissioner reports to the Council of Mayors on TransLink's performance. Under the previous revenue scheme, TransLink relied heavily on property taxes for funding. The new legislation leaves TransLink with its previous major funding sources (transit fares, property taxes and a share of the provincial tax on gasoline sold in the Metro Vancouver area), which fund the billion-dollar operation and the CAD 4 billion capital plan. In addition, TransLink will also continue to benefit from Federal Gas Tax Fund. The parking stall tax, worth approximately CAD 18 million annually, has been replaced with an equal amount of property tax.

The new legislation gives TransLink access to an additional three cents of gas revenues in Metro Vancouver (worth approximately CAD 66 million) if, by the end of the new ten-year strategic plan, TransLink can demonstrate that it can raise CAD 130 million from regional sources such as increases in property tax, transit fares and advertising revenues. A new source of funding is revenues from property development near rapid-transit stations, illustrating TransLink's new role as a real estate development body.

Source: Vancouver's Translink website.

Capacity building and reform at sub-national level

In Chile, there is a widespread perception that the current levels of governance capacity in local governments – both municipal and regional governments – are insufficient for performing their mandated tasks in a satisfactory manner. Sub-national government staff generally tend to have less formal training than civil servants at the central level. Lack of capacity in Chile's sub-national governments is linked to the relatively limited financial resources of most regional and municipal governments for hiring qualified staff. Central government agencies offer much higher wages and are thus able to attract the most highly trained personnel (Valenzuela, 2006).

Sub-national governments have advantages in terms of making use of local knowledge, but the lack of human and institutional capacities can affect their performance. Local knowledge, strong political incentives to respond to local needs, and citizens' ease of access to local officials all give sub-national governments advantages for developing the institutional capacities needed for local governance. Nevertheless, to reap the benefits of decentralisation it is necessary to enforce the capacity of sub-national actors.

Investing in capacity building can facilitate the implementation of decentralisation reforms in Chile and help to dispel one of the main fears of opponents to these reforms. Some programmes have sought to improve the skills of local and regional public officials in order to prepare them to carry out their devolved responsibilities efficiently. This is the case of Subdere's Governance Improvement Programme (*Programa de Mejoramiento de la Gestión de Subdere*), which seeks to strengthen territorial development processes by providing technical and administrative support to local actors who are receiving an expanded public policy mandate as a result of decentralisation. Regional governments are the main target group. Subdere staff interacts with the regional government staff to document and assess practices and procedures in each of the 15 regional governments. The participatory monitoring and evaluation system identifies limitations and potential opportunities for augmenting capacities and addressing shortcomings through a process of progressive administrative adjustments and training. An attractive feature of the programme is that it has shifted the focus from the central government's pure control function to a focus more in line with its facilitative role in an increasingly decentralised context.

This is in line with reforms implemented in the OECD area, where capacity building is a responsibility that normally involves sub-national governments and other actors: sub-national governments are called upon to help recognise needs and design the necessary programmes. Involvement of regional academic institutions and NGOs in these programmes is frequent and could be an interesting option for capacity-building programmes in Chile.

Another specific measure to improve public officials' capacities in OECD countries is promotion of staff mobility both nationally, between central and local governments, and between the public and private sectors. This allows sharing expertise and best practices and focusing employee development on strategic needs (see the example of Interchange Canada in Box 3.14).

In Chile, the lack of flexibility to adapt the organisational structure of municipalities to local characteristics and demands has also hindered capacity building at the local level. As of now, several measures related to human resource management at the municipal level, such as the composition of the technical and professional staff or the maximum share of municipal resources devoted to hiring municipal staff, remain fixed and tied by national organic laws. The municipal reform under way is intended to give municipalities more responsibility and flexibility in the administration of human resources. It also aims to make performance incentives part of the remuneration of local officials. At the same time the reform is intended to offer municipalities further support and to improve municipal fiscal revenues, among other measures. This would be a necessary step in giving localities greater autonomy to adapt their organisational characteristics to their particular needs and create an institutional framework more favourable to improving the capacities of local governments.

Learning by doing

In centralised countries like Chile, constraining the political mandate of sub-national units can stifle local possibilities and motivation to acquire new skills. Reformers seeking to improve public-sector performance by decentralising governance responsibilities face a dilemma. While the devolution of political autonomy to local governments seems necessary to start a process of progressive capacity building, such devolution may seem risky if the local governance actors do not appear capable of performing the tasks asked of them. The solution is often a very limited transfer of political autonomy and resources combined with a more "generous" transfer of responsibilities. The problem is that, as noted above, a process that limits the resources and tools to carry out devolved responsibilities will restrict the capacity to execute these responsibilities efficiently.

Capacity building requires learning by doing. Moreover, observations from OECD countries reveal that apart from mechanisms to strengthen performance and improve local officials' skills, building capacity clearly benefits from the progressive involvement of sub-national governments in public affairs (see the example of Sweden in Box 3.15). Most countries have implemented this learning by doing framework gradually, by offering technical assistance and capacity building parallel to a progressive transfer of responsibilities. The use of performance indicators is a useful way to be aware

Box 3.14. Interchange Canada

Interchange Canada is a national programme that involves the temporary assignment of employees from one sector to another, including the federal public service, other levels of government, private-sector organisations, academic institutions and non-profit organisations. These assignments serve to strengthen policies, programmes and services, share expertise and best practices, and encourage employee development in line with strategic organisational needs.

Interchange Canada encourages employee assignments between the federal public service and organisations in other sectors both within Canada and internationally. By taking assignments in a new sector, employees develop personally and professionally and their organisations benefit from new skills, knowledge and approaches. Interchange Canada has the following characteristics:

- Employees are sponsored by their organisation. During the assignment, they work on site with the host organisation but remain employees of the sponsoring organisation. At the end of the assignment, they are expected to return to their sponsor. An assignment can be for a period of up to three years.
- Employees maintain their current pay and benefits, and the sponsoring organisation continues to pay the participant's salary and benefits. Normally, the host organisation reimburses the sponsor for these costs.
- The host pays for initial interview expenses as well as job-related travel and training during the assignment.

Possible conflict of interest situations are examined. Participating organisations are responsible for ensuring that there is no possible conflict of interest or that the risk is not significant.

Interchange Canada is open to employees in all groups and at all levels of the federal public service and to employees in business, other levels of government, Crown corporations, unions, academic institutions and non-profit organisations both within Canada and internationally.

Executives participating in the programme promote linkages between the federal government and organisations in the private sector or other levels of government, both within Canada and internationally. Because these leaders influence an organisation at its highest levels, the knowledge, innovation and cultural changes that result from their assignments are long-term and can help enhance stakeholder relationships.

Source: ACOA; the Canada Public Service Agency; the Public Service Commission Advisory Council of Canada.

of institutional capacities and requirements and to monitor the process (OECD, 2008b). The central government can adopt different general strategies for transferring responsibilities in areas for which sub-national units have limited management capacity. Either it can transfer policy domains immediately to the sub-national authority and co-operate (on the basis of a contract) to train and co-manage the delegated policy. Or, before delegating wide policy areas to a weak sub-national government, it can narrow the scope of delegation on the basis of a relatively detailed contract, the performance of which can be the basis of further delegation (OECD, 2007a).

Matching devolved responsibilities and capabilities

A specific point to keep in mind is that capacities may be unequally distributed across the country's different territories. Some regions or localities may find it more difficult than others, in human and institutional terms, to cope with devolved responsibilities. In general terms, most developed localities will be better able to adapt and benefit from further devolution, while the least developed localities with weaker institutions and fewer financial and human resources for carrying out the enlarged mandate, may find implementation more difficult (Rodríguez Pose and Gill, 2004). This is an important challenge in countries with marked territorial inequalities such as Chile. Actions to provide less developed areas with appropriate means, capacities and resources to execute an enlarged mandate will be crucial.

The perception of unequal capacities to carry out an extended mandate has led some OECD countries to implement asymmetrical decentralisation, with some localities in a transition period while they acquire the human, social and institutional capacities to cope with the new responsibilities. Decentralised functions and responsibilities should be commensurate with the capacities of each sub-national unit and may be increased as capacities become stronger. Asymmetric decentralisation in OECD countries has led to some interesting experiences (see Sweden's experience, described in Box 3.15). This strategy could benefit countries with important territorial disparities (like Chile), with responsibilities devolved gradually to municipalities/regions with a minimum level of capacity. It could be piloted in one region and gradually introduced elsewhere if the experience proves successful. In Chile, the reform of the organic constitutional law of regional government and administration (LOGGAR) which is under way proposes to differentiate among "exclusive functions" and "transferable functions" of regional governments. This reform will allow a transfer of responsibilities to a single region or to a group of regions, as the result of specific requests by either the regional government or a national ministry.

Box 3.15. **Asymmetrical decentralisation in Sweden**

While homogeneous decentralisation processes facilitate management of the whole system thanks to the application of the same set of rules and may reinforce national cohesion, they may also be unable to adapt to different territorial contexts. Therefore, in view of their political and cultural characteristics or important differences in their ability to deliver and finance services, local or regional governments may usefully be given different responsibilities for transitory periods. **Sweden** has used asymmetrical decentralisation to promote pilot experiences in particular regions. The results of experimental regionalisation policies in the regions of Västra Götaland (three counties including the City of Göteborg) and Skåne (two counties) since 1997 have been positive and led to the creation of regional councils. These councils are in charge not only of traditional county council tasks such as health care but also of the regional and economic development programmes normally dealt with by the County Administrative Board. Later, a new regional division of responsibilities was introduced: two regions with directly elected political bodies (Skåne and Västra Götaland), one region with an indirectly elected regional council (Kalmar) and one region in which a municipality assumes regional functions (Gotland). The regions have taken over certain tasks from the state, including responsibility for regional development, support of businesses and decisions on investment in regional infrastructure. The preliminary assessment of this decentralisation experience by the Council of Europe in its local and regional report on Sweden, adopted in June 2005, stresses the fact that “the region has experienced an economic growth and capacity to administer a variety of development programmes, from transport to health care, that would not have happened if the trial had not taken place”.

The use of incentives

Incentives that are tied to performance are an instrument for improving capacities at sub-national level. In order to raise the performance of sub-national units, countries can attach explicit rewards and sanctions to indicators tied to specific performance objectives. Such incentives are usually of two kinds: financial and administrative. Financial incentives refer to the availability of funds based on performance. Administrative incentives are changes to rules and regulations that affect regional or local actors, such as a relaxation (or tightening) of budgetary rules, decreased (or increased) oversight, etc. In Chile, the Management Improvement Programme (PMG) offers public institutions a performance bonus (a financial incentive) based on the fulfilment of several performance indicators. Another example may be the

preferential scholar subsidy implemented by the Ministry of Education from 2008. This reform involves the gradual transfer of resources and management responsibilities to municipalities (as school operators) conditional on results and the acquisition of capacity (see the section on education in Chapter 2 for more details).

Performance indicators

In combination with incentive mechanisms, performance indicators can contribute to capacity building. Indicators can be used both to measure and to monitor the performance of the regional economy or to monitor and manage the performance of regional policy actors. Multi-level governance can benefit from the use of indicators. Indicators can reduce information asymmetries between levels of government and are a way to share good practices, help the central government transfer knowledge across sub-national authorities, and encourage better performance. The use of performance indicators may improve policy performance in several fields (OECD, 2008c):

- **Select policy strategies:** Information can reveal the strengths and weaknesses of a regional economy and thus increase the likelihood that policy objectives will be met.
- **Monitor policy implementation:** Once specific policies are implemented, information from indicators can monitor input utilisation and the achievement of milestones.
- **Increase accountability:** Information systems can enhance accountability by offering information about the characteristics and results of what has been done.
- **Create knowledge and improve policy choices:** Comparative performance data may generate an implicit incentive by encouraging stakeholders to improve their performance and efficiency and to search for better strategies.
- **Create a common framework for dialogue,** by sharing common references and objectives and contributing to a common learning process.

The effective implementation of performance indicators poses some challenges. Information does not automatically improve policy performance. It is important to select appropriate indicators and to validate and distribute the information. At the same time, the capacity to use the information in an effective and timely way has to be developed. Finally, weak local capacities can limit the benefits of performance measurement and reduce the usefulness of the system. This makes stakeholder training and the acquisition of the necessary technologies at the local level especially important.

Box 3.16. 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 the public administration. The government adopted the concept of results-based budgeting and gives a performance bonus to public institutions based on the fulfilment of several performance indicators. A horizontal area under the PMG is the Electronic Government System which is aimed at contributing to the use of information and communication technologies through the following actions: improve and simplify the information and services offered by the state to the public; improve and simplify institutional support processes; and promote the creation of technological channels that enable enhanced transparency and community participation.

Subdere developed **the Municipal Services Accreditation System** together with the Chilean Association of Municipalities and Chile Calidad (the National Centre for Productivity and Quality). The system consists of a set of processes and methods to support, guide and encourage municipalities to initiate and remain on a continuous course of performance improvement. The certification process is a multi-step process that starts when a municipality enrolls voluntarily in the programme. While the main goal of this voluntary monitoring and evaluation programme is to certify governance processes that meet high standards of quality control, it also provides essential decision support to municipal actors in charge of public service provision.

The SINIM, the National System of Municipal Indicators, provides over 150 standardised indicators for each of the municipalities of the country. This initiative of Subdere provides information that is easily accessible to the general public through its website (www.sinim.cl/). The data make it possible to compare the characteristics and performance of all Chilean municipalities, and allow the different stakeholder to take informed decisions. The system offers information from 2001 onward.

Source: Subdere.

Chile has implemented several performance management programmes based on indicators, such as the Management Improvement Programme and the Municipal Services Accreditation System. Subdere has also developed an Internet platform with a complete system of municipal indicators, the SINIM (see Box 3.16). Most performance indicator initiatives are designed top-down. However Subdere developed the Municipal Services Accreditation System together with the Chilean Association of Municipalities, in an effort to take advantage of local knowledge to build the performance indicators. Such intergovernmental participatory assessment could be extended to other initiatives. The central authorities are well positioned to gather information

from many sources and facilitate its sharing among central and sub-central authorities. However, an exclusively top-down approach to indicator selection may fail to reflect regional and local needs and challenges. Moreover, a strategy imposed by the centre in the absence of consultation may undermine sub-national actors' engagement and participation in the process. All of this suggests that intergovernmental collaboration can be a good way to increase the usefulness of indicator systems (OECD, 2008c). Participatory vertical and horizontal arrangements can help make the system more effective.

Enhancing participation

In Chile, as in many countries, decentralisation is largely seen as a way to enable participation: it can enable the citizenry to be in a position to engage in partnerships with government and to monitor and hold local officials accountable. In fact, the empirical evidence reviewed above indicates that participation can also be a tool for making decentralisation reforms work. Governance systems with high quality institutions for downward accountability and legitimate sub-national governments would be well placed to improve administrative and economic efficiency through decentralisation. Research has shown that effective public service delivery by local governments depends on the degree to which they involve a variety of local groups and individual citizens in political decision making, establish transparent administrative processes, and are downwardly accountable and responsive to broad local concerns of service users (Blair, 2000; Crook and Manor, 1998; de Oliveira, 2002; Ribot, 2002; Singleton, 1998). In this regard, OECD country experience shows that greater openness and participation in policy making and service delivery can have several economic and political advantages (OECD, 2008a):

- Better economic outcomes: Making policy in a more inclusive way can contribute to better use of public funds by planning and implementing policy options on the basis of more comprehensive knowledge from various stakeholders (public, private, civil society). The co-operation, co-ordination and involvement of the different actors in diverse instances (RDAs, coalitions, participative councils) are an important aspect of the policy process. Additionally, as noted in Chapter 2, active participation by regional actors (local/regional governments, SMEs, universities, among others) may help to reveal untapped regional resources that would not be identified by traditional top-down approaches. This, in turn, would be important to identify further possibilities for diversification.
- Innovative solutions: Engagement of the private sector and civil society (including universities, community-based organisations and citizens in general) is well known to be a driver of innovation in the public and private sectors.

- Increased legitimacy, trust in the reforms: Open and participative policy making can reinforce credibility and legitimacy. Including different sectors of society in the policy process can help them to understand the reforms, increase social ownership of the process, and remove the barriers to reform.

Therefore, open and inclusive policy making (including the public and private sectors, universities, community-based organisations and citizens in general) contributes to better economic and political outcomes. Efforts to strengthen democracy and the effectiveness of public services are mutually reinforcing. By bringing policy decisions closer to citizens, decentralisation can facilitate this process. However, there are various barriers to participation in local government decision making.

Main barriers to participation and inclusiveness

Participation and accountability are not likely to result automatically from decentralisation, and even when they do they may face a number of obstacles. The notion that decentralisation somehow leads to increased participation is often taken at face value: if governments are brought closer to the people, they will seek citizens' input when making decisions. Yet, in societies with significant inequalities, inclusive local institutions for civic participation are unlikely to emerge as a natural consequence of decentralisation.

In Chile, there are some initiatives under way to strengthen citizen participation but even when participative forums exist, they may still not reach most of the citizenry. The administrative organisation of municipalities includes an economic and social council to represent the different social groups and community-based organisations. The municipal government law requires the preparation of the community development plans (PLADECO) that include public participation. The programme for municipal strengthening also encompasses several participation mechanisms, including personal interviews with stakeholders and community focus groups. Additionally, some public programmes and initiatives, such as the Rural Infrastructure for Territorial Development (Box 1.2), take participation and empowerment of local stakeholders as a basic characteristic. Yet, these initiatives have still not reached most of the citizenry. A recent survey of a sample of 7 200 local residents in Chilean municipalities (Más Voces, 2005) indicates that only 8% of respondents had been invited to express their opinions on municipal decision making. In addition, only 16% were aware of the existence of the Municipal Council for Social and Economic Affairs. This survey showed that citizen participation at the regional level is even more limited. Finally, 57% of those surveyed said that the same group of (privileged) people is always invited to participate by the government.

This trend corresponds to OECD country experience that even when participative forums exist, some sectors of society may be left out for socioeconomic, ethnic, cultural or gender reasons. Even when inclusive forums for participation (local councils for instance) are established, large social inequalities or the marginalisation of certain groups mean that the opinions of such groups will not be heard. Lack of interest in public policies among those who can but do not wish to participate in public matters is another barrier to participation in OECD countries. Local citizens may not wish to participate if they believe that their voice will have little influence on the final decision or if they have the perception that public authorities are distant from citizens' concerns. In societies where time is a limited resource, people will not engage in participative activities if they feel that this will not change their life. Lack of confidence in public authorities normally accentuates this attitude. In Chile, 72% of respondents in the Mas Voces survey (2005) considered that the best way to solve local problems is to have a "good contact" in public institutions. Only 32% believed that a simple citizen can influence the decisions taken by the government.

Measures to improve participation

Inclusive participation in decision making may require additional measures to reach out to different social groups. Inclusive participation requires something more than more tools for the organisations or citizens that already have access to decision makers. Experience in OECD countries demonstrates that obtaining a broader range of social views requires efforts to ensure socio-economic and cultural inclusion. The use of trusted intermediaries or local organisations that have strong support among the non-engaged can help involve target groups that may distrust external actors. This would be especially useful for working with immigrants or native populations. In such cases, use of multilingual documents/information would also be helpful.

Incentives from the central government and from the local electorate are important to motivate local governments to favour participation initiatives. The choice to adopt an inclusive decision-making strategy depends to a significant degree on the institutional incentives of local politicians, which often depend on the demands made on local politicians by local actors and community-based organisations (their electorate) and by the representatives of the central government. In Chile, initiatives such as the Innovation and Citizenry Award programme offer an incentive to participatory problem-solving initiatives in the public realm, and an interesting way to exchange information and good practices in local public affairs (see Box 3.17).

The presence of a wide range of community-based groups appears to be an important element for citizen participation. In Chile, according to the Mas Voces survey (2005), 18% of respondents said they had joined forces with other

Box 3.17. **The Innovation and Citizenry Award programme**

The Innovation and Citizenry Award programme organises an annual competition for prizes in innovative approaches to participatory provision of public goods and services in Chile (www.premioinnovacion.cl). The programme is the product of a partnership between several civil society organisations, including Universidad de Los Lagos, la Corporación Innovación y Ciudadanía and the Ford Foundation. The goal of the award programme is to give public recognition to self-organised and participatory problem-solving initiatives in the public realm, and to document and learn from these experiences so that they can benefit other actors struggling with similar problems in different locations. Since its inception in 2000, the programme has been known to serve as an important forum for exchange, learning and debate about new ideas in local public affairs in Chile. In 2006, the programme received more than 1 500 applications from local initiatives throughout the country. Out of these, the ten most innovative approaches were awarded a grant of USD 5 000 and another ten were given an honorary mention. Two municipal governments and one regional government were awarded the prize. Apart from stimulating local organisations and governments to develop new, innovative approaches to effective problem solving in public affairs, the programme serves a very important function of social learning that benefits all actors involved in public affairs, not just those who win the prizes. Other actors interested in public policy are able to learn about the winning initiatives by reading about them in a variety of forums, including a publication that documents the experience of all annual awardees, the programme website, as well as an appealing magazine.

local residents to try to influence governmental decision making, and 45% of this group reported that their efforts had received a positive response. These findings, which are consistent with social capital research, support the notion that membership in formal and informal groups and networks has a positive effect on democratic development. It also suggests that there are still some barriers to citizen engagement in such groups in Chile. Experience in OECD countries has shown that strengthening transparency and openness in public processes can help rebuild local actors' confidence in overall government and in the participative process. This, in turn, enables citizens to become more engaged in participative processes. However, participation does not mean including everyone every time. Broad public participation may not always be productive. Excessive participation generates fatigue and a sense of time wasted, particularly if there are opportunity costs, such as participating at the expense of working time. Participation has to have a concrete goal and the chance to influence the lives of those who participate.

E-Government

E-government and ICT have become major tools to help OECD public administrations improve their relations with stakeholders and their effectiveness. E-government provides online access to information and gives citizens access to government services. It allows the sharing of information and creates new channels for citizen engagement in the policy process (OECD, 2007c). Since the 1990s, a number of initiatives to develop e-government have been undertaken in Chile (see Box 3.18). However, as noted in Chapter 1, interregional disparities in access to the Internet are still high and represent a challenge that must be faced to spread the use of this tool to the inhabitants of the less developed regions and rural localities.

Box 3.18. E-government in Chile

In 2000 a Public Sector Reform and Modernisation Project (*Proyecto de Reforma y Modernización del Estado – PRYME*) was established by the General Presidential Secretariat Ministry with the aim of enhancing the co-ordination of all aspects of e-government within the government. This project suggested reforming the entire contracting and public procurement system, using the Internet to introduce a fully online system. Within this framework, Chilecompra was established with the goal to provide an innovative tool to connect public buyers with providers through the Internet. Its objective is to guarantee high levels of transparency, efficiency and use of technologies in the public procurement market to the benefit of businessmen, public agencies and citizens. It helps government agencies be more accessible, efficient and transparent in their relationships with the citizenry, thanks to the creation of the www.chilecompra.cl platform.

Participation of the private sector and universities

The specific knowledge and the involvement of private-sector and civil institutions (such as universities and research centres) can be essential for regional development policy. Private-sector participation and public-private co-operation can play an important role: the co-operation, co-ordination and involvement of the different actors in diverse bodies (RDAs, coalitions, participative councils) can help make better use of public funds by planning and implementing policy options on the basis of the more comprehensive knowledge of a variety of stakeholders. In Chile, the participation of micro, small and medium-sized enterprises (MSMES) is crucial as they account for more than 75% of jobs and face particular difficulties for coping with the challenges of global competitiveness. The RDAs can serve as a mechanism for involving MSMES in regional productive planning. When MSMES are

represented in the governing structures they can orient the action of these agencies towards their specific requirements. Chile Emprende (see Chapter 2) also represents an initiative for integrating the private sector and research institutions in the management of an economic development programme. In each region a regional branch, headed by the intendant, is composed of regional public, private and academic institutions.

Finally, universities and research institutions in Chile have started to play an active role in regional development initiatives, a process that should go further. Currently universities participate in initiatives to promote innovation (for instance as project partners in the regional scientific and technological centres) and in business development programmes (collaborating with Chile Emprende regional programmes or participating in strategic councils of regional development agencies). However these efforts are still limited in scope. To play a regional role and contribute to regional competitiveness, these institutions must extend their activities beyond education and research.

Conclusion

Regional competitiveness requires context-sensitive responses which in turn require a certain degree of decentralisation. Chapters 1 and 2 argue that enhancing regional productivity and competitiveness in Chile will require a shift towards regional policies capable of adapting to the different assets, strengths and potentialities of specific locations. Chapter 3 has focused on showing the governance challenges for implementing a territorial approach to development in the Chilean context.

Chile has a long tradition of centralism, and its administrative system has long been associated with economic efficiency and political stability. Today, however, the role of decentralisation is being debated, with a focus on improving regional performance and competitiveness. The current government has set high priority on decentralisation with the aim of providing sub-national governments with the tools, capacities and legitimacy to improve their autonomy and performance. Among the main reforms carried out in the latest period is the direct election of the regional council, creating a democratically elected body for managing regional development. Additionally, responsibility for regional planning has been transferred to the recently created regional planning division of the regional government. A municipal reform is also to be undertaken to modernise municipal organisation and to give more autonomy and further responsibilities to municipalities.

However, in spite of these efforts, progress remains modest. The strict administrative framework of the central state places financial and administrative limitations on Chile's regional and municipal governments

which may undermine their ability to carry out some of their responsibilities efficiently and thus fail to take advantage of specific regional and local opportunities. At the same time the benefits of initiatives such as the regional development agencies, or the delegation of the regional planning responsibility, are limited by an economic agenda largely designed at the national level and by the lack of an institutional framework at the regional level capable of co-ordinating the different policies, instruments and actors involved in economic development.

Chile still requires at the sub-national level a stronger institutional framework able to bring together and co-ordinate the different local players and the various programmes and instruments designed to promote territorial development. At the local level, most municipalities currently have neither the resources nor the incentive to invest in local economic development initiatives. Incentives are needed to strengthen both the capacities and resources of municipalities (especially those of the least developed) to engage in local economic development. Additionally, a co-ordinated local governance structure will be needed, especially in big cities like Santiago, in order to improve the harmonisation of different sectoral policies in the metropolitan area (e.g. housing, land use planning and economic development) and to improve co-ordination in the delivery of key public services (especially public transport) across several municipalities within a functional city. On the other hand, the strengthening of regional governance will also involve several challenges. Territorial development strategies should be strengthened to create a closer link between regional planning and investment portfolios. This will give the regional government and the new planning division the opportunity to play a stronger role in guiding an integrated approach to regional development. However, it will also be necessary to give greater powers to the regional government to allow it to be active in the discussion, planning and co-ordination of regional development policies. National institutions and agencies should strengthen their links and co-ordination with the regional government in order to ensure that they have the capacity to carry out efficiently the delegated responsibility of regional planning.

Matching the newly delegated responsibilities with technical and administrative support and with institutional legitimacy for the actors receiving an expanded public policy mandate will be crucial. In any decentralisation process, the assignment of new responsibilities should be accompanied by a concomitant allocation of the competences and resources necessary to carry them out. This will require greater trust on the part of national institutions in the competences of sub-national institutions. It will also require greater co-operation between levels of government. Multi-level governance and co-ordination arrangements, mechanisms to promote capacity building and institutions for participation and accountability could

help by raising regional governments' capacities and strengthening the legitimacy, coherence and effectiveness of the reform.

In addition to better co-ordination among levels of government and greater involvement of sub-national governments in regional planning, it is important for central policies for regional development to have a territorial dimension. Central government agencies have a key role to play in promoting place-based rather than one-size-fits-all policies, strengthening collaboration among ministries and public agencies, and including local and regional institutions in the design and co-ordination of national initiatives.

This review suggests that moving towards a territorial approach to development in Chile will require further progress towards decentralisation. However, decentralisation on its own will not necessarily lead to efficient and integrated place-based policies. The key issue is likely to be the development of a governance structure that fosters collaborative context-sensitive interventions which respond to local particularities in terms of strengths, opportunities and challenges. It will require greater co-operation between levels of government and also greater involvement of sub-national governments in co-ordinating, designing and managing their development. However, decentralisation does not mean that the central government should leave sub-national governments alone. The central government has a key role to play in setting the general legal framework to enable virtuous relations, both vertically among the different levels of governments and horizontally among the different national sectoral policies and among the different regions or municipalities.

Notes

1. Figure based on IMF's *Government Finance Statistic Yearbook*, excluding grants from other levels of government.
2. The provision of primary and secondary education and primary health are competences transferred to the local level and are financed on a per pupil/per patient subsidy by the central government. This grant is complemented by the municipality's own resources, and with funds from the FNDP. Yet, national transfers to education subsidise both public education and private subsidised schools. As regards the former, the per student transfer is delivered to municipalities. In the case of the latter, the subsidy is run by the private sector. Therefore, this transfer is only partially managed by municipalities.
3. A national law determines a minimum property value threshold. Under this limit properties are exempted of the municipal property tax.
4. As mentioned, current expenditure on municipal education is financed with national subsidies, combined with the municipality's own resources (national grants are not sufficient to finance municipal education). In addition, in small municipalities student enrolment is low and so is the (per pupil) national subsidy.

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ANNEX 3.A1

Empirical results on correlations between decentralisation and economic growth

Effect*	Explanations	Author (year)	Data	Sample
– (nonsign)	Low capacity of local government, local expenditures are not growth-oriented, many counteracting forces.	Davoodi and Zou (1998)	1970-1989	World (n = 46)
+	Household mobility and spillover effects mediate decentralisation effect.	Crucq and Hemming (2007)	1978-2002	EU (n = 14)
+	When local governments compete citizens win. A better match between local needs and policy responses makes citizens and businesses more productive.	Stansel (2005)	1960-1990	United States (n = 314)
– (nonsign)	Economic impact in cross-national studies loses significance when decentralisation is measured as the sub-national mandate to raise revenue.	Thornton (2007)	1980-2000	OECD (n = 19)
+	Fiscal decentralisation decreases the public sector's share in the economy and this stimulates economic growth (significance in effect depends on whether country is unitary or federal and how decentralisation is measured).	Yilmaz (1999)	1971-1990	World (n = 46)
+	The effect of fiscal decentralisation is significant when controlling for historical, cultural and institutional variation. Only sub-national studies can control for such factors.	Akai and Sakata (2002)	1992-1996	United States
+	Decentralisation produces more accountability of public sector. Correlation is significant but no regression statistics are available.	Hunter and Shah (1998)	1980-1993?	World (n = 80)
+	Fiscal decentralisation in China increased efficiency of resource allocation by strengthening local incentives for local problem solving.	Lin and Liu (2000)	1970-1993	China (n = 28)
–	Provincial spending failed to deliver fast economic growth because projects financed by the central government are more crucial to growth.	Zhang and Zou (1998)	1980-1992	China (n = 30)
– (nonsign)	The effects of decentralisation are more likely to be detected at the local level rather than in national growth rates.	Woller and Phillips (1998)	1974-1991	World (n = 23)
– (nonsign)	No discernible and consistent effect of fiscal decentralisation on economic growth when controlling for energy, investments, labour, income inequality and inflation.	Xie <i>et al.</i> (1999)	1949-1991	United States
Curvilinear	Positive effect when decentralisation is increasing from low to medium levels, but negative when increasing from medium to high.	Thiessen (2003)	1973-1998	OECD countries

Effect*	Explanations	Author (year)	Data	Sample
+	The positive effect of decentralisation depends on political freedom (interaction effect).	limi (2005)	1997-2001	World (n = 51)
-/+	Lower levels of economic growth in countries where devolution has been driven by the central government; greater growth in cases where regions have been the main drivers (Spain).	Rodríguez-Pose, Tijmstra and Bwire (2007)	1985-2002	Germany, India, Mexico, Spain and the United States
-/+ Regional Disparities	Decentralisation in a context of liberalisation may lead to an increase in interregional disparities, with concentration of economic growth in dynamic regions.	Rodríguez-Pose and Gill (2004)	1980-1998	Mexico, Brazil, India, United States, Spain, China

* Positive or negative correlation between decentralisation and economic growth. "Nonsign" means that the analysis did not find a statistically significant effect of decentralisation

ANNEX 3.A2

Contextual factors explaining variation in decentralisation outcomes

Intervening factor	Examples	Studies
Characteristics of national regime that decentralises	Degree of economic development, democracy, government structure. At what stage of development is the country, and how decentralised is the pre-reform structure?	Litvack <i>et al.</i> , 1998; Parker <i>et al.</i> , 2000
Policy mix: Type of decentralisation considered	What is the extent of the decentralisation? Which authority, resources and responsibilities have been transferred, and to whom?	Agrawal and Ostrom, 2001
Central government monitoring and support	Training events, technical support, unannounced visits, accounting.	Gibson and Lehoucq, 2003
Supportive local networks	Are there local organisations that support problem solving?	Chhatre and Saberwal, 2006; Shah, 2004
Institutional, technical and administrative capacities	Extent to which local government has well-trained personnel, is able to organise and unite local actors.	Fiszbein, 1997; Pacheco, 2000; Angell <i>et al.</i> , 2001
Institutions for participation and accountability	The existence of participatory decision making forums, ombudsman, public record keeping.	Ribot, 2002; Crook and Manor, 1998; Blair, 2000
Local organisational culture and leadership	Local individuals gather and unite local people around a common cause.	Hildebrand and Grindle, 1995; Grindle, 2007
Financial resources	Sufficient resources to fund most critical activities.	Cohen and Peterson, 1996
Other public policies: External conditions	Macroeconomic and monetary policies may overpower the effects of the decentralisation reform.	Andersson and Gibson, 2007
Governance outcome measures	The governance outcomes may be evaluated with different criteria and must be defined in light of specific policy objectives. The empirical relationships will differ depending on the outcome measures used (<i>i.e.</i> tax revenue raising, social spending, administrative efficiency, GDP/capita, etc.).	Sharma, 2006; Akai and Sakata, 2002
Nature of the goods and services	Some goods and services may be more amenable to decentralisation than others. Technical support services for agricultural extension are quite different from primary education, health care, and tax collection.	World Bank, 2005

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CHILE

Chile has achieved strong economic growth during the last 20 years. Nevertheless, its economy depends on a few resource-based sectors located in a small number of regions. The performance of Chilean regions varies significantly and regional disparities in GDP per capita are very high compared to those in OECD countries. Chilean regions have thus far so not fully utilised their assets and reached their potential for growth.

This report recommends moving towards a territorial approach to development in Chile in order to better adapt public management to the different opportunities and needs of the diverse territories of the country. Chilean regions would particularly benefit from context-specific policies to boost productivity, such as those targeting innovation and entrepreneurship, and to improve education and training.

At the same time, moving towards place-based policies in Chile will require strengthening the institutional framework at the regional level. This will involve increasing the capacities of and support for regional governments, so that they can become active participants in the discussion, planning and co-ordination of regional development policies. Multi-level governance and co-ordination arrangements, and other mechanisms such as capacity building and strengthened participation schemes, will help raise the legitimacy, coherence and effectiveness of this governance reform process.

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