CURRENCY EQUIVALENTS
Currency Unit = Chilean Pesos (CLP)
US$1.0 = CLP 555 (July 5, 2006)

FISCAL YEAR
January 1 to December 31

Vice President LCR: Pamela Cox
Director LCC/TC: Axel van Trotsenburg
Director LCS/HD: Evangeline Javier
Task Manager: Jesko Hentschel
<table>
<thead>
<tr>
<th></th>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AFP</td>
<td>Administradores de Fondos de Pensiones</td>
<td>(Pension Fund Administrators)</td>
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<tr>
<td>APV</td>
<td>Ahorro Provisional Voluntario</td>
<td>(Voluntary Provisional Savings)</td>
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<tr>
<td>ARI</td>
<td>Anteproyectos Regionales de Inversión</td>
<td>Regional Investment Projects</td>
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<tr>
<td>AUGE</td>
<td>Acceso Universal para Prestaciones Integrales y Garantías Explicitas Asociadas a la Atención de Prioridades</td>
<td>(Universal Access for Comprehensive Benefits and Explicit Guarantees)</td>
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<tr>
<td>CAPM</td>
<td>Capital Asset Pricing Model</td>
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<td>CASEN</td>
<td>Encuesta de Caracterización Socioeconómica Nacional</td>
<td>(National Socio-economic Survey)</td>
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<tr>
<td>CCDF</td>
<td>Child Care Development Fund</td>
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<td>CCGT</td>
<td>Combined Cycle Gas Turbines</td>
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<td>CCNA</td>
<td>National Consultative Council</td>
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<tr>
<td>CCT</td>
<td>Conditional Cash Transfers</td>
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<td>CNE</td>
<td>Comisión Nacional de Energía</td>
<td>(National Energy Commission)</td>
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<tr>
<td>COLS</td>
<td>Corrected Least Squares</td>
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<td>CORFO</td>
<td>Corporación de Fomento de la Producción</td>
<td>Production Promotion Corporation</td>
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<td>CSE</td>
<td>Consejo Superior de Educación</td>
<td>(Education Council)</td>
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<td>DEA</td>
<td>Data Envelopment Analysis</td>
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<td>DFL</td>
<td>Decreto con Fuerza de Ley</td>
<td>(Decree with Force of Law)</td>
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<td>DIPRES</td>
<td>Dirección de Presupuestos</td>
<td>(Budget Management)</td>
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<td>ECE</td>
<td>Early Childhood Education</td>
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<td>EP</td>
<td>Evaluation Program</td>
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<td>FDI</td>
<td>Fondo de Desarrollo e Innovación</td>
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<td>FDS</td>
<td>Full Day Schools</td>
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<td>FCM</td>
<td>Fondo Común Municipal</td>
<td>(Common Municipal Fund)</td>
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<td>FNDR</td>
<td>Fondo Nacional de Desarrollo Regional</td>
<td>(National Regional Development Fund)</td>
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<td>FONASA</td>
<td>Fondo Nacional de Salud</td>
<td>(National Health Fund)</td>
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<td>FSAP</td>
<td>Financial Sector Assessment Program</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GES</td>
<td>Garantías Explicitas de Salud</td>
<td>(Explicit Health Guarantees)</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>ICORE</td>
<td><em>Indice de Competitividad Regional</em> (Regional Competitiveness Index)</td>
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<tr>
<td>IEA</td>
<td>International Association of Evaluation of Educational Achievement</td>
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<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
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<tr>
<td>INE</td>
<td><em>Instituto Nacional de Estadísticas</em> (National Statistics Institute)</td>
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<td>IP</td>
<td>Internet Protocol</td>
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<td><em>Instituciones de Salud Provisional</em> (Private Health Insurance Institutions)</td>
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<td><em>Unión Internacional de Telecomunicaciones</em> (International Telecommunications Union)</td>
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<td>JUNAEB</td>
<td><em>Junta Nacional de Auxilio Escolar y Becas</em> (National School Aid and Scholarships Board)</td>
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<td>JUNJI</td>
<td><em>Junta Nacional de Jardines Infantiles</em> (National Board of Kindergartens)</td>
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<td>LAC</td>
<td>Latin America and Caribbean</td>
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<tr>
<td>LACEA</td>
<td>Latin American and Caribbean Economic Association</td>
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<tr>
<td>LNG</td>
<td>Liquefied Natural Gas</td>
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<td>LOCE</td>
<td><em>Ley Orgánica Constitucional de Enseñanza</em> (Constitutional Education Law)</td>
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<td><em>Ministerio de Educación</em> (Ministry of Education)</td>
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<td>MINSAL</td>
<td><em>Ministerio de Salud</em> (Ministry of Health)</td>
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<td>MPG</td>
<td>Minimum Pension Guarantee</td>
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<td>NIS</td>
<td>National Innovation Survey</td>
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<td>NGO</td>
<td>Non-Governmental Organization</td>
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<tr>
<td>OECD</td>
<td>Organization of Economic Cooperation and Development</td>
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<td>OLADE</td>
<td><em>Organización Latinoamericana de Energía</em> (Latin American Energy Organization)</td>
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<tr>
<td>PAP</td>
<td><em>Prueba de Papanicolaou</em> (Pap smear test)</td>
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<td>PASIS</td>
<td><em>Pensiones Asistenciales</em> (Targeted Social Assistance Pension)</td>
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<td>PLADECO</td>
<td><em>Plan de Desarrollo Comunal</em> (Community Development Program)</td>
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<td><em>Encuesta de Previsión de Riesgos Sociales</em> (Social Risk Prevention Survey)</td>
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<td><em>Programa de Fortalecimiento Municipal</em> (Municipal Strengthening Program)</td>
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<td>PSTN</td>
<td>Public Switched Telephone Network</td>
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<td>QIAS</td>
<td>Quality Improvement and Accreditation System</td>
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<td>RD</td>
<td>Research and Development</td>
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<td>Acronym</td>
<td>Description</td>
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<td>Red Internacional de Metodologías de Investigación de Sistemas de Producción (International Methodology and Research Network for Production Systems)</td>
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<td>ROE</td>
<td>Return on Equity</td>
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<tr>
<td>RUT</td>
<td>Tax Registration Number</td>
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<td>SD</td>
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<td>SEC</td>
<td>Superintendencia de Electricidad y Combustibles (Superintendence of Electricity and Fuels)</td>
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<td>SEREMI</td>
<td>Secretaría Regional Ministerial (Regional Ministerial Secretariat)</td>
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<tr>
<td>SFA</td>
<td>Scholastic Frontier Analysis</td>
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<td>SIGGES</td>
<td>Sistema de Gestión de Garantías Explicitas (Explicit Guarantees Management System)</td>
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<td>SIMCE</td>
<td>Sistema de Medición de la Calidad de la Educación (Quality of Education Measuring System)</td>
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<tr>
<td>SING</td>
<td>Sistema Interconectado del Norte Grande (Norte Grande Interconnected System)</td>
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<td>SINIM</td>
<td>Sistema Nacional de Indicadores Municipales (National Municipal Indicators System)</td>
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<tr>
<td>SISS</td>
<td>Superintendencia de Servicios Sanitarios (Superintendence of Sewerage Systems)</td>
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<tr>
<td>ST</td>
<td>Science and Technology</td>
<td></td>
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<tr>
<td>SUBDERE</td>
<td>Subsecretaría de Desarrollo Regional y Administrativo (Under secretariat for Regional Development and Administration)</td>
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<td>SUBTEL</td>
<td>Subsecretaría de Telecomunicaciones (Under secretariat for Telecommunication)</td>
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<tr>
<td>TIMSS</td>
<td>Third International Mathematics and Science Study</td>
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<td>UNDP</td>
<td>United Nations Development Program</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<td>UNICEF</td>
<td>United Nations Children's Fund</td>
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<tr>
<td>VAD</td>
<td>Value Added Distribution</td>
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<tr>
<td>VAT</td>
<td>Value Added Tax</td>
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</tr>
<tr>
<td>VOIP</td>
<td>Voice Over Internet Protocol</td>
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<tr>
<td>ZE</td>
<td>Zonas Extremas (Extreme Zones)</td>
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</tbody>
</table>
Acknowledgements

These Policy Notes were prepared for the incoming Government of Chile by a team coordinated by Jesko Hentschel (Human Development Sector Leader, LC7). Primary authors of the sector policy notes were:

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Policy Note 1:  
Towards Equality of Opportunity:  
Presentation of World Bank Documents to the New Chilean Government

1. Introduction

The newly elected Chilean Government has outlined in its election platform an ambitious development agenda, starting from, and centered around, improving the lives of the Chilean population. One core element of the platform is to improve the equality of opportunity of Chileans today, thereby reducing poverty, inequality and marginalization while reaching more fully Chile's growth potential.

This package of documents aims to provide the Government with new analytical findings, international experiences, as well as a number of options which might be of interest in the deliberations of policy actions that could improve equalities of opportunity in Chilean society. The package includes a Development Policy Review which examines policy options that could help Chile to achieve the twin goals of fast and equitable growth. The Development Policy Review focuses on social protection, education, innovation, private sector development, and the financing of development policies. Further, the package includes five specific Policy Notes which provide additional in-depth discussions on a number of selected topics, all of them important to improving equalities of opportunity in the country (Box 1). These specific topics had been suggested to us by a number of senior Chilean policy makers over the past months as being of potential interest for the incoming Chilean Government.

This presentation of World Bank documents shows, in the second section, some dimensions of inequalities of opportunity in Chile today. The third section summarizes the main messages of the Development Policy Review and the specific Policy Notes in four broad areas of pro-equity policies: strengthening and protecting human capacities; ensuring access to infrastructure services and equitable regional development opportunities; strengthening markets, protecting people against macro-economic shocks and fostering innovation-led growth; and financing pro-equity development policies. Finally, we present the results of some quantifications as to what the results of a number of pro-equity policies could be on growth, poverty and income inequality.

2. Equality of opportunity

While the package of policy papers presented here includes a variety of technical analyses, the policy options outlined do have one common objective: to assess policies that could help improve the equalities of opportunity for all Chileans. As pointed out in the election platform of the new Government, if there were the need to single out one important challenge for society today, it would be to improve the chances of Chileans - independent of race, religion, parental background, gender or geographical birthplace - to get an education, obtain good and stable work, and live healthy and long lives, free of poverty. This concept is also the focus of the World Development Report (2006).

Policies that foster equalities of opportunity have multiple positive spin-offs - for growth, poverty reduction, and the reduction of income inequality. Equity can be defined as individuals having equal opportunities to pursue a life of their choosing and be spared from extreme deprivation. Institutions and policies that promote such equity - where members of society have similar chances to become socially active, politically influential, and economically productive - contribute to sustainable growth and development. For example, if people cannot reach their full potential in developing their capacities because of gender discrimination or socio-economic background, the overall economic development of society will be lower than its potential.

Box 1: World Bank Documents for the New Chilean Government

A. Development Policy Review
B. Specific Policy Notes
  1. Access and Quality of Early Childhood Education
  2. Policies for Better Old Age Income Support
  3. Implementation of the Chilean Health Reform
  4. Regulation of Basic Public Services
  5. Regional Development and Decentralization

1. This overview was prepared by Jesko Hentschel (Sector Leader, Human Development, World Bank.)
2. See www.michellebachelet.cl
Additionally, market failures in access to land, credit, or human capital markets can impede resources flowing to their best use, necessitating public policy interventions.

The poor, hence, gain in two ways from pro-equity policies. Since they tend to be the population group lacking opportunities, pro-equity policies should try to reach them first. In addition, unbundling such additional growth potential would also lead, indirectly, to poverty reduction through higher incomes.

Lastly, pro-equity policies would lead, over time, to a more equal distribution of endowments and assets (including human capital and wealth) which would in turn reduce income inequality - something many Chileans are becoming sensitive to given the high inequality of incomes in the country. Graph 1 compares income inequality developments in Chile to other Latin American and OECD countries from 1995 and 2000 - in both periods, Chile ranked among the most unequal countries in the world.

In a number of dimensions, important unequal opportunities exist today in Chile, especially when compared with OECD countries (see Box 2 for an example of how the life chances of two Chilean children are markedly different today, depending on their family background, ethnicity, gender and their home location). For example, at 33 percent in 2002/2003, average enrolment in pre-school education is relatively low in Chile when compared to other Latin American countries but especially when compared to many OECD countries where coverage now reaches 100 percent (Graph 2). Low enrolment rates in early childhood and pre-school programs are of particular concern as they may adversely affect the children’s performance in school and later in life. Closely linked to pre-school education, women’s labor market participation in Chile lags behind.

Graph 3 includes Latin American, South-East Asian and OECD countries with three data points: the average labor force participation (mid-point) with a span for each country characterizing male labor force participation (upper end) and female labor force participation (lower end). As Graph 3 shows, Chile had not only a low overall average labor force participation in 2003 but also wide disparities between men and women - with female labor force participation again among the lowest in the LAC region and far below levels in most OECD and especially South-East Asian countries. To some degree, such striking differences will be due to individual choice. However, they will also be due to unequal opportunities including inequalities with respect to education access, gender discrimination in the workplace, or the unavailability of childcare and pre-school opportunities.

As a last example of existing inequity, Graph 4 shows access to improved sanitation (2002) in selected Latin American, East Asian and OECD countries. Access to quality and reliable sanitation services have numerous externalities for households, including a significantly reduced risk of diarrhea diseases (and consequent malnutrition) for children. As Graph 4 shows, Chile ranks relatively high on overall access (close to 90 percent) but the dispersion between rural and urban areas is markedly higher than in any of the countries with higher average access rates and also several countries with significantly lower average access rates (such as Indonesia, Guatemala, Venezuela, Ecuador). Such dispersion poses a challenge for regional development.

4. In a recent survey of Latinobarómetro (2001), 90 percent of Chileans classified the existing income distribution in the country as unjust or very unjust.
In Chile, marked differences in terms of area of residence, gender, and race are observed which influence the life chances of children born today—Independently of any effort or decision the newborns take in their lives. Two Chilean babies, both hypothetically—born on the 15th of January 2006, can have markedly different chances to succeed in their lives. Let us assume that Maria was born in an indigenous family, in Loncoche—a rural community in the south of the country, and Christian was born in the metropolitan area of Santiago, specifically in Las Condes. The average monthly income at Christian’s household is US$3,500 and the one at Maria’s is US$2,750. Christian’s mother has 13 years of education and Maria’s has less than 5. The probability of Maria not surviving her first year of age is 4.4 times higher than the one faced by Christian. If present conditions prevail in the next years, the probability of Christian’s receiving preschool education is 4.3 times higher than Maria’s. In the fourth grade, Christian’s score at the SIMCE test will be around 294 points while that of Maria will be 250. During high school, Maria’s drop-out probability is 13 times higher than Christian’s. When they become adults, Christian’s probability of perceiving his health status as a good one will be 58% higher than Maria’s. The probability that Maria will have an updated PAP is 36% lower than Christian’s wife and her likelihood of dying because of vesicular cancer will be 5 times higher than for Christian’s wife. Maria’s risk of committing suicide is 13 times higher than Christian’s. And Maria’s risk of being assassinated is 30 times higher while Christian’s life expectancy is at least 14 years more than Maria’s.


3. Elements of Policies that Foster Equalities of Opportunity

The World Bank’s Policy Notes and Development Policy Review seek to outline specific sectoral technical policy options which could be useful inputs into the definition of Chile’s policy agenda. Such policies could be grouped into four broad areas:

A. Strengthening and Protecting Human Capacities.

The Development Policy Review and Policy Notes address ideas aimed at improving the opportunity for people to develop their capacities to the fullest and at enabling them to lead a life without poverty. They encompass a range of different topics, including schooling, health, and managing risks.

Access and Quality of Schooling. As pointed out above, access to pre-school education is comparably low in Chile today and, in addition, varies significantly by socio-economic group. Graph 5 shows that, while pre-school enrollment rates have increased since 1990 (albeit remaining below regional and especially OECD levels), the gap between children from different socio-economic groups has widened. Such inequity is important given the long lasting learning impact of preschool education as well as its link to mother’s labor force participation which, as seen above, is significantly below

Figure 3. Labor Force Participation by Gender, 2003 Chile and other Latin American Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Female</th>
<th>Total</th>
<th>Male</th>
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<tbody>
<tr>
<td>Brazil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
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<td>Chile</td>
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<td></td>
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<tr>
<td>Ecuador</td>
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<td></td>
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<tr>
<td>Peru</td>
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<tr>
<td>Source: World Bank Staff elaboration based on World Development Indicators (2005)</td>
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Figure 4. Access to Improved Sanitation by Urban and Rural Areas

<table>
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<th>Country</th>
<th>Rural</th>
<th>Total</th>
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<td>Indonesia</td>
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<td></td>
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<tr>
<td>Mexico</td>
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<td></td>
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<tr>
<td>Chile</td>
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<tr>
<td>Source: World Bank Staff elaboration based on World Development Indicators (2005)</td>
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</table>
regional and OECD averages. Also, concern over the low enrollment rates of young children in Early Childhood education (ECE) programs has risen in recent years, especially after Chile's participation in international assessments of student performance showed great disparities in test scores between Chilean students and their peers in other countries. In addition, there are striking differences in scores in the national student assessments between Chilean students of different socioeconomic backgrounds.

Most countries that have succeeded in achieving universal pre-primary school enrollment have implemented strategies that involve both expanding financing as well as setting laws and regulations in place to ensure that parents send their young children to ECE centers. The Policy Note on “Access and Quality of Early Childhood Education” presents policy options based on international experience to increase ECE coverage, quality and equity in Chile. Specifically, the Note provides options related to: (i) the legal and regulatory framework; (ii) service provision; (iii) quality assurance; (iv) financing; (v) deepening social support for ECE; and (vi) strengthening research and evaluation of ECE interventions.

A key role for the Chilean Government and, in particular, for the Ministry of Education, could be to provide the necessary coordination between the various existing ECE providers. The Government might consider strengthening the capacity within the Ministry of Education to regulate, monitor, and evaluate the quality of ECE programs. Standards for ECE provision could be developed, and financing of ECE could be based on meeting these standards. In addition, the Ministry has an important role in fostering social demand for quality ECE programs. Finally, given the need to expand ECE in Chile, the new administration could consider alternative financing mechanisms to develop demand for ECE, especially among low-income families.

Chile has made significant progress in closing the access gap between students from different socio-economic backgrounds in primary and secondary school enrolment, but quality differences remain. Furthermore, access to higher education remains low for students from poorer backgrounds. The Development Policy Review (Section E) outlines a number of options to improve school performance which would improve equity within the system, including differentiating student subsidies based on their socio-economic background, stricter supervision of school performance, more stringent accountability for the use of public resources, better dissemination and availability of information on school quality, and a comprehensive evaluation of education policies and programs.

<table>
<thead>
<tr>
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<th>Quintile 2</th>
<th>Quintile 3</th>
<th>Quintile 4</th>
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Managing Health Shocks. Chile’s progress in improving health outcomes has been impressive but vulnerabilities to health shocks remain for a significant part of the population. As outlined in the Policy Note on Implementation of the Chilean Health Reform, the recent important health reform has large potential to improve equalities of opportunity as it can provide effective protection from such shocks - and the negative consequences they can have for family welfare, labor market participation and disinvestment in other forms of building human capacities of the affected families. In 2000, 5 percent of the population in the third poorest population quintile became poor because of expenditures related to health shocks, the majority of them beneficiaries of the Private Insurance Institutions (Instituciones de Salud Previsional, ISAPRES).

Implementing the reform implies important potential improvements in the management of the public health sector, especially with respect to the system's incentive and accountability framework. The implementation of the system of specifically specified guarantees, however, also implies important fiscal and governance risks that will need to be mitigated during the implementation.

The Policy Note discusses several reform challenges considered critical for the short and medium term. First, the Note examines the risk of defaulting on the explicit guarantees of the AUGE (Acceso Universal para prestaciones integrales y Garantías Explicitas asociadas a la atención de prioridades - Universal Access for comprehensive benefits and Explicit Guarantees associated to selected priorities) system. AUGE guarantees to all citizens health consultations and treatment for 56 priority problems, with norms regulating maximum out-of-pocket contribution, maximum waiting time, and quality.
Second, the Note examines the framework of incentives for the implementation of AUGE in the overall public sector and the potential response scenarios of insurers and providers and the fiscal risk related to such scenarios. The introduction of the AUGE plan poses the risk of negatively affecting the performance of non-AUGE services by public providers as well as to shift provision of services from the private to the public sector. Both scenarios could bring about fiscal and service-provision risks for the National Health Fund (Fondo Nacional de Salud, FONASA) population of beneficiaries. At this time, neither FONASA nor the Superintendence has sufficiently detailed or reliable individual information regarding the guarantee of financial protection or quality of services for patients who have joined the AUGE system.

The third reform challenge relates to the likely low impact of the inter-ISAPREs compensation fund to reduce risk segmentation in the health system. The Inter-ISAPREs Fund, by itself, is insufficient to solve the problem of risk and income segmentation of the Chilean health insurance system. To solve it, the new government would have the option of creating a solidarity redistribution fund comprising both FONASA and the ISAPREs.

The fourth challenge rests with ensuring the effectiveness of the claim arrangements in the AUGE system. Regulation (and control) symmetry of public and private insurers and providers would significantly contribute to the effectiveness of the incentives to comply with the AUGE guarantees and, equally important, with an adequate empowerment of people in protecting their rights. The current governance arrangements for the Health Superintendence and FONASA could become an obstacle for such regulatory symmetry. The new administration might consider monitoring closely the relation between FONASA and the Health Superintendence to ensure equity and an effective enforcement of the regulatory framework across public and private insurers.

Finally, the implementation of a reliable and effective monitoring system is an integral part of the AUGE reform - only such a system will verify whether the guarantees are indeed fulfilled and which ones of the above mentioned risks materialize. The new government might want to define a strategy and an impact monitoring and evaluation system based on a combination of data from AUGE’s information system in FONASA, the ISAPREs and the Superintendence, accompanied by panel-type household surveys. This would include the design and implementation of a study of baseline indicators. It might be useful for MIDEPLAN to support MINSAL in impact monitoring and evaluation of the financial protection dimension of the reform.

Protecting People in Old Age and Against Unemployment and Poverty. Health-related shocks are not the only threats to people’s livelihoods. The potential impoverishing impact of employment losses or old age is equally important. The Development Policy Review (Section F) takes an integrated look at Chile’s Social Protection System and argues that Chile’s social protection programs are generally well-designed and have broad coverage, but that gaps remain especially in rural areas. Furthermore, unemployment insurance does not include those working outside the “formal” sector, and public employment programs do not yet reach the most vulnerable. Reforms of labor regulations, changes in the financing of social security and improvements in the targeting of social protection could all help to make the system more effective.

While Chile’s multi-pillar pension system is well-designed and fiscally sound, the Policy Note on “Policies for Better Old Age Income Support”: emphasizes that reforms increasing coverage remains the key policy challenge for the future. Currently, the system only covers 60 percent of workers, and eligibility for the minimum pension is estimated at only 50 percent due to low or irregular contributions on the part of affiliates. Graph 6 shows that, among the current contributors to the system, women are at a particular high risk of not obtaining sufficient contribution times to reach even the minimum pension.

The Policy Note outlines options for reform of current pension policies to increase coverage. It suggests that the new administration might want to consider several options, such as: (i) removing the rationing of social assistance pensions to reduce and, eventually eliminate the risk of poverty in old age; and (ii) restructuring the minimum pension guarantee so as to provide more incentives for participation in the pension system. This could be achieved by pro-rating the minimum pension to award every month or year of contribution. Alternatively, savings incentives could be similarly smoothed by replacing the minimum pension guarantee with matching contribution subsidies that could be deposited directly in affiliates’ individual accounts, fully exempted from AFP fees. The note stresses, however, that such reforms of the first pillar instruments would need to be part of an integrated social protection strategy that would aim to minimize the risk of poverty for all Chileans.

The Policy Note also outlines a number of options for the incoming Government that could improve the consumption-smoothing functions of the pension system. To further lower administrative costs, the various services of the Administradoras de Fondos de Pensiones (AFPs) could be
unbundled and restructured, which could also contribute to fostering competition among AFPs. Also, to encourage greater innovation and better risk-adjusted performance, regulation could be shifted away from a compliance-based to a risk-management approach. Such risk-based approach could allow providers the flexibility to diversify risk in both local and international markets. The new Government could also consider encouraging the innovation of better investment and annuities instruments which would help affiliates better manage risks and the transition from work to retirement. The current structure of payout options seems to encourage individuals to retire early and to over-annuitise. In the accumulation and pay-out phase, product design, default mechanisms and pay-out options could be better framed to lower financial risks and more explicitly target a certain minimum replacement rate for the average income workers. Lastly, the new administration could consider opt-in default policies to increase affiliates’ incentives to participate in the pension system. This could improve incentives to participate by making coverage more attractive and easier to attain. For example, an “opt-in” default on income tax returns could lower the transactions costs of participating for employers and the self-employed alike.

B. Ensuring Equitable Access to Infrastructure Services and Equitable Regional Development Opportunities

Access to Basic Public Services. Equitable access to affordable and reliable public basic services is a core pillar for policies to strengthen equalities of opportunity. As the Policy Note on “Regulation of Basic Public Services” points out, Chile has been one of the most successful countries in Latin America in terms of providing infrastructure services such as water, sanitation, telecommunications and electricity. However, coverage gaps remain, especially concerning access to water and sanitation services as well as telecommunication in rural areas. Further, in electricity distribution and fixed-telephone telecommunications, rates of return have been high during the 1990s, pointing towards the need for reviewing the institutional set-up and technical details of price regulation as affordability for consumers might be improved.

The Policy Note outlines a number of policy options that could contribute to more efficient, affordable provision of basic services as well as coverage extension. First, the Government could consider to establish Superintendencias that could have legal powers to enforce regulations and impose fines on operators. Such Superintendencias could also assume more political and financial independence as well as regulatory discretion, strengthening the purely technical base for regulatory decision-making. Also, the Government could consider fostering institutional convergence between sectors by establishing only one regulatory agency per sector, in charge of both technical and economic regulation as well as responsibilities for data collection and enforcement. Such a reform would unify the regulatory framework across sectors and improve coordination within each sector.

Second, the Policy Note reviews tariff setting mechanisms in the basic public services sectors. One option for the incoming administration to avoid the problems that the efficient firm approach entails in the price-setting process, including regulatory capture, would be to apply benchmarking to the most efficient firm as has been introduced in a number of OECD countries today. Alternatively, benchmarking could also be incorporated into the efficient firm model as currently exists. Reforms of the capital cost determination are important since currently capital costs are set arbitrarily and differ across sectors. Finally, the Government might also want to consider replacing individual price regulation with the introduction of revenue caps, making the net income of regulated firms independent of actual demand which is always difficult to predict.

Third, the Policy Note suggests a number of sector specific policy options. In electricity, the government could consider deregulation of the commercialization segment which could further improve competitiveness within the whole electricity sector. The node pricing system could be structured more flexibly so as to encourage the formation of long-term contracts. Finally, the new administration might consider studying the costs and benefits of a number of alternatives that would improve fuel security, including new domestic production of hydro-power as well as developing new import sources for gas, coal, hydro and LNG.
options to replace the existing asymmetric regulation model or to deregulate consumer rates in the local telephone market. Also the Government could consider the introduction of a new generation of universal access programs, appropriate to the development of new technologies. Such programs could be directed towards expanding broadband service, and they could prioritize schools and communities, with likely high equity pay-offs for more marginalized areas.

To tackle the pressing problem of under-coverage in water and sanitation, the new administration might want to (i) clarify institutional responsibilities in the sector, (ii) target funding; (iii) promote the use of cost-effective and appropriate technologies; and (iv) promote decentralized and integrated programs that build on community initiatives. Further, as price alignments within the sector have been completed, the means-tested subsidy scheme for poor household could be reviewed to verify whether it reaches and protects poor households sufficiently.

Regional Development. In its election program, the new Government has outlined an ambitious agenda in decentralization and regional development, geared towards reducing geographic inequality of development, increasing public participation in decision-making, and gradually fostering decision-making at the regional and municipal levels. Indeed, while there has been a certain degree of convergence of per capita incomes between Chile's different regions over the past 20 years, such convergence cannot be observed for poverty levels. Graph 7 compares the initial poverty level in 1987 to reduction in the poverty level from 1987 to 2003 - ideally, the regions with the highest initial poverty levels would have also been the ones with the highest reduction in poverty but such relationship did not exist.

Chile has transferred a significant portion of its public resources to regional and local governments, especially for public investment. As a consequence, currently the regions and municipalities represent a third of the total investment expenditure. The Policy Note on “Regional Development and Decentralization” underlines that to improve decentralization and support regional development in Chile, the Government could consider strengthening the incentive structures and institutional arrangements of the current inter-governmental system. The Note presents policy options in four selected areas that might be relevant for that process.

Firstly, the Government has succeeded in allocating resources more uniformly by taking into account the needs for regional and local expenses. The latter would contribute to an improved regional distribution of resources, which currently continues to be inequitable and biased in favor of the Extreme Zones. In addition, the Government might consider evaluating the design and incentive structure of the Municipal Common Fund (FCM), which is an important source of revenues, specially for the poorer local governments. There is also the potential to improve the balance between the technical standards for regional and local investment projects that are applied throughout the country, on the one side, and the need for region-specific solutions, that may require greater flexibility. Finally, the Note suggests the need to continue analyzing performance in the process of mainstreaming the government's current programs across regions and considering possibilities to base resource allocation on the provision of minimum levels of service at the sub-national level.

Second, the Government could consider reviewing the current decision-making processes. This could lead to improving inter-governmental coordination mechanisms and clarifying and rationalizing the functions of each level of government. Such evaluation might also consider granting more authority to the municipalities regarding the mobilization of local revenues, allowing them to establish the property tax rate within a given band.

Third, to strengthen the capacity and performance of local governments, the national system for Management Control and Performance Budgeting could be extended to local governments. This system would not only help the national and local governments make better decisions but would also create incentives for good performance.

Fourth, increasing the opportunities for public participation in the decision-making process and monitoring the policies of their local governments could further strengthen performance incentives. Chile has experimented with several public participation schemes in a project-based environment, such as the Infrastructure Project for Territorial Development. Such initiatives could now be extended to provide greater impact.

Finally, Chile could also benefit from other countries’ experience in strengthening information transparency and developing opportunities for participation in the budget and monitoring processes.

C. Strengthening Markets, Protecting People against Macroeconomic Shocks, and Fostering Innovation-led Growth

Policies governing the overall economic framework, including access to finance, the structure of labor markets and macroeconomic policies, also have an important impact
that, compared to the OECD, Chile lags substantially in the heart of ensuring lasting job creation, income sustaining growth in a knowledge-based economy - and thereby at the heart of ensuring lasting job creation, income generation for households, as well as to generate fiscal revenues that support the overall equality of opportunity agenda.

The Development Policy Review (Section D) shows that, compared to the OECD, Chile lags substantially in

![Figure 7. Poverty Convergence, 1987-2003](image)

Source: MIDEPLAN

for people to develop their opportunities - in terms of access to productive assets and jobs as well as in terms of protection from macro-economic shocks. The Development Policy Review (Section A) argues that the new Government has a number of options to reduce obstacles that impede a prompt adjustment to shocks. While Chile has a favorable investment climate relative to many other countries and has done well in establishing adequate competition policies, there remain obstacles that, if reduced or removed, will lead to further increases in productivity and make the economy more resilient to shocks. The options include: strengthening the enforcement of creditor rights; improving the efficiency of bankruptcy proceedings; restructuring job security; and decreasing wage rigidity. The Development Policy Review (Section A) also emphasizes the importance of reducing one of the core inequalities in opportunity which impedes progress in economic development: strategies to promote access to credit by small and medium enterprises.

International experience has shown that macroeconomic stability is a necessary condition for reducing poverty and also improving equalities of opportunity. Chile has performed very well on this count, experiencing much less volatility than other Latin American countries; however, its dependence on copper can make it vulnerable to changes in commodity prices. The Development Policy Review (Section G) discusses options to improve Chile’s “fiscal rule” at the margin as to manage risk associated with fluctuations in the copper prices.

While perhaps linked only indirectly to strengthening equalities of opportunity of people, innovation is crucial for sustaining growth in a knowledge-based economy - and thereby at the heart of ensuring lasting job creation, income generation for households, as well as to generate fiscal revenues that support the overall equality of opportunity agenda. The Development Policy Review (Section D) shows that, compared to the OECD, Chile lags substantially in

Research and Development (R&D) expenditure; private sector participation in R&D; patenting; and in the relative importance of applied, as opposed to basic, research. Like Spain and Italy, Chile has relied heavily on FDI and has a large number of successful firms that focus on innovation in both production and management. Investments in Science and Technology (S&T) and R&D are important over the medium and long term. Increasing S&T capability includes increasing the number of research units and well trained workers but it also requires improving the diffusion of knowledge, and that in turn implies viewing the National Innovation System (NIS) as a network to facilitate the transmission of knowledge.

D. Financing of Policies Geared Towards Promoting Equality of Opportunity

Finally, the new Government’s ambitious pro-equity agenda will trigger additional financing needs. The Development Policy Review (Section G) offers suggestions as to how the efficiency and equity of the tax system could be improved while simultaneously reducing tax evasion. Many income tax credits, deductions and exemptions which benefit the relatively better-off and which unnecessarily complicate tax administration could be eliminated, improving the progressivity of the tax system per se without leveraging new taxes. Closely linked to the strategic agenda on ‘strengthening markets’ outlined above, a reduction of the withholding tax on dividends of foreign corporations would also reduce tax evasion while having a positive net effect on FDI. The reduction or elimination of VAT exemptions and special regimes (e.g., construction) could boost revenue while simplifying tax collection. There are also opportunities to refine the fiscal rule so as to increase its anti-cyclical effect and stabilize the seasonal impact of fiscal policy.

4. Potential Impacts of Improving Equality of Opportunity in Chile

We conducted a number of quantitative simulations so as to obtain a sense of how important improving equalities of opportunity could be for reducing poverty in Chile. Such simulations are illustrations and can only provide an approximate guidance on the overall importance of pursuing pro-equity policies. Any quantification depends on a host of variables which are difficult to predict - for example, when analyzing the impact of universalizing secondary school completion, the impact will depend crucially on earnings of the new graduates in the labor market. Similarly, any approximation of the impact of higher female labor force participation would much depend on wages and salaries of...
such new entrants - and whether the newly working women come from poorer or less poor households.

The first simulation we conducted was to approximate the impact on income of higher equalities of opportunity in Chile. Using the OECD as a benchmark for pro-equity policies, we assessed, what key labor market characteristics (such as the labor force participation, occupation and unemployment rates, by gender) would be in Chile, given its GDP per capita. The result is very significant: if Chile were to reach levels of equalities of opportunity (in different dimensions) as currently prevalent in the average OECD country, this could have an income effect equivalent to seven percent of GDP.

Then, to assess the impact of equity improvements on poverty and income inequality, we chose five specific equity outcomes. First, we examined an improvement in the quality of education which would have the impact of graduates obtaining better paying jobs, especially those whose education quality is low today. Second, we assessed the potential impact of universalizing secondary education for all which would benefit especially children from poorer socio-economic backgrounds whose likelihood of dropping out of secondary school is relatively high today. Third, we considered the effects of increasing female labor force participation by 25 percent (which would bring the female participation rate to 55 percent, close to the regional average). Fourth, we looked at the impact of reducing intra-regional inequalities (convergence of growth rates of less developed regions to the national average for a period that would reduce the inter-regional gap by 25 percent) as well as, lastly, the impact of reducing the existing gender discrimination in the labor market (in which women are paid less although they have the same education, experience, age and other characteristics) by 25 percent.

The poverty reduction results of these quantifications are presented in Graph 8. The potential pay-offs of improving equalities of opportunity are very significant - with the poverty rate decreasing by more than 50 percent when we look at improving the quality of education or close to 30 percent in the scenario where secondary education becomes universal. Increases in female labor force participation and regional convergence have also an important effect with a reduction of the gender wage gap showing somewhat lower impacts on poverty. As mentioned above, such simulations are only hypothetical and based on many assumptions - but they do show the important impacts on poverty that could result from improving equalities of opportunity in Chile. Further, pro-equity policy reforms generally cannot be viewed in isolation so that important synergies might arise (e.g., between female labor force participation and the reduction in the gender wage gap) which we have not examined here. Lastly, we have only considered the direct impact of such policies on poverty and inequality, thereby not having taken into account the likely considerable positive impact on poverty through the growth effect described above.

Lastly, we also look at the impact of the above pro-equity changes in terms of income inequality. Here, as presented in Graph 9, we again see important ensuing reductions in the degree of income inequality although they tend to be lower than the impact on poverty. Inequality in Chile is relatively inflexible which would, if its reduction were to become an explicit policy goal, necessitate a number of different policy actions, of which improvement of equalities of opportunity would likely be an important - but not the sole - component.
References


Policy Note 2:
Improving Access and Quality of Early Childhood Education in Chile

Abstract

Chile has succeeded in expanding access to basic and secondary education to all children. Now the country faces the challenge of increasing access and quality of Early Childhood Education (ECE). ECE has been found to have important effects on children's performance in basic education and throughout their lives. Concern over the low enrollment rates of young children in ECE programs has risen in recent years, especially after Chile's participation in international assessments of student performance showed disparities in test scores between Chilean students and their peers in other countries as well as between students of different socioeconomic backgrounds within Chile. In addition, expansion of ECE programs could support greater incorporation of women into the labor market in Chile. Although there is strong evidence on the impact of ECE on children's performance in basic education and throughout their lives, there is scarce evidence on how to effectively design, fund and provide quality ECE programs to all children, especially those from low-income families. This Policy Note is intended to provide evidence from other countries that may help Chile improve access, equity, and quality of ECE programs.

1. This policy note was prepared for the Government of Chile by a team of World Bank staff and consultants led by Emiliana Vegas (Education Economist, Department of Human Development for Latin America and the Caribbean, World Bank). The team consisted of Gregory Elacqua (Associate Researcher, Universidad Adolfo Ibáñez) and Ilana Umansky (Education Policy Analyst, World Bank). This note summarizes a longer, more detailed policy report that may be requested from Emiliana Vegas (evegas@worldbank.org).
Chile achieved significant progress in ECE coverage in the last decade.

Chile achieved significant progress in ECE (Early Childhood Education) coverage during the last 13 years. The gross enrollment rate for children aged 0 to 5 increased from 16% in 1990 to 30% in 2003, but the sharpest increases occurred among children aged 3 to 5 (Figure 1).

![Figure 1: Evolution of Preschool Enrollment Rates by Age Group (percent)](image1)

Source: Author's calculations, CASEN.

While total education investment in Chile rose substantially between 1990 and 2002, the share of spending going to pre-primary education has declined slightly (Figure 5).

Figure 6 presents the distribution of education spending across the various chapters of the Budget Law. With less than 6 percent of total education spending going to ECE, Chile lags behind other countries in investment in ECE. Indeed, the gap in per-pupil expenditure between Chile and OECD nations by level of education is wider in ECE than in other education levels.

Compared to other Latin American and OECD countries, the share of total public education expenditure that is devoted to ECE is low in Chile, as shown in Figure 7.

The potential benefits of ECE expansion in Chile are large.

Despite this progress, Chile still has relatively low ECE coverage rates and inequalities persist.

Indeed, the enrollment rate of children aged 3 to 6 in ECE programs in Chile, averaging 33% in 2003, is low compared to OECD and other Latin American countries (see Figure 2).

There are marked differences in ECE enrollment rates by age group. While over 90% of children aged 5 attend an ECE center, only half the children aged 4 attend. This share is significantly lower among children aged 3 or less. Only 4% for children aged 0 to 2 years old are enrolled in ECE (Figure 3).

Inequalities in access to preschool by student socio-economic background persist (Figure 4). There are also enrollment gaps in preschool between indigenous and non-indigenous children and between children in rural and urban settings.

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Compared to other Latin American and OECD countries, the share of total public education expenditure that is devoted to ECE is low in Chile, as shown in Figure 7.

A number of factors converged to put ECE at the center of policy dialogue in Chile. These include evidence of significant learning gaps between Chilean and international students as well as among Chilean students of different backgrounds, and research findings indicating that the brain continues to develop during early childhood and that ECE interventions...
can create measurable differences in schooling outcomes. Furthermore, concerns over the impact of low rates of female labor force participation in Chile on economic growth and income inequality have led policymakers to view expanding access to ECE as a policy mechanism to raise the labor force participation of Chilean women.

Test score disparities between Chilean students and their peers in other countries and among socioeconomic groups are a prominent feature of the national education landscape. Figure 8 illustrates the large gap between average test scores of Chilean students and their peers from other countries on the Third International Mathematics and Science Study (TIMSS). In addition, national assessments reveal stagnant test scores over time (Figure 8).\(^4\)

Another concern is the prevailing test score gaps between students of diverse socioeconomic backgrounds. As Figure 9 shows, there is a strong relationship between national test scores and socioeconomic student background - the greater the vulnerability, the lower the test scores.\(^5\)

ECE contributes to improving quality and reducing inequities in elementary and secondary school learning. Although the international and national achievement gaps have been treated mainly as a problem affecting elementary and secondary levels, research evidence suggests that the gap first opens during preschool years. Studies consistently show that children who do not attend high quality ECE programs have already fallen behind before they enter formal schooling. Because ECE contributes to the development of cognitive skills in children and has especially strong benefits for children from poor socioeconomic backgrounds, ECE helps narrow the skills gap upon entry to school among children from diverse backgrounds.\(^6\) For example, a recent study found that the effect of having attended pre-school on third grade test scores is twice as large for poor students in Argentina than for non-poor students.\(^7\) Furthermore, research suggests that ECE programs are more cost-effective than alternative educational interventions and policies at narrowing learning gaps in school.\(^7\)

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4. The relationship between the student's socioeconomic background and standard test scores does not appear linear in Figure 9, indicating that what schools do also affects the outcomes. In fact, test scores across students within each socioeconomic level also present a significant variability in Chile as well as in other countries.
5. See, for example, Belfield, 2005.
7. For theoretical and empirical reviews of ECE programs in developing countries and the U.S., see Schady (2005), Carneiro and Heckman (2003), and Currie (2001).
ECE is also linked to numerous social benefits. The positive outcomes of ECE participation go beyond test scores. Recent research in the U.S. indicates that benefits of ECE include lower rates of grade retention and special education, improved child health, nutrition, and emotional well-being, reduced criminal activity, and higher tax revenues (due to lower welfare reliance).  

Strengthening ECE is also an economic development and gender equity strategy, since it is closely related to the participation of women in the labor force. In Chile, increasing preschool coverage could also contribute to reduce inequities by providing low-income mothers with the opportunity to seek employment. Chile's 35 percent female labor force participation rate is well below other Latin American countries. Female work rates are also stratified by socio-economic level. Only one-third of women in the lowest income quintile participate in the labor force, as compared to over 55 percent of women in the highest income quintile. Figure 10 shows the number and percentage of women out of the labor force - either looking for work (unemployed) or not looking for work (inactive) - by income quintile. Recent empirical evidence indicates that women with children in preschool are more likely to be working than mothers with similar characteristics whose toddlers are at home. This suggests that an expansion of preschool could potentially have an important impact on female labor force participation in Chile.

Finally, cost-benefit analyses of ECE investments suggest that expanding ECE is cost-effective. Estimates of the costs and benefits of reaching universal education in various U.S. states indicate that for every dollar invested in education, the benefits are between $1.18 (in Massachusetts) and $1.60 (in Ohio). Although similar estimates do not exist in Chile, given the large ECE enrollment gap and the low rates of female labor force participation that currently exist, it is reasonable to expect that the benefits from ECE expansion would be even greater in Chile than in the U.S.

Key Characteristics of ECE Provision in Chile and Other Countries

Legal and Regulatory Framework

Most countries that have succeeded in achieving universal pre-primary school enrollment have implemented strategies that involve both expanding financing as well as setting laws and regulations in place to ensure that parents send their young children to ECE centers.

In Chile, ECE policy is under the jurisdiction of the Ministry of Education. Although the 1999 Education Law (LOCE) establishes ECE as the first education level, there is no legally mandatory ECE in Chile. The State does, however promote ECE through its National Plan to Overcome Poverty (Plan Nacional de Superación de la Pobreza) and by directly financing various institutions that provide ECE. Recent evidence from Argentina suggests that the legal expansion of mandatory education to include children aged five, accompanied by a large preschool construction program in the late 1990s has led to important increases in average test scores.
scores in those provinces where ECE enrollment increased the most. Box 1 describes the legal framework of ECE provision in OECD countries.

**Service provision**

In Chile, there are currently four main types of ECE providers: municipalities, private voucher schools, Junta Nacional de Jardines Infantiles (JUNJI) and the Integra Foundation. Many (but not all) municipal and private voucher schools offer preschool and kindergarten while JUNJI and Integra provide services to 0-6 year olds. JUNJI is an autonomous public institution that receives funding from the national government and often outsources services to municipalities and private voucher schools. The former First Lady presides over the Integra Foundation, which is a nonprofit organization with a mission to provide ECE services to needy children. Integra is also funded directly by the national government.

Figure 11 shows the distribution of ECE enrollment across provider types. Municipal and private voucher schools each account for around 29 percent of enrollment. JUNJI enrolls 17

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**Box 1: ECE legal framework in OECD countries**

Eight of twelve OECD countries have laws guaranteeing access to ECE for 3 to 5 year-olds (upper level ECE). The four countries that do not offer legal rights to this level - Australia, the Czech Republic, Norway, and the U.S. - have broadly access to this level, and in two countries - the U.S. (Kindergarten) and Australia - these upper level ECE programs are free. With or without legal status, many OECD countries offer 1-2 years of free ECE to all children in the years just preceding the enrollment age for primary. However, there are different blueprints for ECE provision across OECD countries, with varying consequences for gender equity, socio-economic equity, child care quality, and labor market participation. In Finland and France, governments provide incentives for mothers to stay at home raising young children and for families to hire private childcare help through financial allowances for stay-at-home mothers, tax credits, or other monetary incentives. In Finland, 60 percent of two-year-olds are now cared for at home, and female labor participation dropped markedly after the incentives were put in place in 1986. Some experts argue that this blueprint for ECE can undermine gender equity and female labor participation, decrease child care quality, and create greater social inequity by building a market for low-skilled, low-wage private child care providers (Mahon 2002).

In the Netherlands and the U.K., the approach to expand ECE focuses on demand-side incentives, such as tax credits, for parents to enroll their children in ECE programs. But the incentives focus on ECE for children aged 3-6 and are generally part-time. Both of these characteristics make female labor force participation frequently of a part-time or temporary nature. In both countries, there are large disparities between the number of regular work hours for women and men. Private costs for childcare remain high, averaging 44 percent of total costs in the Netherlands and 30 to 60 percent in the U.K. Both countries have targeting policies which further subsidize child care provisions to the poor. In Denmark and Sweden, current ECE policies are designed to support gender equity, at home and at the workplace, to promote high labor market participation for both genders, to provide universal ECE coverage for children from age one, and to ensure high quality, education-based, ECE. Parental leave policies are designed to be attractive to men and women and to high- and low-wage earners. Parents are subsidized based on their salaries, and fathers have significant rights to leave. Cash transfers for parental leave are relatively short in duration, encouraging parents to return to work. In both countries children from age one have the legal right to ECE, with parents covering either a very low percentage of costs (in Sweden) or paying on a sliding-scale (in Denmark).
percent of students, while Integra accounts for 10 percent of enrollment. Private non-voucher schools enroll 15 percent of all ECE students.

Typically, there are important differences in student characteristics by provider. Those attending private voucher and private non-voucher schools come from families with higher incomes, on average (see Table 1), and are headed by parents with substantially more schooling than families in municipal, JUNJI and Integra centers. There is also substantial variability among schools in the private voucher sector in Chile. For-profit operated schools account for around 24% of subsidized schools and 25% of enrollments. Most other voucher schools are Catholic, but a growing number are operated by Protestant churches and secular foundations (Elacqua, 2006). The complex nature of ECE provision is not characteristic of Chile alone, as described in Box 2.

### Quality

Two approaches to measuring the quality of ECE programs focus on process and structure. Process quality emphasizes the experiences that occur in educational settings, such as child-teacher interactions and the types of activities in which children are engaged. The second way to measure quality is to review the structural and teacher characteristics of the program, such as teacher-pupil ratios, and qualifications and experience of teachers and staff.

OECD countries tend to have established standards for ECE provision and systems for evaluating the quality of ECE programs, enforcing standards, and accrediting ECE providers. Box 3 describes the example of Australia's Quality Improvement and Accreditation System for ECE programs. The only quality-assurance or accreditation process measure currently used in Chile is a national registration system that

### Table 1: Distribution of ECE Enrollment by School Type and Income Quintile, 2003

<table>
<thead>
<tr>
<th>Quintile</th>
<th>Public Schools (%)</th>
<th>Private Voucher Schools (%)</th>
<th>Private Non-Voucher Schools (%)</th>
<th>JUNJI (%)</th>
<th>Integra (%)</th>
<th>% del quintile over total enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>41%</td>
<td>22%</td>
<td>2%</td>
<td>21%</td>
<td>15%</td>
<td>24%</td>
</tr>
<tr>
<td>II</td>
<td>40%</td>
<td>29%</td>
<td>4%</td>
<td>21%</td>
<td>12%</td>
<td>24%</td>
</tr>
<tr>
<td>III</td>
<td>29%</td>
<td>32%</td>
<td>8%</td>
<td>22%</td>
<td>9%</td>
<td>18%</td>
</tr>
<tr>
<td>IV</td>
<td>22%</td>
<td>40%</td>
<td>21%</td>
<td>11%</td>
<td>6%</td>
<td>15%</td>
</tr>
<tr>
<td>V</td>
<td>8%</td>
<td>27%</td>
<td>59%</td>
<td>4%</td>
<td>2%</td>
<td>16%</td>
</tr>
</tbody>
</table>

Source: Picheco et al. (2005)

### Box 2: ECE Provision in OECD and Latin American Countries

OECD and Latin American countries generally have at least two separate ECE programs, one for the lower (for children aged zero to three) and another for the upper level (for children aged three to five). Many countries have more than two programs and, in some cases, these programs overlap in terms of the ages they serve. ECE services also differ in terms of whether they are public or private, free or fee-based, full- or part-time, where they are located, what government body oversees them, and where the locus of decision making is centered.

Upper level ECE tends to be offered by education departments within countries, is a public provision, and is free. Lower level ECE, on the other hand, is largely dealt with outside the purview of the education ministry, is fee-based, although it can be state-subsidized, and takes place in centers or homes instead of in schools. Within any one country ECE can be offered by a host of institutions, including different levels of government or line ministries, charities, religious groups, non-governmental organisations, and for-profit businesses. Due to its private nature and its important goal of providing care while parents are working, lower level ECE is more frequently offered full-day than upper level ECE. The wide array of providers and the different regulatory bodies can make coherent quality ECE provision difficult and some countries, such as Sweden, have placed the regulatory responsibility for all of ECE in one body. In the case of Sweden the regulatory body is the Ministry of Education and Science (Choi, 2002).

certifies health and safety routines and classroom materials in ECE centers. Only 47 percent of centers in Chile have been registered. JUNJI is also in the process of implementing a more comprehensive qualitative accreditation system that will measure experiences in the center and classrooms and rate the multiple dimensions of the preschool program, such as teacher-child interactions, type of instruction, room environment, materials, and relationships with parents. JUNJI’s accreditation system will also evaluate the center’s management of financial and human resources as well as the quality of curriculum utilized by each center.

Without significant measurement in place, there is little systematic information available on the quality of ECE in Chile. Information does exist, however, on two structural features of Chilean ECE: teacher-pupil ratio and teacher qualifications. Preschool teacher-pupil ratios in Chile are higher than most countries (see Figure 12). However, as Figure 13 illustrates, they vary across sectors. Private voucher schools, on average, have larger ratios than other institutions, and Integra and private non-voucher schools have the lowest preschool student-teacher ratios.

Compared to other countries, Chile has a large percentage of teachers with degrees in Early Education. Almost 96 percent of Chilean preschool teachers have university or vocational degrees. However, there is limited information on the quality of Early Education programs. Only 6 out of the 71 institutions of higher education that offer undergraduate degrees in Early Education are accredited.

Financing
A number of financing factors could complicate ECE implementation in Chile. Most notable is the fact that both demand- and supply-side funding mechanisms are currently used. Municipalities and private voucher schools are funded with per-pupil vouchers and JUNJI and Integra receive their funding directly from the government budget.

Recently, the Ministry of Education estimated the cost of ECE expansion in Chile. While costs will vary across regions, geographical areas (rural/urban) and programs, the Ministry estimates that providing universal ECE to all 4 and 5 year olds would cost approximately US$5.7 million per year over 3 years. The estimates for targeting 0-3 year old enrollment to the lowest income quintiles would cost approximately US$22 million per year over 3 years. The Ministry also calculated the costs of implementing a national accreditation system (US$8 million), developing national standardized tests (US$800,000), and conducting a national public awareness campaign over 4 years (US$3.6 million).

These estimates only consider the costs of expanding enrollment in existing programs. However, improving the quality of these programs would cost additional money. For example, JUNJI’s annual per pupil costs for their traditional formal programs are only US$998 for 0-2 year olds and US$679 for 3-6 year olds. In the U.S., Haskins and Rouse (2005) estimate that a high quality preschool program for low-income families would cost about US$8,000. Head Start

Box 3: ECE Quality Assurance in Australia

Australia’s Quality Improvement and Accreditation System (QIAS) is a promising model for accrediting ECE centers and improving ECE quality. The QIAS is an evaluation process that all ECE centers must participate in, in order to be accredited and to be an eligible center for the national Child Care Benefit, a subsidy given to parents. Because QIAS is tied directly to accreditation and funding, over 98 percent of private ECE centers go through the QIAS process. The accreditation process begins with a self-evaluation process along 52 principles related to interactions between children, staff and parents, management, curriculum, and nutrition and health practices among others. A peer reviewer then visits the center and over one or two days independently evaluates the center. Centers have three chances to pass the QIAS evaluation to become accredited (OECD, 2001).

15. See www.cse.cl.
spends about US$ 6,000 per pupil.

**Social and Cultural Attitudes Toward ECE**

Part of the explanation behind low enrollment rates in Chilean ECE may be prevailing social and cultural attitudes related to early childhood care, parenting, and education. Over 75% of Chilean parents report not sending their children under 6 years of age to ECE programs because they consider them too young to attend. Although high, this share has dropped substantially since 1990, when nearly 100% of these parents considered children six and under to be too young to attend preschool (Figure 14).

Early childhood care may be seen as solely the family's responsibility and, in particular, the mother's responsibility. In addition, parents may believe that young children are better cared for at home than in institutional settings. Understanding the social and cultural attitudes toward ECE in Chile is necessary in order to develop effective policies for ECE expansion.

### Policy Options to Expand Access and Raise the Quality and Equity of ECE in Chile

**Legal and Regulatory Framework**

A substantial ECE expansion in Chile is unlikely to take place without a legal framework that supports universal ECE, at least for five- and six-year olds. For children aged zero to four, policymakers in Chile need to evaluate whether public provision should be targeted or universally provided depending on desired effects. If the principal desired effect is to increase female labor force participation, ensuring that all young children aged 0-6 have access to ECE is necessary. If the main desired effect is to raise education quality and equity, focusing on ensuring universal ECE for children aged 3-6 may be sufficient. For quality and equity purposes, ensuring access to ECE among all 3-6 year olds would have to involve targeted approaches to children from disadvantaged households.

**Service Provision**

The existence of multiple ECE providers in Chile generates challenges for expanding access, quality, and equity. First, there is significant overlap in some of the services provided. Currently, JUNJI and Integra provide services for 0-6 year olds and the municipalities and private voucher schools only enroll 4-6 year olds. Second, at present there are few systems in place to enable an effective coordination across institutions.

A key role for the State and, in particular, for Chile's Ministry of Education, is to provide the necessary coordination across ECE institutions. To that end, it is necessary to strengthen the Ministry of Education's capacity for the regulation, monitoring, and evaluation of ECE programs. Experience from other countries suggests that policy makers should establish a broad policy framework that specifies clearly defined and distinct goals for the diverse early childhood programs that exist in Chile, identify specific program strategies to address those goals, and coordinate the efforts of ECE providers.

**Quality Assurance**

Expanding access without improving quality of ECE programs is unlikely to result in the desired effects on education quality. It is important to provide high quality programs, including qualified teachers that are trained to develop the cognitive, social, and emotional skills of young children.

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In the United States, estimates suggest that increased enrollment in high quality programs could narrow test score gaps by as much as 36 percent (Haskins and Rouse, 2005). Combinations of quantity and quality ECE would likely produce similar effects in Chile. Conversely, increasing access to low-quality programs would be inadequate to close Chile's achievement gaps.

To ensure adequate quality of ECE services, it is important to develop standards of ECE provision that include teacher and personnel qualifications as well as development milestones (for the lower level) and/or learning standards (for the upper level). These standards could form the basis for a more comprehensive accreditation system for ECE in Chile. A strong institutional and regulatory context may be important, also, for boosting demand for ECE. For example, recent research indicates that demand for ECE in the U.S. is stronger in areas where more preschools are accredited.14

Quality information deriving from an accreditation process should be made available to parents, communities, and policy-makers. Adequate public information on the quality of ECE centers is important, especially in the Chilean context where parents can choose among a wide variety of publicly-financed ECE institutions. Survey evidence in Chile that demonstrates parental misinformation about ECE underscores the need to provide information to inform the general public view on the benefits of early childhood education, especially for low-income families.15 In order to create a greater impact on public awareness in Chile, resources could be used for public awareness campaigns, similar to those utilized to help families better understand the legal reforms in Chile.

Costs of ECE Expansion

Recently, the Ministry of Education estimated the marginal cost of increasing ECE coverage of 4 and 5 year olds (pre-kinder and kinder programs), as well as ECE coverage of 2 and 3 year olds. Using costs per student in 2004 as a base, two alternative scenarios were estimated for the increased coverage of 4-5 year olds: (1) increasing the enrollment of children aged 4-5 through a per-student voucher in municipal and private voucher schools, which would make it possible to reach approximately 71,000 additional children between 2007 and 2010; and (2) increasing the enrollment of children aged 4-5 by expanding full-day schools (FDS), which would make it possible to reach approximately 77,000 additional children between 2007 and 2010. Table 2 presents the cost estimates of both scenarios.

According to the estimates in the table, increased ECE coverage through installing classrooms for 4 and 5 year olds targeting 20% of the FDSs would allow for a greater increase in coverage at a total additional cost of approximately US$61 million. In terms of cost-per-student, this estimated cost is more than 40% less than the estimated cost of increasing enrollment through per-student vouchers.

For the 2 and 3 year olds, an increase in coverage between 2006 and 2010 of approximately 157,380 children was estimated. The estimates were based on the assumption that 50% of the new enrollees would enter Integra schools and the other 50% would enter JUNJI schools. Table 3 shows these estimates. The addition of nearly 160,000 2 and 3 year old students would cost US$ 361 million.

The cost of increasing ECE coverage for children aged 2 and 3 is much higher than that of 4 and 5 year-olds because the cost-per-student at that earlier age is almost three times greater than the cost-per-student for 4 and 5 year-olds.

Demand Financing

Expanding ECE in Chile will require additional resources and new interventions, both on the supply and the demand sides. If ECE enrollment, at least for age 4-5, is legally mandated and information campaigns to encourage families to send their young children to ECE programs are implemented, expanding access through student vouchers in FDS could be of help in those areas where the scarcity of supply is the main restriction for ECE enrollment.

Given the urgent need to expand access to ECE in Chile, conditional cash transfer (CCT) programs may provide a short-term solution to expand ECE access, quality and equity in Chile. A CCT can act as a demand-side incentive to enroll children in ECE.

International experience with CCT programs indicates that these can be very effective in getting families to send their children to school; especially young children whose opportunity costs of schooling tend to be low. The conditions upon which the cash transfers may be granted to families could be based solely on young children's attendance in ECE or on a combination of children's ECE attendance and mother's labor force participation.

From a financial sustainability and equity perspective, it would make sense to target the CCTs to low-income families and to phase them out over time, once most families become...

Cash transfers have been shown to correlate positively with female labor participation. Evidence from the United States suggests that child care subsidies are positively associated with, and may be a causal factor of, increased female labor participation (Berger & Black, 1992; Blau & Tekin, 2000; Gelbach, 1999; Meyers, Helitzer, & Wolf, 2002). The United States, through the Child Care Development Fund (CCDF), gives subsidies to low-income families in which parents are employed, in training, or in school, although only a small portion of eligible families participate. The subsidy can cover any child age 13 or younger. Blau & Tekin (2000) find that single mothers enrolled in the CCDF program are significantly more likely to be employed and their children are significantly more likely to be enrolled in school. Gelbach (1999) finds that single mothers receiving previous child care subsidies in the US also work more hours per week, more weeks per year, and have higher wages and salaries than single mothers without the subsidy.

In Chile, there are already systems in place through social programs such as Chilesolidario that provide transfers to qualified families conditioned on sending their children to ECE programs. Preliminary results of an impact evaluation of Chilesolidario suggest that the program has had positive effects on preschool enrollment. Chilesolidario is currently targeted only to indigent families, a population that accounts for only a small share of the families currently not served by ECE in Chile. An option would be to increase eligible families to include low-income families in addition to indigent families.

Strengthening Cultural Attitudes Favorable to ECE

Financial constraints are not the only, nor perhaps, the main reason why Chilean families do not send their children to preschool. Other interventions, including information campaigns on the benefits of ECE, are important to get young children in Chile to attend ECE.

Strengthening Research and Impact Evaluation of ECE Interventions

A significant constraint to developing ECE policy in Chile is the absence of solid evaluations of preschool interventions. Given that current ECE levels of enrollment and quality need to be improved, policy-makers should consider building the basis for impact evaluations of ECE interventions at the time of policy design. It is also important to conduct studies to identify which ECE programs can be effectively brought to scale. Much of what is known today about the impact of ECE interventions comes from the Perry Preschool Program in the US. This program has used random assignment to evaluate the impact of the program on participants over more than four decades. Although such rigorous experiments are costly and not always feasible, alternatives to experimental designs exist that may facilitate a sound evaluation of the impact of policy interventions.

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21. Seguel, Edwards and others have conducted a series of evaluations of preschool programs in Chile. Although it is difficult to generalize based on a few studies, these works suggest that the Integra programs have positive impacts on the learning outcomes of children from low-income households.
### Table 2: Cost Estimates of Increased ECE Coverage of 4-5 year olds

Universal Increase in schooling for 4-5 year olds (1st and 2nd Transition Level) through MINEDUC voucher (municipal and private voucher schools)

<table>
<thead>
<tr>
<th>Difference over 2008 (thousands of dollars 2004)*</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys/Girls</td>
<td>17,785</td>
<td>35,570</td>
<td>53,355</td>
<td>71,139</td>
<td>71,139</td>
</tr>
<tr>
<td>Food</td>
<td>2,463</td>
<td>4,925</td>
<td>7,388</td>
<td>9,850</td>
<td>24,626</td>
</tr>
<tr>
<td>Teaching Material</td>
<td>218</td>
<td>437</td>
<td>653</td>
<td>874</td>
<td>2,184</td>
</tr>
<tr>
<td>Voucher Cost</td>
<td>6,569</td>
<td>13,138</td>
<td>19,708</td>
<td>26,276</td>
<td>65,692</td>
</tr>
<tr>
<td>Total Program Cost</td>
<td>9,250</td>
<td>18,501</td>
<td>27,751</td>
<td>37,001</td>
<td>92,502</td>
</tr>
<tr>
<td>Total Cost per Child</td>
<td>0.52</td>
<td>0.52</td>
<td>0.52</td>
<td>0.52</td>
<td>1.30</td>
</tr>
</tbody>
</table>

Expansion of Full-Day Schools (FDS) for 4-5 year olds (1st and 2nd Transition Level), installing 20% FDS in schools targeted through MINEDUC vouchers

<table>
<thead>
<tr>
<th>Difference over 2008 (thousands of dollars 2004)*</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys/Girls 4 &amp; 5 year olds FDS</td>
<td>19,224</td>
<td>38,448</td>
<td>57,672</td>
<td>76,896</td>
<td>76,896</td>
</tr>
<tr>
<td>Food</td>
<td>532</td>
<td>1,065</td>
<td>1,597</td>
<td>2,130</td>
<td>5,324</td>
</tr>
<tr>
<td>Teaching Material</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Voucher Cost FDS</td>
<td>2,653</td>
<td>5,307</td>
<td>7,960</td>
<td>10,613</td>
<td>26,533</td>
</tr>
<tr>
<td>Infrastructure Cost FDS</td>
<td>7,219</td>
<td>7,219</td>
<td>7,219</td>
<td>7,219</td>
<td>28,876</td>
</tr>
<tr>
<td>Total Program Cost</td>
<td>10,405</td>
<td>13,590</td>
<td>16,776</td>
<td>19,962</td>
<td>60,733</td>
</tr>
<tr>
<td>Total Cost per Child</td>
<td>0.54</td>
<td>0.35</td>
<td>0.29</td>
<td>0.26</td>
<td>0.79</td>
</tr>
</tbody>
</table>

Source: Pacheco et al. (2005)

* Except in children where it is number of people

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### Table 3: Estimated Costs of ECE Coverage Expansion for Children aged 2 to 3 years, 11 months

<table>
<thead>
<tr>
<th>Difference over 2008 (thousands of dollars 2004)*</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys/Girls 2 &amp; 3 years old</td>
<td>39,345</td>
<td>78,690</td>
<td>118,035</td>
<td>157,380</td>
<td>157,380</td>
</tr>
<tr>
<td>Food</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Teaching Material</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cost</td>
<td>36,143</td>
<td>72,285</td>
<td>108,428</td>
<td>144,571</td>
<td>361,427</td>
</tr>
<tr>
<td>Total Program Cost</td>
<td>36,143</td>
<td>72,285</td>
<td>108,428</td>
<td>144,571</td>
<td>361,427</td>
</tr>
<tr>
<td>Total Cost per Child</td>
<td>0.92</td>
<td>0.92</td>
<td>0.92</td>
<td>0.92</td>
<td>2.30</td>
</tr>
</tbody>
</table>

Source: Pacheco et al. (2005)

* Except for the first row, which shows number of additional children enrolled

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22. In Table 2:(i) the infrastructure calculations assume that only 50% of the students incorporated to FDS require construction of classrooms; (ii) in the construction of classrooms, their size is estimated for 35 students in Prekinder and 45 students in Kinder; (iii) based on the assumption that students entering FDS are equally divided into Kinder and Prekinder; (iv) a ratio 1 classroom - 1 bathroom was estimated, which is an estimated mean between bathroom repair, construction and maintenance for all the infrastructure expansion in FDS; (v) Prekinder classrooms (40 m²) require 60 m², including bathroom and Kinder classrooms (50 m²) require 70 m², including bathroom; the cost per built meter is estimated in US$ 459 plus 10% for project design and 10% for furnishing and equipment that are added to the value of each classroom.

23. These estimates include food and teaching material.
References


pública la tensión trabajo v/s atención de los niños?”.
*Expansiva En Foco* (34). Santiago, Chile.


Policy Note 3:
Policies for Better Old Age Income Support in Chile

Abstract

Pension policies in Chile have provided impressive achievements in terms of reduction of fiscal liabilities and development of the financial sector and, ultimately, have contributed to significant macroeconomic outcomes. Said outcomes have also contributed to the significant poverty reduction achieved in Chile in the last two decades. However, from a household's perspective, particularly lower-income households, the outcomes of pension policy look rather less impressive. About 40 percent of workers fail to contribute to the pension system and only about 45 percent of affiliated workers are likely to receive benefits higher than the state minimum pension when they retire. This note outlines options for reforms of current pension policies to lower poverty among the elderly and improve consumption smoothing for old age, while maintaining the significant contributions of the pension system to Chile's macroeconomic performance.

1. This policy note was prepared for the Government of Chile by a team of World Bank staff and consultants lead by Truman Packard (Senior Economist, Social Protection, World Bank). The team consisted of David McCarthy (Imperial College London, United Kingdom), Ximena Quintanilla (Institute of Fiscal Studies, University College London, United Kingdom), and Juan Yermo (Organization for Economic Cooperation and Development, OECD, Paris). This note has benefited from prior analytical work done by Roberto Rocha (Lead Financial Sector Economist, World Bank) and Augusto de la Torre (Senior Regional Financial Sector Advisor, World Bank) for a joint World Bank-IMF financial sector review as well as from comments by Mario Guadamillas (Senior Financial Economist, World Bank). This note summarizes a longer, more detailed policy report available at www.bancomundial.org/
I. Introduction

Pension policies in Chile have provided impressive achievements in terms of reducing fiscal liabilities and developing the financial sector and, ultimately, have contributed to significant macroeconomic outcomes in Chile. While governments in most countries face ballooning public pension liabilities, although it is still spending over 5 percent of GDP on pensions annually, Chile's budget is in surplus and its implicit pension debts are falling. While governments in most developing countries struggle to attract and increase private investment, Chile's pension assets as a percentage of GDP rival those of the United States and the United Kingdom. And while the financial sectors of most Latin American countries suffer from meager development, Chile's private pension industry has helped to deepen the capital market and boost the development of banking, insurance, and a sophisticated array of financial instruments.

However, from a household's perspective, particularly, lower-income households, the outcomes of pension policy look rather less impressive. In any given month, 40 percent of workers fail to contribute to the pension system. If this pattern continues, in 2030 only about 45 percent of affiliated workers are likely to receive benefits higher than the state minimum pension. The state guarantee itself is only likely to cover about 5 percent of affiliates, while up to 50 percent will be able to count only on what they have saved on their own and social assistance in old age. Currently, private pensions cost households more than they should, and upon retirement do not adequately protect them from market risks when switching from savings to annuities. Further, there are several inequities that persist. Women pay a pensions penalty when they retire. The police and military enjoy enormous pension privileges subsidized by all tax-payers. And despite having a relatively well targeted social assistance benefit, in 2003 up to 30 percent of the indigent elderly in urban areas and 8 percent in rural areas went without support, contributing to Chile's low but persistent rates of indigence poverty.

So with respect to pension policy, although Chile has done well it can do better, for these problems threaten hard-won progress and the country's favorable fiscal outlook. This note poses several difficult questions for pension policy makers, but all seek to help the government formulate a vision of the pension system Chile should have in place in 10 years, and to identify the actions that can be taken in the next four years to bring the current institutions for old age income support closer to that vision.

II. The Risks to Income from Ageing and Chile's Multi-Pillar Pension System

Old age is not a bad state, per se. In most societies, long life is considered a blessing, and even a goal of economic development. However, from and individual's perspective, ageing is accompanied by at least three distinct (although related) prospective losses to income: the loss of earnings ability, as the body and even the mind succumb to natural deterioration over time; unanticipated longevity that increases the period of life when an individual has to consume but cannot earn income from work; and, from these, an increased vulnerability to poverty in old age. Helping households to cover these losses forms the core of broadly accepted objectives of pensions policy, which are (i) to prevent a dramatic fall in household means when income from labor is no longer an option - the "consumption smoothing" objective; (ii) to ensure that these means are at least of a level adequate to sustain individuals' needs for the remainder of their life - the "income adequacy" objective; and (iii) to ensure that consumption never falls below an absolute minimum, socially-acceptable level - the "poverty prevention" objective.

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**Figure 1. Public Expenditures on Pensions 1981 - 2005, by Expenditure Category (Percentage of GDP)**

Source:DIPRES

- **Operacional deficit**
- **Deficit of military pensions**
- **Recognition Bonds**
- **Minimum pension guarantee and PASIS**
Chile's Government makes an array of instruments available to help households manage the losses that arise from ageing, both directly and through private provision. Since structural reforms in 1981 that introduced a shift away from a purely public pension system of disparate plans, to a more uniform system in which household savings and the private financial sector play a dominant role, these instruments are generally very well matched to cover the losses described above. In the widely accepted pensions lexicon, Chile's "multi-pillar" pension system has two "first pillar" instruments, the minimum pension guarantee (MPG) and the targeted social assistance pension (PASIS) that pool the risk of poverty; augments consumption-smoothing through mandatory AFP accounts and annuities of the "second pillar;" and encourages additional, voluntary "third pillar" savings through regulated private instruments ("ahorro provisional voluntario", or APV).

In meeting the consumption-smoothing, income-adequacy and the poverty-prevention objectives, assuming workers comply with the mandate to participate, the benefits yielded by Chile's first and second pillars are generally and favorably comparable to mandatory plans in the OECD. However, whereas policy makers in most OECD countries are increasingly concerned at the prospect of financially unsustainable retirement security systems, Chile's pension spending - currently still high at an average of 5.6 percent of GDP, and composed primarily of the transition-cost of the 1981 reform - is quickly declining. Despite this positive assessment, the pillars of Chile's old age income security system are once again a topic of debate (see Bachelet, 2005). There is increasing concern for the system's credibility and legitimacy. For although the system is designed to yield benefits that meet OECD standards of protection, in Chile (as in other Latin American countries) the participation requirement for households to benefit from this protection are not being met.

III. The Challenges to Chile's Pension System: Coverage, Costs and Competition

In the past fifteen years, the share of the labor force that contributes to the pension system has rarely been higher than 60 percent. Most Chilean workers have interrupted and irregular contribution histories, and upon reaching retirement age will not have the years of contributions on which the favorable comparison to OECD countries are based. The regulators of the pension system estimate that, because of low and irregular contribution histories, up to 50 percent of affiliates will be ineligible for the minimum pension guaranteed by the government (Bernstein, Larrain and Pino, 2005). Thus, neither the contributory first pillar nor the second pillar is working for most affiliates.

Explanations for low participation range from broader economic factors and labor market conditions; the structure of incentives households are faced with given the parameters of the first and second pillar as well as those of other

Figure 2. Contributors as a Share of the Economically Active Population, by Income Quintile (Percentage of Contributors in 2003 and Change in Percentage between 1996 - 2003)

Source: Creation based on CASEN surveys 1996 and 2003

2. It is important to clarify that this only refers to old-age pensions and that there are other sources of income, especially in the case of women. Many women do not contribute in a sustained manner and therefore do not have their own pension; however, many are married and live on their husband's salary and later on their husband's pension. Therefore, part of these people have other income to finance their old age. For example, according to the CASEN survey, 24% of women above age 70 receive widow's pensions.


4. Including the availability of non-contributory benefits and the accrual rate implied the contribution requirements for the minimum pension guarantee (Bernstein, et al, 2004); and health insurance coverage (Valdes, 2002).
components of Chile's social protection system; to individual and household preferences. Estimates of the determinants of participation for this note show that the factors mentioned above vary in importance depending on the particular group of affiliates being examined. However, new findings point to forms of employment - particularly uncontracted and daily rate ('bonorarios') employment arrangements that lower the likelihood of contribution and of meeting the requirements for MPG coverage particularly among younger workers and women.

Furthermore, low rates of participation could be linked to actual and perceived high commissions and fees sustained by low levels of competition between the private pension fund managers (Valdes, 2002, Gill, Packard and Yermo, 2004). While there is ample evidence of low price sensitivity among those already participating in the system, high commissions and fees could be dissuading those working outside the system from taking up coverage. This argument links the three most important topics being debated in the discussion of reforms to Chile's pension system: coverage, cost and competition. This is to say that the main challenge in social security for the incoming government - the lack of coverage of a majority of Chilean workers - could also be related to the efficiency of the pension system (Figure 3).

Academic and political observers are increasingly critical of the functioning of the private pension industry, wary of its concentration and super-normal profits, and skeptical as to whether it is keeping the promise of privatization, namely greater efficiency and lower prices for households through market competition. The number of AFPs in the industry fell from 21 in 1994 to 6 in 2003. The fund managers have enjoyed persistently high profits with annual return on equity (ROE) averaging 30% in recent years, twice the ROE of commercial banks (IMF-World Bank, 2004). Although the industry's costs have declined and are even becoming comparable to the cost of similar financial services in OECD countries, there is considerable scope for further reductions (Valdes, 2005). The fundamental worry is that these problems of low system coverage, lack of competition and high costs are not only detrimental to the system and its effectiveness to households, but that they threaten the system's credibility. To the extent that the system loses credibility, the important gains from structural reforms in the 1980s could come under attack (Gill, Packard and Yermo, 2004).

The most recent changes to the pension system have been to increase investment options in the second pillar, measures to bring down the cost of annuities, and to increase savings in the voluntary third pillar. Chile has moved towards making the mandated AFP system more flexible and allowing workers greater choice over their investment portfolios. To ensure competitive pricing and to narrow dispersion in annuity payments, a new centralized virtual market for longevity insurance has been introduced. Further, the Government's efforts to increase the appeal of the mandated second pillar, have been complemented with tax incentives for individuals to participate in the voluntary, third pillar. Household response to these changes has been positive, showing a very modest increase in participation rates (Medrano, 2004).

However, there is much more that needs to be done to lower costs, ensure these savings are passed on to households, and

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5. Including preferences for current over future consumption among workers (Torche and Wagner, 1997, Barr and Packard, 2002); aversion to financial risk, found in Barr and Packard, (2002) among the self employed and among a large sample of poorer employees in empirical estimations for this note; preferences for alternative, substitute savings and insurance instruments (Packard, 2002); as well as credit constraints and liquidity preference (Beyer and Valdes, 2004).
Increase the appeal of the system as a means to smooth consumption, ensure adequate retirement income, and cover the risk of poverty in old age. In the remaining sections of this note, we discuss specific problems with the poverty-prevention and consumption-smoothing pillars of the pension system that lead to truncated coverage; vulnerability to poverty in old age; inequitable outcomes; low competition; and high costs of private pensions. Rather than specific solutions, we propose general principals to align the Government's consideration of reforms.

IV. Better Poverty Prevention

Recent changes in the pension system are very promising. However, an important part of the population is not affiliated to the system (Arenas de Mesa, 2000, Beyer y Valdés, 2004). Tax incentives for voluntary retirement savings, which have been found to be regressive in several countries, are likely to have only a modest impact on savings given how few Chileans pay income taxes. Thus, the improvements to household welfare from recent reforms need to be enhanced by consolidating and strengthening the set of instruments intended to prevent poverty in old age—the non-contributory, rationed PASIS (currently set roughly equal to the poverty line), and the contributory minimum pension guarantee (which is about twice the poverty line). Chile's pension system is failing to meet the poverty-prevention objective. In 2003 about 40 percent of elderly poor and 30 percent of elderly indigent in Chile's urban areas were not receiving pension income. In rural areas, 15 percent of the elderly poor and 9 percent of the elderly indigent failed to receive benefits.

Consolidation of the poverty-prevention component of Chile's pension system could be pursued with three related objectives in mind: (i) to lower and ultimately eliminate the risk of poverty in old age, by shifting to a "rights" approach; (ii) to increase the equity impact of public subsidies to old age income, by restructuring these subsidies for better incentives; and (iii) to embed old-age poverty-prevention coherently within Chile's broader poverty strategy and social protection system.

To lower and eventually eliminate the risk of poverty in old age, Government could move towards a "rights approach" by removing the ration on social assistance pensions. There are at least three basic alternatives for structuring the poverty-prevention component. These are: (a) a minimum pension guarantee, or benefit top-up to workers who have contributed a specified number of years to a retirement security regime; (b) a benefit targeted to the elderly poor; and (c) a universal flat pension, sometimes called a "demogrant"—paid to all men and women over some threshold age, regardless of their means. In addition to poverty insurance, each of these structures can pool the risk of other contingencies markets are unable to manage or manage poorly, such as life-time low earnings and inflation. Many countries have at least one of the three arrangements, and most countries in Latin America offer both the contributory minimum pension guarantee and a (often poorly) targeted benefit to the elderly indigent. Universal flat pensions or "demogrant" are rare, and can be costly.

Chile's MPG ensures that affiliates who have contributed for 20 years retire with a minimum annuity amount, which is initially financed out of the accumulated balance in their individual account, and then by the government directly when these savings are exhausted. In a country where all workers contribute to the earnings related pension system, the current structure of the MPG is fairly good: it encourages workers to save privately and guarantees a minimum level of retirement income at a low cost to tax payers. However, in Chile where many workers will not have a sufficiently long history of contributions, a top up conditioned on participation can not only exclude large segments of the population but also lead to perverse transfers.

The social assistance, "non-contributory" PASIS is paid to the elderly who pass Chile's means test. However, even for individuals who pass the means-test the PASIS is not a legal right and the number of new pensions awarded in any given year is strictly rationed in the budget setting process. The ration on PASIS pensions compromises its effectiveness as the pay-out in the "bad state" (i.e. old age poverty) is not guaranteed even to those who are eligible. Thus each of Chile's poverty prevention instruments truncates coverage, albeit in different ways. Lifting the ration on the PASIS would be a straightforward and relatively inexpensive way to lower and eventually eliminate the risk of poverty in old age. Fortunately, there is a wide social consensus in support

6. Since relatively well off individuals are those most likely to have the information and discretionary income to save for longer horizons, preferential tax treatment for voluntary retirement savings can be regressive.

7. Gill et al. (2004) demonstrate that these are fiscally unviable in most Latin American countries. The universal old age benefit in New Zealand cost 4% of GDP in 2001 and is forecast to grow to 9% of GDP in 2050.

8. Beyer and Valdés (2004) estimate that the annual cost of covering all the existing elderly indigents who are not receiving the PASIS would be approximately US$ 25 million. The authors show that this additional cost could be financed with the fiscal savings resulting from the elimination of badly targeted benefits currently being paid to non-poor elderly.
of this measure (see Bachelet, 2005)*.

To improve equity of subsidies to old age, the minimum pension guarantee could be restructured, not for poverty prevention, but to increase participation. The current structure of the MPG can lead not only to regressive transfers from all tax-payers to relatively better off affiliates, but also creates strong disincentives to participate in the pension system for lower-income earners. On the one hand, the contribution requirement can discourage participation. For individuals who rotate frequently through different sectors of the labor market, as well as in and out of employment, the 20 year contribution requirement can present a formidable obstacle, and discourage participation. On the other hand, it can create moral hazard: for workers with lower life-time earnings who are unlikely to accumulate a balance at retirement that could purchase an annuity for an amount higher than the MPG, contribution up to the eligibility threshold (240 months) may be a high-return investment option, but every additional contribution will be a pure tax.

To eliminate these distortions and disincentives, the MPG could be pro-rated to award every year or month of contribution. Alternatively, savings incentives could be similarly smoothed by replacing the MPG with matching contribution subsidies that could be deposited directly in affiliates' individual accounts, fully exempted from AFP fees.* Both options have merits and weaknesses that need to be carefully analyzed. The ultimate equity impact of either of these "graduated" contributory minimum guarantee structures will depend on their success in attracting participation to the consumption smoothing pillar, and would have to be closely monitored. If the ration on the social assistance PASIS is removed, then a public risk-pooling arrangement to cover the risk of poverty would be securely in place. In many ways this makes the MPG redundant. But although even a graduated contributory MPG or matching contribution scheme targeted a lower-income affiliates would cease to be necessary as a poverty-prevention device, either could prove highly beneficial as a means to increase incentives to participate in the consumption smoothing pillar.

Finally, while proposals for graduated, proportional guarantees and matching contributions are attractive for increasing interest in the pension system among lower-income workers, a target minimum accumulation amount rather than contributory period is a potentially much more important and salient criterion to individuals. A standard 20-year minimum contribution period will vary widely in value between individuals. The contribution of a very poor worker in terms of forgone consumption is very different in relative value than the contribution of a wealthy worker. Similarly, contributions earlier in life are worth more in forgone consumption than contributions closer to retirement, since younger individuals are giving up use of their money for a longer time. A minimum contribution requirement defined in months or years is a relatively poor proxy of savings effort. Once an unrationed, targeted PASIS is in place to cover poverty in old age, a minimum amount of accumulated individual savings is a much better indicator of effort for the State to encourage with subsidies.

The best poverty-prevention structure is likely to be part of a broader social protection strategy. Chile has taken enormous strides in consolidating the segments of its social protection system that are targeted at the poorest. The degree of orchestration among social programs achieved under the Chile Solidario initiative is unprecedented in the country, although there is still room for improvement. Chile Solidario includes a special protocol for the elderly indigent with guaranteed access to the PASIS. Chile should draw from this experience as it considers pension reforms, for the most effective old-age poverty-prevention structure is likely to be embedded coherently within a wider system that targets poverty comprehensively among all household members.

In this context, a difficult question that will have to be answered is whether any additional public expenditure that results from lifting the PASIS ration, from graduating the MPG, or from introducing matching contributions is justified given the needs of other vulnerable groups. Poverty is higher among other age groups, particularly among children. Current public subsidies for old age income security can be better distributed, as discussed earlier and in the last section of this note, but the measures above are likely to imply additional spending. Better poverty prevention among the old should be pursued as part of a comprehensive social protection strategy that sets priorities for additional public spending in light of sometimes competing social demands.

V. Better Consumption-Smoothing

Any market in which participation is mandatory requires

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9. Among workers who are able to evade the mandate to contribute, matching government contributions are in many ways equivalent to the earned-income tax credits that have been employed so successfully for poverty prevention in the US. Conceptually, these schemes are also equivalent to tax-incentives for third pillar voluntary savings, Chile's APV, and could minimize or even counter the regressive impact of these tax incentives. Matching contribution schemes exist in Mexico and Colombia, but have not yet been rigorously evaluated.
close surveillance on the part of the authorities. Governments have a fiduciary responsibility to ensure that the markets that households are forced into can deliver high quality goods and services at low cost. While the options discussed in the previous section could lower, and even eliminate, the risk of poverty in old age, the loss of earnings ability and unanticipated longevity also need to be better covered. Indeed, doing so by increasing efficiency, lowering costs and thus attracting more participation in the consumption-smoothing pillar is the best way to keep the poverty prevention pillar affordable in the long run.

Further specific changes to the structure of the consumption smoothing component of Chile's pension system should be considered with five closely related objectives in mind: (i) to lower administrative costs, mainly by unbundling the provision of AFP services; (ii) to ensure that these cost savings are passed onto workers in the form of lower commissions, through structural reforms that could lead to greater competition; (iii) to encourage better risk-adjusted performance, through a shift in the regulatory approach; (iv) to help affiliates better manage the transition from fund-accumulation to pay-out, by encouraging the creation of new instruments; and (v) to increase participation among a greater number of workers, by lowering transactions costs and improving incentives.

To further lower administrative costs, AFP services could be unbundled and restructured. The efficient provision of services in Chile's mandatory funded pension system requires policies that will improve the price elasticity of demand. The current structure of the AFP industry is, to a large extent, a result of regulation and consists of three main activities which have very different cost structures and are subject to different competitive pressures: operational services, asset management, and marketing to seek out new affiliates. Operational services such as contribution collection, record keeping, account management and benefit payment have greater economies of scale given the degree of technology involved in these services. In contrast, asset management becomes operationally efficient at a much smaller scale. Further, although these two activities benefit from economies of scale, there is relatively greater potential for product differentiation in asset management. However, under the current structure, operational services drive the tendency for concentration in the AFP industry, allowing the largest AFPs to capture rents from fund management. By separating these functions each segment of the industry can achieve different optimal scales of operation for overall gains in efficiency.10

The unbundling of services would add complexity to the system, possibly affecting the already low price elasticity of demand and even failure to choose between fund managers by affiliates. Thus, the unbundling should be complemented with "search assistance" offered by the regulator. This assistance could be provided by default to affiliates who fail to choose a service provider or, even more proactively, to affiliates with low account balances. Indeed search assistance could be organized to keep administrative costs down and meet the second objective of ensuring cost-savings are passed on to households.11 Affiliates' interests should guide how search assistance is structured.

To ensure savings are passed on to households, the market for consumption-smoothing services could be made more contestable. There are no explicit barriers to entry into the AFP industry, however, the market is far from contestable due to high start-up and sunk costs that can put-off potential new rivals. Much of these costs have to do with the operational services discussed above, rather than asset management services. However, if services were separated, banks, investment management firms and life insurance companies could be permitted to enter the asset management segment of the industry, bringing with them expertise and competitive pressures that could help further improve efficiency and bring down the commissions affiliates pay.

The current market segmentation by which foreign banks can control AFPs but local banks cannot does not have any obvious justification. Specific provisions would be required to avoid conflicts of interest in asset management, similar to those applied to the current AFPs and their foreign owners. In the short-term, it may be preferable to retain the AFP structure - a specialized financial intermediary dedicated to asset management - and allow local banks and other financial companies to set up AFP or buy existing AFPs. However, at some future point it may be preferable to turn the "AFP" into a licensed service that could be performed directly by any

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10. If the services that are bundled together in the current AFP system were to be separated, a range of options exist for how they can be organized. Operational services can be reorganized to minimize costs, and asset management can be opened up to true competition. In some countries, operational services are centralized either under public administration (as in Sweden) or private administration (as in Mexico). Valdes (2003) proposes that operational services could be offered by separate "operational service providers" (OSP) leaving "pure" AFPs to handle only asset management.

11. Affiliate who do not expressly choose to join a particular operational service provider or asset manager could be assigned to one according to specific considerations of cost and performance. In fact blocks of indecisive affiliates could be auctioned to service providers for a certain period (e.g. three to five years) through a competitive bidding process. Limits could be placed on the number of indecisive affiliates any single service provider could win from auction, to prevent the largest service providers from leveraging their low costs to further concentrate the industry.
private financial institution without having to set up a costly dedicated, specialized subsidiary.

To encourage greater innovation and better risk-adjusted performance, regulation could be shifted away from a compliance-base to a risk-management approach. The regulatory framework of AFPs and life insurance companies needs to become less rules-based and more oriented towards a risk-based supervision model that allows providers the flexibility to diversify risk in both local and international markets. A risk-based approach emphasizes efficient risk management capacity and internal controls inside the AFPs, market discipline, and greater responsibility of some key players such as the external auditors. New investment instruments are needed to allow the AFPs to better manage interest rate and currency risk. The development of such instruments, however, is inhibited by current regulations that reward investments in low-risk and highly liquid securities.

The limits set on investment in individual securities by risk and liquidity could be replaced. The rate of return regulations contribute to short-termism and herding in investment strategies, thus funds are managed without the objective of maximizing return for a given level of risk. These limits could be replaced with risk-based regulations that require AFPs to establish a financial risk-return objective for each of the pension funds that they manage. They could be held accountable to these objectives through revised minimum return requirements. The global quantitative limits on broad asset classes and individual issuers could be retained, but their level should be set solely by the supervisory authority rather than being written in the pension law.

These changes would accord well with the “prudent person rule” financial regulation preferred in the US and the UK. However, the scope for liberalizing the investment regime and the shift to a risk-management regulatory approach is constrained by the inherent fiduciary role of the private pension pillar. Unlike in countries where the benefits of private plans are complemented with public defined benefit plans, the AFP system is the core and dominant component of old-age income support in Chile. Thus workers are already exposed to a relatively greater degree of market risk. Furthermore, Chile would have to develop the legal, technical and regulatory capacity to fully adopt “prudent person” rules. For these reasons any liberalization should be gradual as suggested in IMF-World Bank (2004).

To help affiliates better manage risks and the transition from work to retirement, innovation of better investment and annuities instruments could be encouraged. The low degree of understanding of investment options and the general lack of public interest is a major concern in a funded pension system like Chile’s. A failure to invest contributions adequately exposes individuals to retirement income risks and, as a result, increases the fiscal cost of the MPG and social assistance pensions. Greater attention should be paid to the pay-out phase and the purchase of annuities.

The current structure of payout options seems to encourage individuals to retire early and to over-annuitise. Approximately 90% of early retirees choose to annuitise their fund balances. This is in striking contrast to international experience. Life insurance company agents and independent brokers may be exerting influence on the payout options chosen by members. Intermediaries may also be exerting pressure on individuals to retire early. Early retirement requirements have been tightened, and the new quotation system may change some of these outcomes.

While a high annuitisation rate may be economically inefficient, it is consistent with ensuring that affiliates receive adequate income in old age. Over-annuitisation also imposes a positive externality because it lowers the potential cost of the MPG, as those who purchase annuities are unlikely to claim the guarantee. However, over-annuitisation might impose a negative externality cost on poorer people by pushing up annuity rates. The widespread purchase of long-term guaranteed annuities is inefficient because this is a restrictive combination of investment and longevity protection that workers might be able to achieve in a cheaper and more flexible way.

In the accumulation and pay-out phase, product design, default mechanisms and pay-out options could be better framed to lower financial risks and more explicitly target a certain minimum replacement rate for the average income worker. Achieving such a target with near absolute certainty requires the purchase of a product that would function like a deferred annuity, offering an indexed benefit at retirement in exchange for the monthly contributions paid into the system. Unfortunately, such a product can be expensive to manage and providers may be unwilling to underwrite longevity for very long periods. At the very least, however, workers should have the option of buying deferred annuities with part of their accumulated balance as they approach retirement. This policy could also reduce adverse selection problems in annuity markets. Staggered fixed annuities - bought through a sequential purchase (via multiple premia), rather than through a single premium payment - are another product that would allow retiring workers to address annuity rate risk more effectively than the current system where there is a
one-off purchase decision since with staggered products each purchase is made at the pricing conditions of the moment, helping to diversify interest rate risk. Alternatively, workers could elect to defer the annuitisation decision for a few years after retirement if they could invest in a portfolio which protected them against annuity price risk. The introduction of impaired life annuities - annuities which pay a higher rate for workers who are in poor health - might also be considered as this would help to make annuities better value for poorer workers.

To increase affiliates' incentives to participate, opt-in default policies could be considered. The pension system parameters that effect the incentives to participate directly are the MPG and the PASIS and how these interact on savings decisions of lower income workers. Measures to improve incentives were discussed earlier, however, there are additional changes that could attract participation. Currently, the self employed and employers are free to choose whether to participate. While there are calls for the mandate to be extended to cover self employment, based on the negative experience in other countries (Argentina and Brazil) such a move could actually result in increasing evasion. The alternative course is to improve incentives to participate by making coverage more attractive and easier to attain to self employed. A specific measure that could be considered would be an “opt-in” default on income tax returns that would lower the transactions costs of participating for employers and the self employed. This possibility of joint payment could be defined as a default option for those taxpayers. This proposal also links well with research of retirement savings behavior in OECD countries showing that when participation in voluntary company pension plans (like the 401k in the US) is made the default option, worker enrolment doubles (Benartzi and Thaler, 2004). These behavioral studies form the basis of proposed opt-in default measures in the UK where earnings-replacement programs are voluntary, and for the “KiwiSaver” program in New Zealand, where despite concerns for low household savings, voters rejected the introduction of mandatory accounts in 1999.

Furthermore, by introducing the possibility of a single annual contribution, rather than twelve monthly contributions, the transactions costs of participation for the self employed are reduced almost to zero. Given that the group of permanently self employed is relatively small, and most self employed find themselves in this status temporarily (although not among lower income groups), for many the opt-in default could prevent self employment from automatically cutting contribution history.

VI. Looking Even Further Ahead

The objectives and general principles for better poverty prevention and consumption smoothing presented in the two previous sections translate into a very ambitious medium-term reform agenda. But pension policy should be formulated with close consideration of longer-term problems and prospects. In this final section, we pose a series of challenging questions that we hope could contribute to looking even farther ahead.

Has the time come to eliminate the gender penalty? As part of the 1981 pension reform, the minimum retirement ages of men and women were raised from 60 to 65 and from 55 to 60, respectively. The current earlier retirement age for women was a political legacy of the old system. In defined-benefit systems that pool coverage of the loss of earnings ability, an earlier retirement age for women created transfers from men to women, designed to compensate for lower-earnings in the labor market and recognize years dedicated to homecare and child-rearing. However, in systems where the consumption smoothing objective is pursued primarily through individual savings, this transfer from men to women does not take place. Pensions are determined by the savings and the return earned from asset investment. With a lower retirement age, women contribute fewer total years, and have a longer period of retirement to finance. Thus, in a defined contribution plan, the earlier retirement age compounds the negative effect of women’s longevity to lower the monthly annuity payments they receive. Berstein and Tockman (2005) estimate that earlier retirement alone imposes a loss in women’s pensions of almost 30%.

Just what is “Old Age” anyway? Chile’s shift to defined contributions in individual savings accounts did much to protect public finances from the cost of population ageing. However, as development and technological advances further increase life expectancy, the Bismarckian definition of “old age” that Latin American countries, including Chile, inherited from Europe over a century ago, will continue to pose fiscal risks. Chile can expect further population ageing, which will eventually raise demographic risks faced by the pension system again - particularly the sustainability of public risk-pooling benefits for poverty prevention. Many specialists suggest the introduction of a “mortality-adjusted retirement age” (Barr 2001 and 2004, and Barr and Diamond 2006). The advantage of the proposals for mortality-adjustment is that it would continuously and automatically re-caliber pension plans to changes in longevity, and if done
correctly, can avoid the need for periodic, politically contentious debates.

How should Government subsidies to the elderly be used? At the end of 2005, Chile will have spent 1.3% of GDP covering the deficits of special, separate pension plans for the police and military. In the same year, Chile will spend half this amount (0.6%) preventing poverty among the elderly. The special pension regimes were left untouched by the 1981 reform. Many of the benefit parameters of these plans are anachronistic and costly. As Chile weighs options for changes to improve poverty prevention and consumption smoothing for the population as a whole, the cost of current public subsidies to maintain these plans should also be an item for discussion.

What is the appropriate level of mandatory consumption smoothing? Once a financially sustainable structure that prevents poverty in old age is in place, how much private consumption-smoothing should the State require of households? Is mandated saving too low or too high? To set the parameters of the system the architects of the 1981 reform required at least an implicit benefit objective that could be targeted. Many proponents of individual accounts suggest replacement rates from 70 percent to 90 percent, which has been shown to be overly optimistic. If a more realistic objective were made explicit, how much would the average worker really have to contribute, and on what portion of his monthly salary to achieve this benefit objective? Is it less than or greater than the current 10 percent of a ceiling of 3.8 times average earnings? And if it is less, would lowering the contribution rate or the ceiling on earnings subject to the mandate also lower the “costs” of participation for households and further encourage greater participation? The share of earnings subject to mandatory pension plans in Chile is much higher than the OECD average. Lowering the contribution ceiling to 1 or 2 times average earnings would be more in line with pension systems in the OECD and might prove a more salient level of minimum consumption smoothing with Chilean households (Gill, et al., 2004).
Arenas de Mesa, A. y Gana, P. (2003), “Proteccion Social, Pensiones y Genero en Chile” en Protección Social, Pensiones y Genero, Argentina Brasil y Chile, Bertranou, F y Arenas de Mesa, A. Eds. OIT.
Barr and Diamond (2006),“The Economics of Pensions”/Oxford Review of Economic Policy, 22/1, (forthcoming) [not for quotation and subject to change, until published in February 2006]
—. (2000), “Revealed and Concealed Preferences and Self Insurance: Can we Learn from the Self Employed in Chile” Oxford University, Department of Economics Discussion Paper Series No. 53
(2001), The Welfare State as Piggy Bank , Oxford University Press
Summary

In 2004 and 2005, Chile introduced a significant structural reform in the country's health system. This was a third generation of reforms, the most extensive and complex one since the creation of the National Health Service in 1952, its subsequent reform, and the creation of the National Health Fund (FONASA) and the Private Health Insurance Institutions (ISAPRES) in 1982. The reforms have the potential to improve equity, to strengthen citizen empowerment in the health system, as well as to provide better financial protection against catastrophic health shocks. In addition, the reforms substantially modify the framework of incentives geared towards improving efficiency in the health system as a whole. The new Government will face very important challenges in the implementation of the reform to ensure it fully realizes its potential - this Note outlines such challenges ahead.
Introduction

Over the last 15 years, Chile has made notable gains in health indicators, including a 50% reduction of child mortality, increasing life expectancy to 78 years, and extending health insurance coverage to over 90% of the population.

However, notwithstanding such important achievements, effective access to healthcare services, insurance, and financial protection was not fully satisfactory. Chilean households reported that the diseases that require costly treatments, as well as expenditures induced by such treatments, were the second most important cause of “shock” to the household, very close to unemployment, which was reported as the first cause (PRIESO 2000). Additionally, recent data (Baeza and Packard, 2006) show that health-related expenses have significantly contributed to the impoverishment of Chilean households: More than 1% of the country’s overall population and more than 5% of the total population in the third quintile became poor in 2000 as a result of health-related out-of-pocket expenses (Figure 2). Most of these households are beneficiaries of the Private Health Insurance Institutions (ISAPREs - Private Health Insurance).

In 2004 and 2005, Chile introduced a significant structural reform of the country’s health system. This is a third generation of reforms, the most extensive and complex one since the creation of the National Health Service in 1952, its subsequent reform, and the creation of the National Health Fund (FONASA) and the Private Health Insurance Institutions (ISAPREs) in 1982. The reforms have the potential to improve equity, strengthen citizen empowerment in the health system, as well as to provide better financial protection against catastrophic health shocks. In addition, the reforms substantially modify the framework of incentives geared towards improving efficiency in the health system as a whole. The new Government of President Bachelet will face challenges in ensuring that these reforms realize their full potential.

We consider that the following challenges could have critical impacts on the implementation of the reform: (i) the risks of non-compliance with the explicit guarantees of the AUGE (Acceso Universal para prestaciones integrales y Garantías Explicitas asociadas a la atención de prioridades - Universal Access for Comprehensive Benefits and Explicit Guarantees Associated with Selected Priorities) system; (ii) the framework of incentives of AUGE implementation in the public sector and the implicit fiscal risks; (iii) the Inter-ISAPREs Compensation Fund and its low level of effectiveness to resolve risk and income segmentation; (iv) the challenges in the regulatory schemes to ensure compliance with the Guarantees of the AUGE system and the potential failures in the governance design of this system; and, (v) the need to establish mechanisms to monitor and evaluate the impacts of the reform.

The context in which the reform takes place is characterized by two factors. First, the reforms are very recent and, to a certain degree (for example, the rules and regulatory framework), are still evolving. Therefore, it is not possible to evaluate their impact as of yet. Second, the reforms are highly innovative and advanced so that international experience can be drawn on only to a limited extent in guiding reform implementation. The analyses and arguments presented in this Note are, hence, of a more indicative nature.

This Note is structured in three sections, including the introduction. The second section analyzes the five potential short and medium term challenges. The last section presents a short summary of the challenges and possible policy.
actions to address such challenges in the short and medium term. In addition, an Annex is included with general information regarding the framework of the reform and its objectives, including a brief analysis of the specific aspects of the four main laws related to the reform.

II. Reform Implementation Challenges

This section analyzes the five short and medium term challenges described above. Confronting such challenges will be essential to meet the objectives of the reform.

1. Risks of non-compliance with AUGE guarantees. The new framework of incentives generated by the implementation of the explicit guarantees law (Ley AUGE) could lead to significant gains in empowerment of the population in the health system, improve access to services, and provide better financial protection. At the same time, the implementation of the health guarantees scheme could also lead to significant efficiency improvements in the management of the public health sector and improved accountability of the health system to society. However, the implementation of the system of guarantees also entails important fiscal and governance risks, which will require mitigation during implementation.

The introduction of the AUGE plan imposes requirements on all stakeholders in the health system but particularly on the relation between FONASA and public health care providers. The level of compliance with these requirements by the public health sector will define the success or failure of the reform and its fiscal impact.

The AUGE reform specifies conditions regarding maximum waiting time for patients, the quality of services, and maximum financial contributions of households. This marks a radical departure from the sector’s historical tradition, particularly in the public sub-sector, which used to transfer resources to the factors of production (salaries, infrastructure and equipment and inputs) without a link to the actual production of services. The implementation of AUGE now requires that FONASA (as the agency legally responsible for compliance) pay public health care providers for actually provided services to FONASA beneficiaries - with quality of services assessed through compliance with the AUGE guarantees. This requires payments to providers to be based on actual billing of services, including the identification of beneficiaries (the so-called “rufification”\footnote{Translator’s Note: term derived from the Spanish acronym “RUT”, which stands for Tax Registration Number.}) and the recording of quality standards (e.g., waiting time). Under these new conditions, efficiency gains will be essential to ensure that the system adjusts the delivery of non-AUGE services on a productivity basis.

Although the AUGE law includes arrangements to reduce the fiscal risk (for example, indexing the size of the AUGE plan to the actual growth of salaries in the country and not to increases in health expenses), the introduction of explicit, legally-enforceable guarantees - in combination with greater autonomy of public hospitals to manage their budgets - entails financial risks. In addition, the introduction of the AUGE plan has potential effects on the behavior of public providers, particularly in the production of non-AUGE services. These risks will need to be mitigated in order to reduce the fiscal and service provision risks for FONASA’s beneficiary population.

We estimate that there is a significant risk of non-compliance of the AUGE guarantees in the public sub-sector, at least
during 2005, 2006 and 2007. This risk stems from the, to date, under-developed monitoring and control arrangements of the AUGE system as well as from the currently low capacity to estimate unmet demand gaps, costs and prices in the public sub-sector.

A scenario of non-compliance of the guarantees would essentially imply the failure of the core element of the reform. To avoid such scenario, it would be crucial for FONASA - as the agency legally responsible for enforcing the guarantees - and the Health Superintendence to command adequate information to monitor compliance with the AUGE guarantees. Monitoring these guarantees is difficult and will require highly complex information and guarantee management systems. At the writing of this Note (beginning 2006), we judge the existing information system not yet capable of fulfilling such complex monitoring function.

Table 1 summarizes information about individuals who entered the AUGE system between July and November 2005 under any of the 26 pathologies covered. Considering that the AUGE plan only became legally mandatory on July 1, 2005, the volumes of individuals entered in the system are very significant.

Although the officially reported data regarding access to health services are impressive, it appears as if FONASA or the Superintendence do not have sufficiently detailed and reliable information related to the compliance with the guarantees (access, timeliness, financial protection and quality of the services). Importantly, the system to monitor the admission of patients to AUGE and compliance with the guarantees is fully dependent on the information fed into the system by the public or private providers themselves. The issue is particularly complex in the public sub-sector since, although proof of admission is given to the AUGE patient when he/she enters the system, it is the public providers themselves who 'start the clock' that determine the maximum waiting time for patients. Given that providers have an inherent interest in meeting the guarantees specified (as otherwise FONASA would have to purchase the service from another provider), independent monitoring would be necessary. Currently, the waiting time guarantee might not be fulfilled as currently assessed - but FONASA does not have the information that it would need to detect such non-compliance and take the necessary actions to resolve them.

One reporting mechanism that could fulfill such independent monitoring could build on social control by FONASA and ISAPREs beneficiaries. This would require that beneficiaries entering the AUGE system would be fully informed of their rights and file claims if non-compliance occurs. Currently, patients rarely make claims for non-compliance in the public sub-sector. However, information collected from recent surveys (by the Health Superintendence) suggests that only 40% of the AUGE beneficiaries in the public system are aware of the fact that they have entered the system. An even smaller percentage knows about the specific enforceable guarantees and their option to file claims if such guarantees are not fulfilled. As people's awareness increases, the sector will potentially face more claims for non-compliance, including through the Courts of Justice.

<table>
<thead>
<tr>
<th>Table 1: Summary of Total Beneficiaries of FONASA under the Guarantees Scheme between July 1, 2005 and November 20, 2005.</th>
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</thead>
<tbody>
<tr>
<td><strong>All health issues of the GES System</strong></td>
</tr>
<tr>
<td>Individuals awaiting first consultation</td>
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<tr>
<td>Individuals with active cases</td>
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<tr>
<td>At suspicion stage</td>
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<td>At diagnosis stage</td>
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<td>At confirmed case stage</td>
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<tr>
<td>At treatment stage</td>
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<tr>
<td>At follow-up stage</td>
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<tr>
<td>Individuals with closed cases</td>
</tr>
<tr>
<td>Closed due to completion of treatment and other causes</td>
</tr>
<tr>
<td>Discarded</td>
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<tr>
<td>Total individuals</td>
</tr>
</tbody>
</table>

Source: SIGGES, FONASA
While requiring the same degree of complexity, monitoring compliance in the ISAPRE system (by the Health Superintendence) will likely be easier and faster. Individual (rutified) service information systems are already in place. Further, the system to enter the AUGE guarantees in the ISAPRE is highly regulated and requires immediate notification of the patient that he/she is eligible for AUGE under the preferred health care provider system. Additionally and probably as a result of the above, 98% of the AUGE patients in ISAPREs are aware that they have entered the system and know their rights and obligations. Further, the health Superintendence has a wider array (and proven application) of regulation and sanction instruments than FONASA. While the 'culture of regulation' is well probed within the private sub-sector, it is rather new for the public sub-sector - and governance asymmetries (analyzed below) could lead such disparities to continue in the future.

The needs to monitor compliance with guarantees, as well as payment transfers to providers, highlight the importance of implementing an effective information system for AUGE both in FONOSA and the Superintendence. Said system should be based on the "rutification" of the billing of the AUGE services within the public sub-sector. In order to be effective, the system should be tamper-proof, build on an automatic trigger to monitor guarantees for eligible beneficiaries, an automatic notification of rights for each patient (including procedures to file claims). The system should also have the ability to follow-up expenses linked to the health consultation for every household, whether through co-payment or other expenses. Start-up of such system is important given that the AUGE law is effective since July 1, 2005, and that, theoretically, since then guarantees have been legally enforceable. The lack of reliable information related to compliance with the guarantee system also seems to hinder compliance with the legal mandate of the Superintendence.

(ii) The framework of incentives of AUGE implementation in the public sector: the implementation challenge. From our perspective, public providers have at least three options to respond to the tension introduced by the AUGE plan: (1) in the expected compliance scenario, AUGE services are produced with resources channeled through the system without altering the production of non-AUGE services; (2) in the non-AUGE adjustment scenario, AUGE services are produced under the required conditions but this is only possible by diverting resources from the production of non-AUGE services; (3) in the private referral scenario, compliance with the guarantees is achieved by FONASA through contracting of private providers. All these three scenarios entail financial and potentially fiscal risks that would need to be mitigated. Monitoring providers' behavior regarding these three possible strategies of response to the implementation of the AUGE would be important. The system (Health Ministry, Health Superintendence and FONASA) currently lacks a monitoring or information system to evaluate the behavior of the public providers, both regarding compliance with the AUGE guarantee and the behavior of non-AUGE services. The anecdotic information collected by the Bank team in the field suggests that public providers are responding with all three alternatives simultaneously, depending on the type of AUGE pathology and the type of provider.

Each one of the possible responses by public providers to the introduction of the AUGE creates a scenario with specific challenges:

(1) Expected compliance scenario. The potential fiscal risk attached to the expected compliance scenario derives from the size of the AUGE plan at each stage of its expansion. In turn, said size and its accurate definition depend on the ability of the public sub-sector to estimate the expected demand of services for the pathologies/treatments therein included (including the incidence and the accumulated unmet demand gap) and on the accuracy to estimate the appropriate prices to be paid for the services (such as not to generate excessive profits or losses for the providers). The approved law contains an arrangement indexing the future size of the AUGE plan to the actual growth of salaries in Chile. This is potentially a very good mechanism to mitigate the immediate fiscal risk in this scenario, since it makes the size of the plan grow at a slower rate than the historical (and probable future) growth of health-related public expenditures, reducing its relative size through time. However, the public sector (FONASA) still lacks a good costing system to support the definition of adequate prices. Such costing system is important when the actual growth space of the AUGE plan is estimated (in terms of quantity production), given increases in salaries. Overestimating such prices would lead to an underestimation of the AUGE growth space. An underestimation, on the other hand, could lead to an excessive growth of the AUGE plan (in terms of production quantities) and to a potential deficit for the public providers which could lead to the scenarios discussed below or to a situation in which the public treasury would have to step in. Such lack of a reliable cost information in FONASA, as well as the currently missing, individualized (rutified) payment system of public providers' services, increase the fiscal risk. Consequently, it would be an important priority for the public sub-sector to implement a reliable patient identification system for billing FONASA and a costing system.
Non-AUGE adjustment scenario. Public providers may respond to the tension that compliance with the requirements of the AUGE plan generates (particularly if there is a perception that the AUGE prices are not sufficient to meet their fixed-cost structure for the AUGE services). Such response could consist of diverting resources from non-AUGE activities to comply with AUGE requirements. Most of the interviewed managers of public health providers think that this phenomenon is increasingly taking place since the formal start-up of AUGE in July 2005. The main risk of this scenario is not fiscal, at least not at the beginning, but rather related to the provision of health services to the population. Providers could resolve this problem spontaneously by increasing their productivity so that the resources paid through the AUGE system are sufficient to deliver health services - then, a diversion of resources from non-AUGE services would not be necessary.

In the absence of a spontaneous increase in productivity and in the presence of a diversion of non-AUGE resources, it will be necessary for FONASA to respond rapidly by converting a majority of non-AUGE services into valued services (Prestaciones valoradas). Such valued services would have conditions similar to the AUGE services attached but without a maximum waiting time or a maximum financial contribution by the households. Additionally, the Health Authority Law provides a broader margin for adjustment scenario. Public providers may

Private referral scenario. Under this scenario, the public providers cannot meet the AUGE demand, either due to lack of qualified supply or the decision of not meeting such demand in the specified time. In this scenario, the biggest potential challenge is fiscal. Given FONASA’s legal responsibility, if compliance with the guarantee is threatened due to lack of supply, FONASA would have to purchase the service from another public or private institution or, failing that, the Superintendence is under the legal obligation to activate the third-party provider mechanism. This could lead to deficits for public providers (as they would not be paid but maintain their cost structure constant) which would need to be covered by the public treasury.

Besides the discussion in the scenario of non-compliance with the guarantees analyzed above (in which the system realizes that it is failing to comply), non compliance with the guarantee up to the level of activating a third provider (particularly private) will require resolving at least two potential problems: the incentives for highly specialized doctors and the actual ability of the Superintendence to implement a third provider system for FONASA’s beneficiaries.

The first potential problem is the incentive that highly specialized (and scarce) doctors may have for not fulfilling the guarantees in public hospitals which would trigger the activation of third-party providers - in which potentially the very same doctor would resolve the pathology (or even in the same hospital but through a parallel private contract). This would not necessarily be a problem if (i) the time periods and guarantees are met for the patient; and (ii) the doctor is not receiving a fixed income (salary) in the hospital and, in addition, a variable income if she/he is the third provider. This potential problem stresses once again the need to closely monitor medical productivity in the system and the need for management regulation in the public health sector. The current regulation appears to be inflexible as compared to the need for continuous and flexible adjustment of the purchase indicators of AUGE and non-AUGE services. This is particularly important with regard to the introduction of productivity incentives for individual staff and in the hiring and compensation schemes. The challenges posed by scenario (2), and by the reform as a whole, call for a reassessment of the administrative and human resources management regulation in the public health sector. While the establishment of hospital self-management introduced by the Health Authority Law provides a broader margin for action, it is not clear if such change is sufficient to resolve this challenge.
the administration to review the productivity incentives in the compensation arrangements for public healthcare workers.

The second potential problem is related to the Health Superintendence’s ability to ensure the availability of a third-party provider for ISAPREs’ beneficiaries and for FONASA’s beneficiaries if guarantees are not met. Although the approved legal framework provides for the Superintendence to instruct the transfer of beneficiaries to a third-party provider if non-compliance occurs, it is not clear whether the Superintendence also has the power to compel the ISAPREs and/or FONASA to incur the expense that ensures payment to the third-party provider. If this power is indeed debatable, the new authorities would need to find administrative mechanisms to ensure payment to third-party providers if so determined by the Superintendence. Otherwise there would be little interest on the part of potential third-party providers to enter the system. This, in turn, could undermine the capacity of the Superintendence to enforce compliance with the guarantees.

(iii) The low effectiveness of the Inter-ISAPREs Compensation Fund to resolve the problem of risk and income segmentation in the health system. It is likely that the existing Inter-ISAPREs Compensation Fund would not resolve the risk of income segmentation of the Chilean health insurance system. Additionally, although the reforms of the regulatory framework substantially reduce the incentives to risk selection and risk-dumping from the ISAPREs to FONASA, these changes are insufficient to resolve the segmentation problem. Although well designed, the regulatory changes will need to be accompanied by appropriate financial incentives. Consequently, in order to resolve the segmentation problem comprehensively, the new government might need to revisit the original idea of creating a joint redistribution fund, which includes both FONASA and the ISAPREs.

Apart from the incentives for market segmentation (characteristic for private insurance in a competitive environment), the framework of incentives in the Chilean insurance system causes high-risk and low-income households to be concentrated in FONASA. This situation could or could not be problem, depending on the policy for fiscal subsidy allocation. That is, if the policy defines that public subsidies are not portable and that to be granted a subsidy a family has to be affiliated with FONASA, then invariably FONASA will concentrate the greatest share of the risks and the lowest incomes. If the policy objective were, however, to achieve a better risk distribution, it would be necessary to introduce changes in the incentives and reduce the opportunities for migration between the ISAPREs and FONASA. Alternatively, the Inter-ISAPREs compensation fund could be expanded to include FONASA. In addition, the policy establishing the portable nature of public subsidies could be reviewed in the context of the creation of a FONASA-ISAPREs Fund.

Since the AUGE pilot was launched in 2004, the ISAPREs have lost a significant share of its members to FONASA. Two possible causes for such migration of beneficiaries exist: quality and/or price differentials. It is possible, though not very likely, for a quality differential to appear in such a short period of time. It is more likely that the most important determining factor is the perceived price. There are at least three potential effects that explain the fact that the perceived price of FONASA is better than that of the ISAPREs. First, the loading effect of the ISAPREs might significantly affect their prices, regardless of the technical cost of service provision. Second, the price differential could be explained by the fact that FONASA has access to high-complexity and low price providers (public hospitals) to which ISAPREs do not have access. Third, the price differential could also stem from the existence of fiscal subsidies to FONASA “D” beneficiaries. The latter two alternatives open complex debates, which could alter the unstable balance that the sector has achieved regarding the population of beneficiaries by sub-sector. It would be useful to update the studies on the funding sources and the self-funding of FONASA’s “B”, “C”, and “D” beneficiaries. Such information is important both for an eventual reassessment of an extension of the Compensation Fund to include FONASA as well as for an evaluation of the reasons why beneficiaries migrate from ISAPREs to FONASA.

(iv) The challenges of the regulatory arrangements to ensure compliance with the Guarantees of the AUGE system and the potential flaws in the system’s governance. Symmetry in the regulation (and control) of insurers and public and private providers would significantly contribute to the effectiveness of the incentives for compliance with the AUGE guarantees in the system. Further, such symmetry would further empower the beneficiary population to protect their rights. The current governance arrangements for the Health Superintendence and FONASA may become an obstacle for such regulatory symmetry.

3. ‘Symmetry’ is used here in the sense that the same consumer protection regulatory standards are applied to both public and private insurers and providers.
The approved legal framework provides the Health Superintendence with the mandate to regulate, under an equivalent regulatory framework, the ISAPREs and FONASA as well as the public and private providers. In order to meet this objective, at least two conditions are necessary. The first one is that the regulatory framework has to be the same (or at least equivalent) for all actors involved. The second one is that the Health Superintendence has the determination and authority to exercise its regulatory duty: to control compliance and to sanction non-compliance in accordance with the law.

There are limitations to the powers of the Superintendence to sanction FONASA, which could limit the real ability of the Superintendence to enforce the AUGE guarantees. An example of the above is that the legislation seems to limit the possible sanctions to FONASA only to the institution of administrative investigation proceedings (sumarios administrativos) against the entity’s Director in case of non-compliance. Applying this type of sanction may be excessive in cases of minor non-compliance but it may be insufficient for cases of major non-compliance. In contrast, the Superintendence has a relatively broad range of sanctions that it may impose on the ISAPREs in cases of non-compliance. Such sanctions vary from warnings and fines to the cancellation of the license to provide health services.

Additionally, the hierarchical and intragovernmental relations that characterize the relationship between FONASA and the Superintendence could hinder applying the regulatory legal obligation of the Superintendence and prevent regulatory equity within the system. It is not apparent whether the Superintendence would use the sanction mechanism established in the law as the Superintendent is part of the same political/administrative governance framework as FONASA’s Director. In addition, the mechanism for the appointment of the senior authorities of both entities can lead to a lower political status for the management of the Superintendence. The Health Superintendent is an official appointed by the President of the Republic based on a senior management public competition, whereas FONASA’s Director is a public official that enjoys the President’s confidence, appointed without a competition. The new administration might want to closely monitor this relation in order to ensure equity and effectiveness in the application of the regulatory framework and in the protection of the citizens.

(v) The challenge of establishing mechanisms to monitor and evaluate the impacts of the reform. It follows from the challenges outlined above that the functioning of a reliable and effective monitoring system is a key ingredient to ensure (i) a successful implementation of the AUGE reform; (ii) compliance with the guarantees; and (iii) successful mitigation of political and fiscal risks that the reform may entail. Such a monitoring and evaluation system is also important to evaluate if the AUGE reform has been successful with regard to its final impact on outcomes - or whether the reform requires adjustments. Currently, there is a need to define such a monitoring and impact evaluation strategy and design the information and survey systems that may render such monitoring and evaluation feasible in the near term. Defining said strategy and a monitoring and impact evaluation system would be an important priority for the new authorities.

As discussed in the previous sections, the reforms introduced in 2004 and 2005 have the potential to achieve the government’s four formulated priority objectives. The reform is rolled out gradually (to hedge against the institutional, financial and fiscal risks discussed above) and AUGE expenditure growth limited to the actual growth of salaries. In practice, this will likely imply a reduction of its relative importance in the next years (as a share of all expenditures for health services) since overall health expenditures (fiscal and private) have grown (and will probably continue to grow) beyond the actual growth of salaries. Hence, it might be necessary to expand the AUGE plan beyond the growth of salaries. In this scenario, AUGE’s impact evaluation could not only assume a technical role to inform policy but could also provide important data for the political debate when such expansion is discussed.

There are four additional core elements that would help assess whether the reform is successful - beyond its importance for health service use for the covered pathologies: (i) population empowerment, expressed, for example, as compliance with the waiting time and co-payment guarantees in both sub-sectors, as well as effectiveness of the claim resolution process in the case of non-compliance; (ii) financial protection for the households guaranteed by AUGE (to prevent such households from falling into poverty as a result of health shocks); (iii) system equity improvements; and (iv) system efficiency improvements, including the production of health services and the reduction of income and risk segmentation in the insurance system. These and other elements could only be verified to the extent that the sector and the government implement an impact evaluation system of the AUGE reform. It is our understanding that a detailed design of the evaluation strategies and systems is still pending. Said strategy could be based on a combination of information from the AUGE Information system in FONASA, the ISAPREs and the Superintendence, as well as on panel-
would be important to design and implement the indicator baseline study before the effects of the AUGE implementation render such data collection a difficult task.

Given the incentives and the specific mission of the Ministry of Health, with special focus on AUGE's health impact and health service provision, it could be useful for MIDEPLAN (Ministry of Planning and Cooperation) to support MINSAL (the Ministry of Health) in the monitoring and evaluation of the financial protection impact. MIDEPLAN has expertise in evaluating the impact of public policies on poverty, something that could prove very useful to MINSAL.

III. Summary of challenges and possible actions to address them

The discussion of the challenges in the previous section shows that there are common underlying factors for the different risks and problems that the new administration might need to address in order to ensure the success of the AUGE reform. Table 2 contains a summary of such risks and problems, as well as the possible strategies to address them.

Annex General Framework of the Health System Reform and its Objectives

(a) Reform Objectives. The policy documents that support the reform point to four specific objectives derived from the diagnosis of the health sector's priority problems identified since the end of the 1980s and mid 1990s: (i) improving households' security by protecting their health; improving their access to Chile's priority health services; protecting them from the impoverishing effects that may be caused by diseases; (ii) empowering households and improving consumers' protection in relation to the health system through enforceable explicit guarantees; designing instruments that allow the population to demand compliance of such guarantees; designing a regulatory framework and system that ensures compliance by insurers and private and public providers; (iii) improving the system's equity; and (iv) improving the system's efficiency.

(b) The Reforms. The recently approved reforms are contained in a package of four laws which include: (i) Explicit Guarantees Law which introduces a guaranteed insurance benefit plan (Universal Access with Explicit Guarantees, in Spanish Acceso Universal con Garantias Explicitas - AUGE) for the whole population, regardless of their health insurance status. This package is mandatory and represents the minimum level of insurance, both for the National Health Fund (FONASA) and the Private Health Insurance Institutions (ISAPRES); (ii) Health Authority Law, which introduces reforms that strengthen and make the health-related regulatory capacity of the State more efficient, as well as reforms which grant autonomy to all the public hospitals under the system's two highest levels of complexity; (iii) "short" and "long" laws of the ISAPRES (Ley Corta and Ley Larga), which introduce improvements to the regulatory framework of private health insurance, including the creation of a risk compensation fund among the ISAPRES.

There are two additional elements that are useful to place the 2004-2005 reforms into context: First, the decision to advance with the global reform of the entire system but, simultaneously, the decision to implement such reform in a gradual manner. Thus, the approved laws include the details of the final design of the system in each of the areas, but also define time-bound milestones to be completed over periods of 1 to 5 years. Second, the reform has to be seen in connection with the long-standing process of administrative and operational changes which were implemented, either de facto or de jure, since 1990. This process included, inter alia, the implementation of several amendments to the regulatory framework of the ISAPRES and the FONASA law in 1999 (which have been consolidated by the recently approved laws). It is necessary to take these two elements into account when considering the relatively short time-period (1 to 5 years) with which Chile is planning to complete the recently approved reforms, which are highly complex from both a technical and policy point of view.

The potential contributions of the laws are the following:

(I) Explicit Guarantees Law. This law provides the core element of the reform; i.e., offering citizens a guaranteed universal protection (in a period of 3 years) based on at least 56 priority health conditions, the timely solution or treatment which is guaranteed and regulated, including financial contribution caps per household, maximum waiting times, clinical guides and quality guarantee standards. The guaranteed universal protection will be implemented gradually over time by increasing the conditions to be guaranteed under the AUGE plan. An ad-hoc procedure has been created to review, every 3 years, the number and type of health conditions to be included in the AUGE plan as from
<table>
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<tr>
<th>Risk or challenge</th>
<th>Origin</th>
<th>Potential strategy</th>
<th>Short-term actions</th>
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<tbody>
<tr>
<td>Non-compliance with guarantees</td>
<td>Inability or perverse incentives to insurers or providers in the implementation of the system.</td>
<td>Implementation of a tamper-proof, timely and efficient information system to monitor compliance with the guarantees related to access, timeliness, quality and financial protection. Strengthening social monitoring and control of guarantees.</td>
<td>Standardization of the system to monitor compliance with the guarantees both for FONASA and ISAPREs users. The Superintendence should have easy and prompt access (online) to the information. The “clock” control for the timeliness-related guarantee should be automatic or external to the providers/insurers. Mass information and education campaign targeting the population to raise awareness on rights, claim mechanisms and need to make use of such mechanisms.</td>
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| Impossibility of evaluating the impact of the reform for decision-making regarding reform expansion and modifications. | There is still no strategy nor system in place to monitor and evaluate the impact of the reform. Lack of information for policy and/or technical decision-making regarding the next steps of the reform. | Designing and implementing a monitoring and evaluation strategy and system which could include data collection and evaluation in order to answer the following questions, among others: (a) Does the reform improve access to health services for AUGE pathologies? (b) Does it improve financial protection (does it prevent from impoverishment)? (c) Are guarantees and claim mechanisms effective in empowering users to demand compliance with the guarantees to which they are entitled? (d) Does the Inter-ISAPREs fund contribute to the reduction of risk and income segmentation? (e) Is there a reduction in the number of non-AUGE services or in productivity? | Baseline survey for access, timeliness, quality and financial protection. |

| Lack of regulatory effectiveness and claim mechanisms | Possible asymmetry in system's governance regarding the Superintendence-FONASA relation. | Reviewing the regulatory, control and sanction powers of the Health Superintendence over FONASA. | Reviewing the control relation of the Superintendence over FONASA and eventual increase of the range of regulatory and control instruments. |

| Fiscal Risks | Effects of the AUGE Plan implementation on the production of non-AUGE services. Private referral effect. | Productivity monitoring and change in payment mechanisms for non-AUGE. Productivity monitoring, particularly of highly-specialized medical human resources. | Prompt notification and transformation into non-AUGE valued services by FONASA. Reviewing the administration and management of human resources in the public health sector, particularly in aspects related to individual incentives and flexibility in staff management. |

The AUGE law requires FONASA and the ISAPREs to provide a package of benefits (the AUGE Plan). The list of approved pathologies and treatments included in such package constitute the minimum benefits that must be offered by any public or private health insurance. The initial number of pathologies/treatments, with which the system formally and legally started in July 2005, amounted to 26. The definition of the number of pathologies/treatments that will be annually included is defined by the government at the proposal of the Ministry of Health, will also be supported by the AUGE National Consultative Council (CCNA), a recently created entity that performs a consultative role.
the healthcare insurance by workers, which amounts to a financial studies derived from the actual growth of salaries and the cost of the services to be included. This reform does not introduce substantial modifications to the financing of the healthcare insurance by workers, which amounts to a minimum 7% of workers' salary.

The AUGE legal reform has the potential to contribute to meeting the four essential objectives of the reform. First, the introduction of explicit guarantees, essentially focused on low frequency and high cost pathologies/treatments, has the potential to significantly improve households' financial protection, a problem that has been identified as the second most important cause of economic shock to Chilean families (PRIESO 2000). Additionally, the 56 pathologies initially identified as a goal of AUGE implementation, account for 60% of the burden of disease in Chile (although only a fraction will be alleviated by the health interventions themselves given the current knowledge of the science in curing such pathologies). The rest will require effective disease prevention and health promotion policies.

Second, the AUGE plan -including all its guarantees- is legally enforceable by the beneficiaries vis-à-vis FONASA and the ISAPREs. The legal and regulatory framework establishes claim and claim-resolution mechanisms, with the potential to provide effective empowerment instruments to the population.

Third, it contributes to further improving equity in the Chilean health system, which has substantially improved due to the fiscal effort in health-related public expenditure of the successive governments since 1990 (fiscal expenditure has more than doubled since 1990). The explicit guarantees (related to maximum waiting times and contribution caps) attempt to correct for equity and consumer protection problems in FONASA and the ISAPREs, respectively.

Finally, the introduction of the AUGE plan significantly changes the framework of incentives both for the public and private sub-sectors. In the public sub-sector, the guarantees will cause providers to be reimbursed according to their production of actually rendered services, likely accelerating a transition from a historical supply-side financing towards financing mechanisms based on “financing that meets people’s needs.” This has been a particularly difficult transition to implement in the Chilean case. In the private sub-sector, the guarantees will force the design and implementation of a health care model that contains costs - private providers will be forced to also cover pathologies/treatments that were not previously covered or that they did cover but without the maximum contribution caps per household established by the AUGE plan.

(ii) Health Authority Law. The Health Authority Law introduces very important structural and organizational transformations in the public system. It separates the health authority (regulation and stewardship role) from the role of management of the public service provision network, thus separating the role that is more inherent to the state from that which is more circumstantial or better explained by custom and practice. The health authority is located in each region, in the Health Regional Ministerial Secretariat (SEREMI), something which is fully consistent with the regionalized country structure. The Health Services have maintained their number and structure and are getting ready to lead the public provision of services in their respective territories. Self-managed hospitals are created; that is, hospitals that are given administrative powers to manage all the resources and budget. Hospitals that have the two highest levels of complexity in the public system (type I and II) shall be under such self-management system by 2008.

The reform thus separates the stewardship and regulation role from the provision role and determines the framework of incentives for the health authority (Ministry of Health) to exercise control over the entire sector, both public and private. Consistent with this and regarding the stewardship and regulation role, two Health Under-secretariats (vice-ministers) assume functions (one newly created): the Public Health Authority Law (for stewardship) and the Under-secretariat of Networks (for public services provision). Also, a Health Superintendence was created with two Intendancies, one for health insurance (ISAPREs and FONASA) and another one for providers (public and private). This new Superintendence replaced the ISAPREs Superintendence. The mission of the Superintendence is to oversee FONASA and the ISAPREs, as well as to regulate public and private providers under the same regulatory framework (with regard to AUGE).

These reforms are additional to the reform introduced in FONASA in 1999, which entrusted FONASA with health service purchasing and financing. However, both the implementation of the regulation of the 1999 FONASA law (still pending) and the provisions that maintain part of the procurement power on the health services through Decree (DFL) 36, show that the separation of the procurement and provision role has not been entirely resolved. The new framework makes FONASA legally responsible for ensuring compliance with the AUGE guarantees to its beneficiaries.
The health authority law is, together with the AUGE law, the most important driving force of the reform. It has the potential to contribute to the objectives of consumer empowerment and protection, as well as to the objective of system efficiency. Among its most important contributions, are (i) the creation of the Health Superintendence (together with the modifications to the ISAPREs regulatory framework) as a substantial milestone in the improvement of the system’s regulatory capacity. For the first time, an external regulatory body is created, with a surveillance role to control FONASA’s performance, something which, together with the powers granted with regard to the ISAPREs, has the potential to significantly increase consumer protection in both subsystems and to deliver effective empowerment mechanisms; (ii) the separation of the stewardship and regulation management line from that of the management of public providers inside the Ministry of Health. Although the Ministry has been entrusted with the role of supervising and directing Chilean health policy for many years, the organizational structure of the Ministry of Health was responsible for diverting most of its attention to the management of public providers. The modifications in the new legal framework make it possible to separate both roles at the national and regional levels, with significant potential efficiency gains.

(iii) ISAPREs’ Long Law. The creation of the Inter-ISAPREs Compensation Fund is aimed at introducing a risk compensation mechanism across the private insurers operating in a competitive environment. The purpose of this mechanism would be to reduce the incentives to the ISAPREs to exercise risk selection (of which there is ample evidence in the literature from the 1990s onwards), and consequently to reduce risk and income segmentation in the insurance system. However, the creation of this Fund was established as a “second best” after the government abandoned, due to lack of consensus in Congress, the initiative to implement a compensation fund that would also include FONASA. The absence of risk compensation that includes FONASA is unlikely to resolve the income and risk segmentation currently observed in the Chilean health insurance system.

References

Policy Note 5: 
Regulation of Basic Public Services in Chile

Abstract
This Note compares the regulatory framework and practices in the different basic public services in Chile - electricity, telecommunications, water and sanitation - focusing on the institutional set-up, conflict resolution schemes, tariff regulation and determination of the cost of capital. It also includes a discussion of sector-specific issues, assessing the experience and analyzing the most critical regulatory bottlenecks in each specific sector. The note briefly presents a series of policy options that might contribute, on the one hand, to making basic service provision more efficient and affordable, and on the other, to coverage expansion in rural areas. In connection with institutional changes, among others, the following options are presented: providing regulatory agencies with greater independence from the Ministries; increased regulatory discretion; and having a single regulator per sector, preferably with the rank of a Superintendency. As for tariff regulation, the Note recommends establishing some sort of comparative method ("benchmarking") and the replacement of the price caps with revenue caps. Finally, some sector-specific policy options are recommended, mostly related to promoting deregulation and improving universal access programs.

1. This policy note was prepared by J. Luis Guasch (Project Manager, Senior Advisor, World Bank), Juan Gaviria (Sector Leader, Finance, Private Sector and Infrastructure, World Bank), Raffaella Mota (Consultant, World Bank), and with the assistance of Andres Gomez-Lobo (Consultant, World Bank).
1. Introduction

As a result of well managed, mature and long standing liberalizing reforms, Chile has been at the forefront of improving the provision of infrastructure services, particularly through private participation. Today, Chile leads LAC countries in terms of performance indicators of basic public services. The new Chilean administration faces, nevertheless, an important task of ensuring further advances in affordability and reliability of basic public services as well as coverage extensions with respect to water, sanitation and telecommunication services. Such advance is an important element in a strategy of providing equality of opportunity.

In many respects Chile already has a good regulatory framework, defined as one that obtains efficient performance of regulated firms by inducing them to (i) provide the service at lowest cost, given a set of quality standards, (ii) comply with clauses addressing increased coverage, and (iii) closely align tariffs with costs, allowing for only normal profits. Further reforms would build on the remarkable results achieved so far (see Box 1), and adjust the overall regulatory framework in specific areas which are outlined in this policy note. Most of the options are medium-term of nature albeit there are several specific options which also apply to a shorter time horizon.

**Box 1: Access to Basic Services in Chile**

Chile has reached relatively high levels of total coverage: access to electricity, telecommunications, water and sanitation services are higher than in most Latin American countries (see Tables 1 and 2). In particular, access to telecommunications services (including Internet) is significantly higher than most Latin American countries. Today, the challenge Chile faces is extending basic services (especially water and sanitation) to the unserved dispersed rural population in a cost-effective manner. Today, a third of the rural population still lacks potable drinking water supply, and only about sixty percent of the rural population has access to a sewers or septic system. In contrast, rural electrification programs have been successful - in ten years national coverage in rural areas has jumped from 53% to 86%. With these figures, Chile has one of the highest levels of rural electrification in Latin America (see Table 2). In addition, although significant disparities of coverage between rural and urban areas remain, Chile has the best telecommunications services coverage in rural areas in Latin America, as a result of effective universal access programs.

2. The magnitude of this challenge must be put into perspective. According to the 2002 census, only 13.4% of the population was rural in Chile. In addition, one must stress that national statistics may hide regional and municipal differences in service coverage.

**Table 1: Access to Water, Sanitation and Telecommunications Services - 2002**

<table>
<thead>
<tr>
<th>Country</th>
<th>Water, total</th>
<th>Water, rural</th>
<th>Sanitation, total</th>
<th>Sanitation, rural</th>
<th>Telephone and cellular subscribers per 100 population</th>
<th>Internet users per 100 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td>95%</td>
<td>39%</td>
<td>92%</td>
<td>64%</td>
<td>66</td>
<td>24</td>
</tr>
<tr>
<td>Brazil</td>
<td>89%</td>
<td>59%</td>
<td>75%</td>
<td>35%</td>
<td>42</td>
<td>8</td>
</tr>
<tr>
<td>Colombia</td>
<td>92%</td>
<td>71%</td>
<td>56%</td>
<td>54%</td>
<td>29</td>
<td>5</td>
</tr>
<tr>
<td>Mexico</td>
<td>91%</td>
<td>72%</td>
<td>77%</td>
<td>39%</td>
<td>41</td>
<td>4</td>
</tr>
<tr>
<td>Venezuela</td>
<td>83%</td>
<td>70%</td>
<td>68%</td>
<td>48%</td>
<td>37</td>
<td>5</td>
</tr>
<tr>
<td>Bolivia</td>
<td>85%</td>
<td>68%</td>
<td>49%</td>
<td>23%</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>Peru</td>
<td>81%</td>
<td>64%</td>
<td>62%</td>
<td>33%</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Paraguay</td>
<td>62%</td>
<td>56%</td>
<td>78%</td>
<td>59%</td>
<td>34</td>
<td>3</td>
</tr>
<tr>
<td>Uruguay</td>
<td>90%</td>
<td>59%</td>
<td>94%</td>
<td>85%</td>
<td>47</td>
<td>12*</td>
</tr>
<tr>
<td>Ecuador</td>
<td>85%</td>
<td>74%</td>
<td>72%</td>
<td>59%</td>
<td>24</td>
<td>4</td>
</tr>
<tr>
<td>China</td>
<td>77%</td>
<td>59%</td>
<td>44%</td>
<td>29%</td>
<td>33</td>
<td>3</td>
</tr>
<tr>
<td>India</td>
<td>66%</td>
<td>82%</td>
<td>30%</td>
<td>16%</td>
<td>5</td>
<td>1.6</td>
</tr>
<tr>
<td>South Africa</td>
<td>87%</td>
<td>73%</td>
<td>67%</td>
<td>44%</td>
<td>41</td>
<td>7</td>
</tr>
</tbody>
</table>

Sources: WHO, UNICEF, ITU
Note for 2001
This note first compares the regulatory framework and practice across different basic public services in Chile, namely the institutional set-up, conflict resolution mechanisms in place, price setting, and the determination of capital costs. In addition, sector-specific issues are analyzed — taking stock of the experience and discussing the most critical regulatory bottlenecks in each specific sector. Finally, the note outlines some policy and institutional options available to policymakers in Chile.

2. Regulation of Basic Public Services in Chile - Background and Issues

2.1. Institutional Set-up: Not enough autonomy and heterogeneity across sectors

The current institutional set-up has three main characteristics. First, regulators are government bodies, part of a ministry, and not autonomous agencies (see Box 2). The level of independence, however, varies across sectors. Regulation staff is subject to public sector wages, causing significant migration of highly qualified staff to regulated firms, increasing the risk of “regulatory capture”. Second, in all sectors, the responsibility for setting tariffs is shared with the Ministry of Economy. Although this allows sectoral regulators to learn from tariff review processes in other sectors, and creates some institutional memory and technical capacity building, it can also politicize economic regulation.

Third, the institutional setup remains diverse across sectors. In contrast with the electricity sector, there are no split responsibilities with respect to sector regulation for telecommunications, water and sanitation. In these sectors one single institution is responsible for both data collection and enforcement. There has been no consensus on an optimal institutional structure, both in terms of the separation of responsibilities as well as the status of the regulator.

The consequences of those three characteristics are high possible capture (of rents), higher uncertainty, and thus high regulatory risk.

2.2. Conflict Resolution

In parallel to the institutional set-up, the arbitration or conflict resolution mechanisms vary across sectors. Conflict resolution takes place through an extrajudicial arbitration scheme (Box 3) but such schemes differ across sectors (Table 3). If the regulator and regulated firm cannot reach consensus in tariff setting matters, arbitration panels are constituted in the water and sanitation, and telecommunications sectors while an automatic price-setting mechanisms is triggered in the electricity sector. Rules governing the arbitration panel deliberations in the water and sanitation, and

<table>
<thead>
<tr>
<th>Table 2: Electrification Rates 2002</th>
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<tr>
<td></td>
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<tr>
<td>------------------------------------</td>
</tr>
<tr>
<td>Chile</td>
</tr>
<tr>
<td>Latin America</td>
</tr>
<tr>
<td>Developing countries</td>
</tr>
<tr>
<td>Transition economies and OECD</td>
</tr>
</tbody>
</table>

Sources: REA and CNE.
telecommunications sectors themselves differ. Given the rules of the price setting mechanisms, incentives exist for both the regulating bodies as well as the regulated companies to under- or overestimate cost developments. Separately, conflicts involving market power matters are also the responsibility of antitrust authorities, which have been recently reformed. Chile has chosen a balanced mix between sector-specific regulators and relevant antitrust authorities. Chile's main competition regulator is the National Economic Prosecutor, a government agency. In general, the judiciary acts as the final arbiter in Chile. In the past, the judicial arbitration system operated relatively slowly given the lack of judges' familiarity with economic and technical matters. The March 2005 creation of the Competition Defense Tribunal (Tribunal de la Libre Competencia) is likely to have a positive impact on judicial expediency.

The consequence of those (imperfect) conflict resolution rules is (incentive-driven) inaccurate reporting, leading to distortions in the alignment of costs and tariffs.

2.3. Regulation of Tariffs Based on the "Efficient" Firm Tariff setting in Chile is based on the efficient firm model. Tariff setting is thereby based on the design of a model how a representative, regulated firm could (and should) work. Such models are based on numerous assumptions and parameters.

The efficient company approach forces the regulator to micromanage the regulated firm, with the burden of proof placed on the regulator to show that the company can be more efficient. With asymmetric information, the company has ample space to game the system, or to convince members of the expert panel of its position by providing very detailed information regarding its operating environment, expenditures and other information only available to the company.

An analysis of the regulated companies' rates of return during the 1990s shows that the application of the efficient firm model has not been very successful in setting efficient tariffs. In electricity distribution, the rates of return of regulated companies were systematically above 20%, with rates of return above 30% in some years. Moreover, the regulated companies in this sector earned higher rates of return than the electricity generating companies that operated in a competitive, and thus more risky, environment. In telecommunications, rates of return in fixed telephones were also quite high during the nineties, with rates above 20% common and in some years above 30% or even 40%

Box 3: Conflict Resolution System

In the water and sanitation sector, when regulator and regulated firm cannot agree on costs estimates, derived from tariff studies, an Arbitration Panel is put in place. The expert panel must deliberate on those parameters for which there is disagreement - and the number of parameters in disagreement can reach hundreds. The panel, by choosing some parameters proposed by the regulator and some others proposed by the operator, often ends up averaging the tariff proposals of each side. If there is disagreement within the panel, tariff decisions are reached by one expert (mutually chosen by the two parties). This panelist is given 30 days to reach a decision which might be difficult given that he might not have been involved in the tariff studies.

In the telecommunications sector, the arbitration panel does not have to choose between the two estimates (formally in this sector there is only one estimate, since only the regulated company commissions a study) and the panel's opinions are not binding. The telecommunications regulator (SUBTEL) has discretion to determine to what extent to adopt the panel's judgment and, therefore, to decide on final tariffs.

In electricity distribution the dispute resolution mechanism is distinct from the others. If there is no agreement between the studies commissioned by the regulator and by the regulated company, a weighted average of both estimates is calculated. A 2/3 weight on the regulator's consultant report and a 1/3 weight on the regulated company's consultant report are used to fix prices for distribution. This dispute resolution mechanism creates perverse incentives for both parties. The parties involved will tend to over or understate cost estimates since final tariffs will automatically be an average of these values. In contrast, in the telecommunications sector the regulator has more discretion, but (s)he cannot ignore the commissioned report altogether; therefore, some perverse incentives still persist.

1. Kerf et al, 2005
2. Dyck and Di Tella, 2002, find that electricity distribution companies have behaved strategically under the efficient company regulation in Chile, suggesting that the model firm approach is vulnerable to gaming.
have been lower as regulators have learned to use the instruments at their disposal to set tariffs.

2.4. The Determination of the Cost of Capital
The determination of the cost of capital for regulated industries, an important input in tariff setting, is arbitrary (Table 4). In electricity distribution, the industry’s cost of capital is fixed by law at a rate of 10% in real terms. In periods of low interest rates, the 10% cost of capital is probably excessive for this industry, whereas it may be insufficient in other periods. On average, 10% is likely too high for this industry. In the water sector the cost of capital is equal to the risk-free rate (determined by the rate of return of Central Bank notes) plus a risk premium varying from 3% to 3.5%. Again, nothing precludes the real risk premium to be above or below this range. In the case of telecom, the law states that the cost of capital should be estimated using the Capital Asset Pricing Model (CAPM) and the risk-free rate to be used is the interest rate of a savings account at the publicly owned Banco Estado. During the last decade, this rate has been at least three to four points below the true risk-free rate for investors, distorting the cost of capital calculations.

The consequences are higher tariffs than appropriate and misalignments among costs and tariffs.

2.5. Sector-Specific Regulatory Features

Electricity
Prices have fallen, quality has improved and companies have kept high rates of investment and a strong financial performance. Electricity prices significantly fell from the beginning of the 1990s until 2002, reflecting declines in the regulated value added of distribution (VAD) and in the regulated node price (see Figure 1). Generation costs were substantially reduced with the introduction of combined cycle gas turbines (CCGT), and there was also an improvement in capacity utilization. In 2004 electricity

Table 3: Dispute Resolution in Chile

<table>
<thead>
<tr>
<th>Structure</th>
<th>Character of Panel decision</th>
<th>Legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>3 member Arbitration Panel</td>
<td>Binding for both parties</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>3 member Expert Panel</td>
<td>Not binding, SUBTEL maintains discretion to fix tariffs</td>
</tr>
<tr>
<td>Electricity distribution</td>
<td>Weighted average of cost estimates of both parties (2/3 authorities, 1/3 companies)</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Table 4: The Determination of the Cost of Capital

<table>
<thead>
<tr>
<th>Estimation</th>
<th>Problems</th>
<th>Legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Risk premium may be unrelated to true market risk premium</td>
<td>Article 5a, DFL No 70</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>CAPM, but risk-free rate to use is not true market risk-free rate</td>
<td>Article 30b B, Title V, General Telecommunications Law</td>
</tr>
<tr>
<td>Electricity distribution</td>
<td>10% real rate fixed by law</td>
<td>Unrelated to the true cost of capital of the industry</td>
</tr>
</tbody>
</table>
prices in Chile were relatively low by international standards (Table 5). The combination of the real price decline and high rates of return reflects substantial efficiency improvements and generous regulatory reviews of the VAD (Pollitt, 2005). Perhaps as result of better investment decisions, quality has also improved - technical and non-technical losses, as well as power outages due to transmission failures have fallen sharply since privatization. More recently, especially after the withdrawal of Argentinian gas in 2004, node prices have shown an upward trend.

The central task regarding electricity pricing is to liberalize the node pricing system while offering consumers the choice of tariff stability. There are two types of electricity customers - regulated and free. Free customers are large consumers (with maximum demand above 500 kW) that can contract directly with generators without the intervention of the regulator. On the other hand, the tariff for small customers is highly regulated and consists of the sum of the node price at which distribution companies buy energy from generators, and the remuneration of distributors. The current node pricing system is based on a four year forward looking average of electricity prices, and is thus ill suited to respond to short term information (as recently happened in the 1998-99 supply crisis). Hence, the task is to introduce reforms that liberalize the node pricing system while, in parallel, providing tariff security to consumers. Rather than introducing a competitive market for electricity supply as in the United Kingdom and California, the Chilean reform could entail a system in which consumers can choose between different combinations of tariff stability versus lower (but variable) prices, thus allowing the market to ration supply efficiently to droughts or other conditions that may occasionally limit supply availability.

In the electricity sector, the lack of independence of Chilean regulators may be the most striking feature of its institutional arrangements. Both regulatory bodies are subject to the operational control of the Ministry of Economy, whose oversight is not limited to tariff issues. There is an inefficient division of responsibilities between the two main regulatory bodies, CNE and SEC.

**Telecommunications Sector**

The telecommunications sector regulatory framework comprises a number of unique characteristics. First, a model of asymmetric regulation exists, whereby only the incumbent has its tariffs regulated. Second, there is freedom of entry as concessions are not exclusive. Third, incumbents must grant interconnection for new entrants at terms and rates fixed beforehand (compulsory connection). Fourth, rate freedom exists unless the competition authority states that for specific services there is not enough competition to warrant a free rate system and when such exception is invoked, rates are computed according to the costs of an "efficient" firm. Fifth, reduction or elimination of cross subsidies and the existence of an universal access fund aimed at stimulating private sector investment in rural areas, using a minimum subsidy mechanism.

In spite of positive results in the sector, there are some issues of concern in the regulation of the telecommunications sector. The combination of deregulation, privatization and universal service has produced remarkable results in terms of expansion of lines, mobile phones and quality improvement. Outstanding concerns include (i) asymmetric regulation might have lead, in practice, to some “cream skimming” with effects on efficiency; (ii)
rate regulation has become increasingly complex over the years, and asymmetric regulation has prevented regulated operators from adequately competing and investing; (iii) when compared to the OECD countries during the past few years, Chile does not seem to be closing the digital divide. In terms of education, the challenge for Chile is how to effectively expand Enlaces to rural isolated areas.

**Implications of New Technologies on Telecommunications Regulation.** The development of VoIP (voice over Internet protocol) technology has changed the way that telecommunications can take place - mostly by increasing the rate of transport, the number of applications and the number of possible platforms (Meisel and Needles, 2005). VoIP technology has also brought challenges for the regulatory framework as there is an increasing convergence of telecommunications, broadcasting, media and information technology service sectors. If it was possible under the vertical model to regulate according to the type of network (i.e., wireline telephony, wireless telephony and broadcast radio/TV, and cable TV), as the technology has evolved the lines between the different network types have become blurred. Regulation needs for converged services therefore differ from the old network regulatory schemes. If it was possible under the vertical model to regulate according to the type of network (i.e., wireline telephony, wireless telephony and broadcast radio/TV, and cable TV), as the technology has evolved the lines between the different network types have become blurred. Regulation needs for converged services therefore differ from the old network regulatory schemes. If it was possible under the vertical model to regulate according to the type of network (i.e., wireline telephony, wireless telephony and broadcast radio/TV, and cable TV), as the technology has evolved the lines between the different network types have become blurred. Regulation needs for converged services therefore differ from the old network regulatory schemes.

**Water and Sanitation Sector**

In the water & sanitation sector, a central feature of the regulatory framework is that it allowed for full cost recovery. The new rate system was first used in 1990 and water tariffs have been raised to the true economic cost of the service over the years. Recent tariff reviews have translated into significant price increases in real terms which have raised concerns about the effectiveness of tariff regulation in the water and sanitation sector.

Sector regulation includes a subsidy system to protect the poor which is currently under review. To protect the poor, the government introduced an innovative direct, means-tested subsidy scheme which can cover between 25-85% of an eligible household’s water and sewerage bill up to a certain limit of total consumption after which the client pays the full cost of the service. The drawbacks of the subsidy approach are its high administrative costs and the difficulties of designing eligibility criteria. A reassessment of the affordability of water and sewerage charges, as well as the targeting properties of the current subsidy scheme, is required before changes in the subsidy scheme can be considered.

In contrast with the urban areas, the rural water and sanitation sector has not benefited as much from the major reforms. Despite coverage gains over the past decade,
especially in the provision of community-managed drinking water services to inhabitants living in concentrated rural communities, a third of the total rural population still lacks a potable drinking water supply. In terms of sanitation, only sixty percent of the rural population has access to a sewer or septic system. However, the water subsidy is also provided for rural households and communities.

3. Policy Options and Recommendations

3.1. Institutional Set-up

Regarding the heterogeneous regulatory framework, a move towards more independence from Ministerial control, more transparency, regulatory discretion (and less excessively detailed legislation) and increased efficiency through improved coordination should be considered. Some of the options available to the new government are:

(i) Institutional responsibilities and design. One option to foster institutional convergence is to establish only one regulatory agency per sector, in charge of both technical and economic regulation, as well as with responsibility for data collection and enforcement. Substantial coordination benefits could materialize.¹² Such a reform would unify the regulatory framework across sectors and improve coordination within each sector, especially if Superintendencies were to be established that have legal powers to enforce regulations and impose fines on operators.

(ii) Given the scarcity of highly skilled professionals in the public sector, a more radical option could be to establish a “super regulator of basic services,” which would be entrusted with exercising control over companies that have activities in more than one regulated sector. The “super regulator” would be a high-profile, visible regulator, preferably structured as a commission in order to reduce the risk of regulatory capture. Such a reform would unify the regulatory framework across sectors and improve coordination within each sector, especially if Superintendencies were to be established that have legal powers to enforce regulations and impose fines on operators.

(iii) Political and financial independence. Ideally, regulatory agencies should also become more independent from Ministries as a clearer separation between technical and political activities should reduce the risk of regulatory capture. Overall policy making for the sector would, naturally, remain within the Ministries. ‘Upgrading’ regulatory bodies to Superintendencies could give them more political and financial independence. Granting powers to the President to nominate and remove regulators from office following transparent and pre-established procedures would increase credibility of leadership within the sector. Nominations could be for fixed periods and removals could be limited to a violation of duties.

(iv) Regulatory discretion. If more political independence were to be given to regulators, Chile could consider increasing the level of regulatory discretion. Technical details and numbers, such as market thresholds, regulated rates of return, number of personnel in the regulatory agency, etc., could be decided by the regulator in conjunction with the relevant industry governance bodies, and not specified in the legislation. In this scheme, the decisions of the arbitration panel might not be binding anymore (as in the water sector), but be rather more similar to an experts’ report (as in the telecommunications sector), with the regulator having the discretion to deliberate in the end. This would render the regulatory framework more flexible.

3.2. Regulation of Tariffs

Regarding the regulation of tariffs, Chile has a number of policy options to consider, whose adoption will depend on the extent to which it is prepared to distance itself from the “efficient” firm approach:

(i) A more radical policy option would be to avoid the problems of the efficient firm approach by replacing the model in its entirety. Higher level approaches (including models such as DEA, SFA and COLS)¹³ have been successfully applied by regulators elsewhere - e.g. United Kingdom, the Netherlands, Norway, Australia/ New South Wales. These techniques are more transparent, less vulnerable to strategic behavior, and can make use of international data for comparison.

(ii) A less radical option would be to incorporate some form of benchmarking in the efficient firm approach and

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¹² Pollitt, 2005
¹³ DEA (Data Envelopment Analysis), SFA (Stochastic Frontier Analysis) and COLS (Corrected Least Squares) are frontier benchmarking techniques, i.e. they measure the relative performance of all firms against an efficient frontier. While DEA is based on linear programming, both SFA and COLS are statistical techniques.
Chile has implemented the most advanced and successful control demand levels, introducing a system of revenue demand. Tariffs are adjusted automatically when the actual demand is different from the projected estimates during a tariff setting process becomes a strategic variable and a source of conflict between operators and the regulator. In order to reduce this conflict and given that operators for the most part do not control demand levels, introducing a system of revenue caps, as in the United Kingdom, instead of price caps may be a good option. This implies that all demand risk is borne by the operator. Therefore, demand estimation during a tariff setting process becomes a strategic variable and a source of conflict between operators and the regulator.

3.3. Sector-Specific Policy Options

Electricity

Chile has implemented the most advanced and successful power sector reform in Latin America. Therefore, the policy recommendations for this sector aim at relatively incremental improvements.

(i) **Deregulation of commercialization.** Reform legislation only recognized three segments - generation, transmission and distribution. The Ley Corta has already moved in the direction of reducing the barriers to entry to the commercialization market by imposing non-discriminatory access rules. However, unless commercialization is deregulated, the full competition potential of this segment will not be unleashed. Similarly to the best practices in developed countries (e.g. the United Kingdom), regulation should be confined to the core network (transmission and distribution), and the potentially competitive segments (generation and commercialization) should be left as much as possible deregulated. In addition, Chile should consider whether to impose any integration restriction in order to prevent the distribution company from discriminating in favor of its commercialization subsidiary.

(ii) **Node pricing flexibilization.** Chile could consider whether to keep the node pricing system or to liberalize it. Some argue that the node pricing system is unnecessary and inhibits long term contracts (Pollitt, 2005). Others argue that the node pricing system is excessively rigid when facing shocks, such as the energy crisis of 1998-99 (Diaz et al, 2001). If the node pricing system is to be retained, it needs to be more responsive to all information available, and the information processing should be independent of the regulator. Consumer safeguards should be preserved.

(iii) **Fuel security.** Fuel security is the most pressing energy sector issue, especially after the recent shortage of Argentinean gas. The heightened concern with security has already been reflected in the investment planning for the sector. Recently CNE published a revised schedule of recommended investments in new generation and capacity for 2005-15. The new schedule increased the share of coal as a source of generation by 20%, whereas reliance on imported natural gas from Argentina was halved. Importing natural gas from Bolivia would be the best option in economic terms. However, if this is currently not available for Chile, the second best policy options could be increasing the shares of coal or hydro, or bringing LNG imports. LNG import facilities are now in an advanced stage of planning and will probably be built.
<table>
<thead>
<tr>
<th>Policy Options</th>
<th>Expected Payoff</th>
<th>Time Frame</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.1. Institutional set-up</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• the establishment of only one regulatory agency per sector, preferably with Superintendency status</td>
<td>• improve coordination and ensure autonomy</td>
<td>Short/medium term</td>
</tr>
<tr>
<td>• the establishment of a “super regulator of basic services” or, alternatively, the formalization of the coordinating role of the Division Desarrollo de Mercados of the Ministry of Economy</td>
<td>• regulatory independence and the balance between the sector regulators; improve coordination</td>
<td>Medium term</td>
</tr>
<tr>
<td>• greater independence of regulatory agencies from Ministries</td>
<td>• lower risk of regulatory capture; greater flexibility to respond to shocks, reflected in lower tariffs</td>
<td>Short/medium term</td>
</tr>
<tr>
<td>• Increasing the level of regulatory discretion of regulatory agencies</td>
<td>• greater flexibility</td>
<td>Medium term</td>
</tr>
<tr>
<td><strong>3.2. Tariffs regulation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• replacing the efficient firm approach by a higher-level frontier benchmarking technique, or incorporating some form of benchmarking into the efficient firm approach</td>
<td>• more transparency; less vulnerability to gaming; less informational requirements, reflected in lower tariffs</td>
<td>Medium term</td>
</tr>
<tr>
<td>• use of more realistic estimation methods for the determination of the cost of capital</td>
<td>• more adequate incentives for investment, better alignment of costs and tariffs, reflected in lower tariffs</td>
<td>Short term</td>
</tr>
<tr>
<td><strong>3.3. Sector-specific: Electricity</strong></td>
<td></td>
<td></td>
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<tr>
<td>• deregulation of commercialization</td>
<td>• benefits from competition in the segment; lower tariffs</td>
<td>Medium term</td>
</tr>
<tr>
<td>• node pricing flexibility</td>
<td>• greater responsiveness to shocks; possibly greater price stability as a result of increased long-term contracting and reduced exposure to the spot market</td>
<td>Medium term</td>
</tr>
<tr>
<td>• reducing the reliance on Argentinean gas through using more coal and hydro, importing LNG, or building gas pipelines to other neighboring countries such as Peru.</td>
<td>• increased fuel security but probably at a higher economic cost, improved risk managing, lower price variance.</td>
<td>Medium term</td>
</tr>
<tr>
<td><strong>Telecommunications</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• moving away from asymmetric regulation, keeping incumbents' regulation, as much as possible, only ex post</td>
<td>• higher efficiency; probably lower regulatory costs</td>
<td>Short term</td>
</tr>
<tr>
<td>• redesign of universal access programs, considering the development of new technologies</td>
<td>• greater access for rural communities to telecommunications services, in particular to the Internet, overall increased coverage</td>
<td>Medium term</td>
</tr>
<tr>
<td>• adaptation of the legislation to the convergence between network types, aiming at providing non-discriminatory access to the natural monopoly segments</td>
<td>• greater development of the new technologies: innovation; increase access, lower costs</td>
<td>Medium term</td>
</tr>
<tr>
<td><strong>Water and Sanitation</strong></td>
<td></td>
<td></td>
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<tr>
<td>• improvement of universal access programs through greater clarification of institutional responsibilities, targeted funding, more cost-effective and appropriate technologies, and decentralized and integrated programs</td>
<td>• greater coverage of rural areas, reduced fiscal costs</td>
<td>Short/medium term</td>
</tr>
<tr>
<td>• review of the means-tested subsidy scheme</td>
<td>• keep the focus on the most vulnerable households now that the price alignment has taken place, reduced fiscal costs</td>
<td>Short/medium term</td>
</tr>
<tr>
<td>• clarification of rules in vertically- or horizontally-related markets</td>
<td>• benefits of increased competition in non-regulated markets</td>
<td>Medium term</td>
</tr>
</tbody>
</table>
during the course of the next few years. In addition, Chile might want to assess the costs and benefits of other alternative fuel supplies, including building or financing gas pipelines, storage facilities and converting facilities to fuel oil.

(iv) Alternative sources. Clearly, Chile still has untapped sources of clean and cheap energy in the form of hydroelectric power. However, these projects, such as the ones currently being considered in the Aysen region in the south of the country, run into strong opposition from environmental groups. How to reach a social consensus and strike the right balance between hydroelectric development and the conservation of pristine and untouched natural environments is perhaps one of the most pressing challenges for the electricity sector in the coming decade.

Telecommunications
The dynamics of the telecommunications sector demands a continuous reappraisal of policies and regulations. Chile faces a few policy options; however, most importantly, it should consider replacing - or at least refining - the 1982 General Telecommunications Law for a more modern legislation, in particular, a law which incorporates guidelines for access charges regulation. Key policy options are:

(i) Asymmetric regulation. Chile could consider whether the asymmetric regulation approach should still be favored in the current context. Restricting competition with an incumbent is now widely regarded as an inefficient policy. Abandoning asymmetric regulation would be a radical turn that would probably have a positive impact on efficiency. At the same time, there would be the need to address the possible abuse of monopoly power by the incumbent. To prevent this abuse, competition authorities would have to be vigilant and active.

(ii) Deregulation of consumer rates. A less radical policy option would be to deregulate consumer rates in the local telephone market while retaining the right for the regulator to set the rates for the incumbent. This would allow the incumbent to be flexible enough to respond to competition, but there would be safeguards to the consumer as regulated rates would be kept as an alternative. There would be an improvement in terms of efficiency from increased competition, and regulation would be, as much as possible, ex-post.

(iii) Universal access. The Government could also consider the introduction of a new generation of universal access programs, appropriate to the development of new technologies. These programs could be directed towards expanding broadband service, and they could prioritize schools and communities. Moreover, Government might consider how to ensure the sustainability of these programs, and how to lower internet connectivity costs to rural areas.

(iv) New technology. With the development of VoIP technology, new legislation should take into account the increasing convergence between network types, ensuring that the framework is consistent and provides non-discriminatory access to the natural monopoly segments. Moreover, in this context tariff rebalancing is inevitable and will have to take into account the impact of VoIP.

Water and Sanitation
With the exception of a possible overhaul of the efficient company regulatory model, the regulatory needs in the water and sanitation sector are more "fine tuning" rather than overhauling pillars of the regulatory framework. However, one specific issue goes beyond "fine tuning"; but should nevertheless be stressed: rural access to water and sanitation services. Although in urban areas affordability of consumption - not of connection - is the main issue, and there has been remarkable progress during the last decade, especially in providing drinking water services to concentrated rural communities throughout the country, a third of the total rural population (which is rather small in Chile) still lacks a potable drinking water supply and only sixty percent of the rural population has access to a sewer or septic system. Therefore, there are still challenges with respect to the expansion of water and sanitation service coverage.

(i) Coverage extension. Some policy options to increase coverage would include clarifying institutional responsibilities, targeting funding, application of more cost-effective and appropriate technologies, and fostering of decentralized and integrated programs building upon existing community initiatives (World Bank, 2004).
(ii) Means-tested subsidy scheme. Policy makers might want to review how to adapt the means-tested subsidy scheme now that most of the necessary price alignments in the sector have taken place. Also, policy makers might want to address if and how the system would need to be changed so as to effectively reach the most vulnerable households.

(iii) Tariff regulation. Given that there are more than three hundred water and sanitation systems in Chile, the sector could benefit from using some form of benchmarking - which could be done even in the context of the efficient firm approach.

**Regulation**

Chile should study how to improve the regulation of vertically- or horizontally-related markets; in particular, the policy maker could define what the regulated firm can do in related markets. For instance, can water companies have businesses in the treatment of industrial liquid discharge, or river control? How will the participation of regulated companies in more competitive sectors affect competition?

**References**


Cohen, T., O. Mattila and R. Southwood (2005). 'Global Symposium for Regulators', *Work in Progress, Medina Conference Centre, Yasmine Hammamet, Tunisia*


World Bank (2004). *Chile - Rural Infrastructure in Chile - Enhancing Efficiency and Sustainability, Report No. 29037,* Finance, Private Sector and Infrastructure Unit, Latin America and the Caribbean, May.
Policy Note 6: Regional Development and Decentralization

Abstract

Over the past 15 years, Chile has gradually moved towards an increasingly decentralized system of government. With subnational governments now accounting for a third of all public investment expenditure, the Government's initiative to strengthen equity of opportunity will thus require a strong focus at regional and local levels. Currently, regional disparities are large in almost all dimensions, and the distribution of public investment remains skewed towards the Extreme Zones. In order to make the next phase of decentralization reforms more effective, the Government could consider improving the regional distribution of public resources, strengthening local and regional institutions, aligning resource allocations with decision-making authority, and increasing local accountability through greater transparency and participation. This policy note is meant to serve as a basis for discussions with the new Government on a range of issues related to regional development and decentralization. In line with the Government's policy agenda, it could be followed by a deeper engagement on selected topics.

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1. This policy note was prepared by Daniel Oks (Lead Economist for Chile, World Bank) and Jasmin Chakeri (Economist, World Bank) and with the assistance of Fernando Rojas (Lead Public Sector Management Specialist, World Bank).
1. Introduction

In its election program, the new Government has outlined an ambitious agenda in decentralization and regional development, geared towards reducing geographic inequity of development, increasing public participation in decision-making, and gradually fostering decision-making at the regional and municipal levels. The Government's program focuses on four priority areas: (i) strengthening the voice of citizens, and empowering local governments to formulate and implement policies that respond to their preferences; (ii) enhancing the capacity of local government and creating incentives for good performance; (iii) transferring more responsibilities to regional and municipal governments for key public services; and (iv) decreasing inequities among regions.

Decentralization in Chile has been gradual and cautious, with a strong focus on the 13 regions, headed by the centrally appointed intendentes, as the main units of subnational administration. At the same time, municipalities, which are run by popularly elected alcaldes and consejos municipales, play an important part in delivering key social services, including basic health and primary education. Taken together, regions and municipalities now account for a third of public investment spending (Graph 1) - a share that is higher than in most other Latin American countries. Given that municipalities and regions play such an important part in the delivery of public services, they will be a crucial link in the Government's drive towards achieving equality of opportunity for all Chileans no matter where they live.

The decentralization of resources has not been accompanied by an equal transfer of decision-making authority. As a result, local governments do not have much influence on key policies that affect development in their areas. As this policy note shows, the strengthening of incentive structures and institutional processes could facilitate the movement to more decentralized decision-making. However, decentralization policies are only part of the solution and thus have to be firmly integrated into broader strategies to stimulate regional development. Some of the key elements for such a strategy are also addressed.

After a brief review of regional economic and social development, this note outlines selected issues and policy options in four areas: (i) improving the regional distribution of public resources; (ii) Aligning these resource allocations with decision-making authority; (iii) Strengthening subnational capacity; and (iv) increasing citizen participation and voice.

2. The Current State of Regional Development and Regional Disparities

Regional Development. Chile's national economic success is mirrored by a steady improvement of economic and social indicators in all regions over the last 15 years. Between 1990 and 2001, average regional GDP growth rates were all positive and ranged between 2 percent p.a. in region XII (Magallanes) and 8.3 percent in region III (Atacama). During the same period, poverty rates decreased significantly in all regions - between 10 and 24 percentage points.

Regional Convergence. The pattern of this regional economic progress has led to some, albeit limited, convergence in regional incomes. As analytical work carried out by "MIDEPLAN" has shown, regions with lower initial levels of income grew modestly faster than those with higher levels between 1960 and 1998, leading to a slowly narrowing gap in per capita income (MIDEPLAN, 2002). While the trend in other Latin American countries is less clear, Chile's experience is similar to that of other OECD countries - the narrowing of intra-country income gaps tends to be slow and periods of overall convergence often include shorter periods in which convergence slows or even reverses (Box 1).

Even if gradual convergence of per capita GDP can be observed, other measures of regional inequity do not display the same trend. In Chile, for instance, a narrowing of the gap in poverty rates between regions has not occurred. Graph 2 compares the initial poverty level in 1987 to the reduction in the poverty level between 1987 and 2003 - ideally, the regions with the highest initial poverty levels would have also been the ones with the highest reduction in poverty, but such relationship does not appear to exist. Further, growth in Chile's poorer regions has slowed in recent years. If this recent trend continues, a significant reduction in the poverty gap - and continued inter-regional convergence - will be difficult to achieve in the near future (Covarrubias, 2005).
Competitiveness. According to the Regional Competitiveness Index (Indice de Competitividad Regional, ICORE), which evaluates a number of economic, institutional and social indicators relevant for sustainable regional development, the regions with the highest share of national GDP are also the most competitive. By the same token, the region with the lowest per capita product and highest poverty rate (Araucania, IX) scores lowest on the ICORE.

The ICORE results offer some further interesting insights. First, there does not appear to be a clear relationship between a region's economic growth and its competitiveness score. For instance, two of the regions that grew fastest between 1990 and 1999, OHiggins (VI) and Aisen (XI), scored relatively low on the ICORE in 2000, in part due to the fact that these are resource-rich regions. Instead, regions with low growth such as Valparaiso (V) and Magellanes (XII) scored relatively high. The only two regions where healthy growth and a high ICORE score coincide are Antofagasta (II) and the Metropolitan Region (Covarrubias, 2005).

Second, a number of poorer regions show important levels of competitiveness: Biobio (VIII) and Atacama (III), both regions with high poverty rates, rank well above the average; in fact, they fare better than two of the extreme zones (Zonas Extremas). Similarly, a number of regions with relatively low per capita income (such as Los Lagos and Coquimbo, X and IV) have an above-average competitiveness score of around 0.4 (Graph 3).

Virtually all regions increased their competitiveness index between 2000 and 2005 - the exceptions being Region Metropolitana and Araucania - but poorer-low income regions in general experienced the strongest increases. Of the six regions with poverty levels above 20 percent in 2003, only one (Araucania) did not improve its ICORE; the others averaged a 31 percent increase.

Disparities Remain Large. Given the slow pace of regional income convergence and the lack of progress in poverty convergence, it is perhaps not surprising that regional

**Box 1: International Evidence of Inter-regional Convergence**

Experience from OECD countries tends to support the theory that economically, regions within the same country converge over time towards the same steady state. Barro and Sala-i-Martin (1992) find that between 1940 and 1988, the 48 contiguous US states did converge - states with lower initial per capita income grew faster than those with higher initial incomes. Cashin (1995) finds a similar result in his analysis of the Australian colonies (which later became Australia and New Zealand) between 1861 and 1991. Poorer regions grew by about 1.2 percent faster than richer ones, and regional disparities in per capita income decreased over the same period. However, this convergence occurred at a slower speed than results from other countries suggest. Coulombe (1997) observes that income convergence in post-war Canada occurred simultaneously with the introduction of a far-reaching system of equalization transfers. He also finds that the trend towards convergence has slowed down noticeably since the mid-1980s.

The evidence suggests, however, that in most cases regional convergence can only be observed in the long run. In the short- to medium-run, the experience is much more mixed. Shah and Shankar (2001) find, for instance, no convergence among Canadian provinces between 1994 and 1998. Cashin (1995) confirms that there are sub-periods of income divergence, especially in times of economic shocks.

**Figure 2: Poverty Convergence**

<table>
<thead>
<tr>
<th>Rate of poverty decrease (%)</th>
<th>Poverty, 1987</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4</td>
<td>V, II, VI</td>
</tr>
<tr>
<td>3.2</td>
<td>V, VI</td>
</tr>
<tr>
<td>3.0</td>
<td>V, VI</td>
</tr>
<tr>
<td>2.8</td>
<td>V, VI, X</td>
</tr>
<tr>
<td>2.6</td>
<td>V, VI, X</td>
</tr>
<tr>
<td>2.4</td>
<td>V, VI, X</td>
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<tr>
<td>2.2</td>
<td>V, VI, X</td>
</tr>
<tr>
<td>2.0</td>
<td>V, VI, X</td>
</tr>
</tbody>
</table>

Source: MIDEPLAN, 2004

**Figure 3: Poverty, GDP and Competitiveness**

Source: Informe CIEN, Universidad de Desarrollo; MIDEPLAN; INE, 2005

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2. The ICORE awards scores in seven areas, which are then aggregated to a global score which determines a region's rank. The seven areas are: Human development; management; science and technology; infrastructure and capital; financial system; government and public institutions; integration and internationalization.
disparities in Chile are significant in almost all dimensions. Poverty rates range from 11 percent in Antofagasta to 30 percent in Araucania, while two regions alone (Biobio and Metropolitan) are home to half of all the poor people in Chile. Per capita GDP in Chile’s richest region, Antofagasta, is more than 5 times as high as that in the poorest one (Araucania). The existence of such large disparities presents a formidable challenge and underscores the need for region-specific solutions to development.

**Policy Implications.** In summary, Chile’s regions have experienced a slow economic convergence and a general increase in their competitiveness, while disparities remain significant. The linkages between the competitiveness indicators and convergence, on the one hand, and the Government’s regional development policies, on the other, need to be explored in greater detail to determine whether these have been effective. The improvement in the competitiveness of Los Lagos, for instance, may be linked to government-supported public-private partnerships that stimulated the formation of clusters and chains of production.

It should be noted here that is not clear how effectively development policies can influence regional convergence. Shah and Shankar (2001) contend that in most developed and developing countries, regional development policies have failed to bring about greater regional convergence. Policies aimed at boosting economic growth and reducing regional economic disparities thus need to be carefully evaluated in terms of their costs and benefits and convergence effects. Chile’s generous incentives towards the Zonas Externas, for instance, are likely to have contributed to growth in the targeted areas, reducing the gap in a number of social and economic indicators between Regions I and XII and Metropolitan Santiago. But they have not been a very cost-effective or efficient tool (World Bank, 2005a).

3. Regional Distribution of Public Resources

As part of the Government’s decentralization reforms, the share of funds under the control of regions has increased significantly. But the regional distribution of public investment is unbalanced. Taking all investments (independent of their source of funding) into account, public investment today is heavily biased towards the Zonas Extremas - regions with specific geographical and historic significance in Chile in the far northern and southern reaches of the country (World Bank, 2005a). Graph 4 compares per capita public investment in 2004 across regions; the Zonas Extremas (regions XI and XII) recorded by far the highest per capita investment levels.

Matching the regional investment data to poverty levels (Graph 5) shows that higher regional poverty rates are not associated with higher public investment levels. However, it is clear that such assessment is strongly dependent on investment levels in the Zonas Extremas - excluding those areas from the assessment results in a more pro-poor distribution of funds. Of course, poverty alone may not be the most appropriate indicator of whether a region’s needs are being met. Other economic, social and geographic indicators - such as population density, relative prices, data on current infrastructure access and underlying economic growth potential - can be used as additional proxies to measure a region’s expenditure needs.

![Figure 4: Public Investment by Region](image)

The distribution of regional investment funds - including primarily the Fondo Nacional de Desarrollo Regional (FNDR), Convenios de Programación, and Inversión Sectorial de Asignación Regional - shows a positive relationship with poverty rates (Graph 6). This is likely due to the fact that the distribution of the FNDR, which represents close to 70 percent of all regional investment, takes into account regional socio-economic indicators such as population, unemployment and per capita GDP. The revised Regional Government Law places even greater importance on poverty incidence in the allocation of the FNDR, making it the single most important criterion.

At the local level, the main mechanism designed to achieve a more equitable distribution of resources is the Fondo Común Municipal (FCM), an inter-municipal compensation.
fund, through which richer municipalities share part of their own revenues with other municipalities. The FCM is rather unique in Latin America; its design resembles closely the equalization tools used in Germany and Australia, both federal states. In Chile’s case, municipalities contribute a fixed share of the revenue collected from the property tax, motor vehicle taxes, fees from commercial licenses (patente) and traffic fines to the fund. The national Government’s contribution to the fund is fixed annually in the national budget, and while currently only accounting for 10 percent of the FCM, is set to grow over time. The distribution formula takes into account relative poverty, population size, property tax exemptions, and the ratio of per capita municipal income to national income. The fund can be used for both recurrent and capital expenditures, representing on average a third of all municipal revenues. In the case of poorer municipalities, however, revenues from the FCM represent more than half of total revenues.6

There are a number of additional challenges that - unless addressed in a timely manner - could foster increased inequality between regions and among municipalities. For instance, poorer regions benefit from the way regional and local investment funds are distributed, but they may not be able to make effective or efficient use of these resources. There are at least two reasons for this: First, in order to qualify for projects financed by regional investment funds, municipalities prepare project proposals and submit them to the regional level. While this may help ensure that project proposals reflect local priorities, municipalities with weaker capacity in project preparation may not be able to produce proposals of high quality, which decreases their chances of winning approval. Second, once submitted to the national level for evaluation, the Government reviews and evaluates regional proposals against high technical standards. This process favors those regions with conditions that allow for a cost-effective implementation of projects that conform to the high technical standards set by the Government. But these standards cannot be met in all projects in all regions: In the case of infrastructure projects in sparsely populated rural areas, for instance, the regional proposals may not always conform to the technical requirements set by the national agencies (World Bank, 2004b). This may lead to low or inadequate infrastructure investment in those areas for technical reasons and not necessarily for a lack of potentially available funding.

Finally, the national government has for a long time favored the Extreme Zones of the country with a privileged incentive package. This package is primarily founded on a geopolitical rationale rather than efficiency or equalization objectives. The incentives included in the Extreme Zones package are currently being reviewed in terms of effectiveness, efficiency and control, and a revised policy could be based more on equity considerations than predominantly on geopolitical factors.

Policy Options for a Better Regional Distribution of Resources. While more analytical work needs to be conducted to assess the overall effectiveness of the current transfer system, the Government could take measures to improve some of the existing mechanisms. The performance of the FCM, which is already a well-designed transfer mechanism, could be further improved by incorporating additional sources of municipal revenues into the sharable pool and by reviewing the criteria used for the distribution. While there is evidence that the FCM has an equalizing effect on per capita fiscal resources, other indicators for municipal expenditure needs (such as number of school-aged children, incidence of malnutrition etc) could be added. Carefully reviewing the incentive structure of the FCM, particularly its effect on local revenue mobilization (see below) and on the collection of the nationally administered property tax, would also be important.

6. Based on data from SINIM.
The Government could also review the tradeoffs between ensuring technical standards of regional or municipal investment projects on the one hand, and flexibility to choose a project design that corresponds better to local needs on the other hand. Chile’s methodology for project evaluation is sound and sophisticated. An option to consider as an alternative -- at least for smaller projects -- to the current approach of applying the rigorous evaluation criteria to every project no matter its size would be the ex-ante setting of general and technical criteria for the use of sectoral funds, accompanied by an ex-post monitoring and evaluation system that ensures that the funds are used as planned and that the projects are of satisfactory quality.

Further analytical work could provide important leads for policy options for using transfer and equalization mechanisms to support a broader regional development strategy and reduce regional inequities in Chile. A mix of both economic growth strategies and social considerations is needed to shape regional development plans. As mentioned above, Chile has successfully used economic planning in several cases to achieve regional and local growth conditions. Regional strategies for growth and competitiveness can be pursued in parallel with plans to provide minimum service levels throughout the country.

An explicit territorial policy could build upon the analysis of current equalization impact of government programs in the territories. Following, for example, the recent Canadian federal social pact, which is designed to enable all provinces to provide comparable levels of services taking into account revenue raising capacity, such analytical work could focus on five areas. First, the analysis could decompose the per capita inter- and intra-regional incidence of different forms of public expenditures and investments by source of funding and over time. Given the fact that Chile does have a number of budget programs that are allocated on a regional basis, it is not just the fiscal transfers through FNDR or the Zonas Extremas (ZE) policies that need to be measured. Second, the analysis could include a review of the incentives and capacity to raise revenue at the local level. Third, it could attempt to determine the approximate per-capita cost of providing minimum subnational services that are to be guaranteed to any Chilean citizen regardless of where they live. This would help design a transfer system that ensures minimum per capita resources sufficient to guarantee minimum service standards. Territories that do not have sufficient revenues to meet minimum service standards would be compensated accordingly. In order to maintain fiscal neutrality, territories that already have more revenues than needed for standard subnational services would receive less transfers in the future. Fourth, the analysis could include an assessment of local and regional institutional capacities - including, for example, local capacity to deliver quality education. Fifth, the analysis embodied in the previous four steps could be integrated with subnational economic planning exercises and the forthcoming regional investment plans (anteproyectos regionales de inversion, ARI) to ensure that compensation transfers are reflected in current expenditure decisions.

4. Aligning Resource Allocations with Decision Making Authority

As mentioned above, Chile’s model of decentralization places a large share of resources in the hands of regional, and to a lesser extent local, governments without an equivalent transfer of decision-making authority. This approach helps the national government ensure that regional services and investments correspond to uniform standards across the nation. By the same token, it does not allow for much flexibility to respond to regional and local preferences and needs, which is one of the key principles of decentralization. Chile has already experimented with increased participation of local governments in specific programs. Over time, these initiatives could be improved and scaled up, and accompanied by additional revenue assignments. Doing this successfully hinges on improved intergovernmental coordination, clarification of functional assignments, and a gradual increase in subnational revenue raising authority.

Intergovernmental Coordination. With the multitude of actors in a decentralized context - the Ministry of the Interior, sectoral agencies and their deconcentrated offices, regional and local governments - there is a strong need for a well-functioning coordination mechanism for planning, implementation and management of public investments and services. In Chile, the lack of such a mechanism has led in some cases to the unresponsiveness of investments to local needs, duplication of investments by competing programs, and over-design of infrastructure for local conditions (World Bank, 2004b). The recent revision of the Regional Government Law attempts to improve coordination somewhat by requiring the intendentes, together with the SEREMIs (the regional representatives of the national ministries), regional service directors and the regional consejos, to prepare ARI, which include all direct public investment as well as other programs such as CORFO aimed at promoting regional development. The ARI have to be taken into consideration in the budget formulation of the sectoral agencies. It is not clear how the ARI, once...
implemented, will affect regional investment, but given that they are not binding at the national level, their impact may be small.

A potentially effective option for improving coordination would be a territorial approach which shifts the focus from sector-specific to geographic strategies, thereby ensuring a more integrated solution to regional development. Territorial development strategies can also be useful to take into account the linkages between neighboring provinces and municipalities in different regions. The territorial approach to development provides an opportunity not only to improve regional coordination between levels of government, but also between government, community associations, private firms and individuals with the objective of promoting regional development in a specific territory. It aims to facilitate integration by maximizing synergies at the local level through networking across all agents or agencies involved. The territory provides the base to identify capacities, business opportunities, competitiveness potential, bottlenecks and constraints to development.

Territorial planning is widely used in OECD countries: The European Union, for instance, launched the LEADER initiative as part of an integrated rural development strategy in 1991 (OECD, 2003). Chile has gained experience with the territorial approach through SUBDERE’s Infrastructure for Territorial Development Project (World Bank, 2005d), and is now starting to apply the concept of territorial planning in rural areas through a project covering roads, water, sanitation, electricity and information & communication technology in selected regions (Box 2). Another experience is the Chile Emprende program (Box 3). The experience gained from these projects could be valuable in improving cross-sectoral and intergovernmental coordination.

There is also room for increased horizontal coordination, i.e. among units of the same level of government. In many countries, subnational governments enter partnerships with each other (or with private organizations) to provide certain services. In Spain, there is a long tradition of mancomunidades through which local governments agree to jointly perform one or more services; a successful example is the Greater Bilbao Water Partnership which manages water supply and sewerage treatment for 24 municipalities (Font et al., 1999).

In Chile, cooperation between municipalities has been somewhat limited, partly because of restrictions imposed by Law 18.695, which prevents such associative bodies from registering as legal entities, and because of limited available financing (SUBDERE, 1999).

The national government could provide more support for such arrangements to take advantage of externalities, economies of scale or insufficient capacity of individual municipalities through co-financing associative arrangements. For example, matching grants from the central government could encourage municipalities to collaborate on solid waste, urban planning, or tourism. A simulation of the potential benefits of municipal associations in education and health services suggests that in these sectors, there may not be significant gains in efficiency or quality of services; but in a number of well-defined areas such as bulk purchases of supplies, cooperation could be beneficial (World Bank, 2005c).

**Clarification of Functional Assignments.** In order for intergovernmental coordination to work, the functions of

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**Box 2: Infrastructure for Territorial Development**

The Infrastructure for Territorial Development project was initiated in 2005 by the Chilean Government, with the financing and technical assistance from the World Bank. The objective is to improve through selected investments in rural infrastructure (roads, electricity, water/sanitation and telecommunications) the living conditions of the rural population in 25 territories located in the regions of Coquimbo, Maule, Bio-Bio, Araucania and Los Lagos. At the end of the project, in 2009, it is expected that 90 percent of the population will have access to water, sanitation and rural electrification services and that the use of transport services will have increased by 20 percent.

A key element of the project strategy is the preparation of multi-sector territorial development plans (planes marco de desarrollo territorial, PMDT). These plans prioritize among selected interventions in rural infrastructure that will help implement a territorial development strategy defined by local stakeholders themselves, based on the economic potential of the territories. Benefits arise from an enhanced effectiveness of rural infrastructure investments with greater complementarities across sectors and a better alignment with local needs. In addition, the partial devolution of investment decisions at the local level is a first move towards a greater empowerment of local stakeholders and the re-thinking of the existing centralized decision-making framework.

By early 2006, the process to prepare territorial development plans had been initiated in 11 territories (regions of Bio-Bio and Coquimbo). This process had created a real momentum for local stakeholders to voice up their needs and think strategically about the development of their territories.
each level of government must be clearly defined. In general, Chile has an economically efficient allocation of responsibilities across different government levels. While there are opportunities to take better advantage of economies of scale and deal with externalities, the main issue is the management of existing assignments, especially in service provision. It is not clear, for instance, to what extent rain-water drainage is a municipal responsibility, or what is the role of the region with regards to urban and rural roads.

There is also scope to develop mechanisms through which local, regional and central levels of government can discuss their respective competencies and responsibilities for investment decisions. For example, a regional road, while clearly a regional responsibility, may benefit from consultation with, and participation of, those municipalities affected by the project. This could help improve the design, ensure appropriate service provision and ensure complementarity with local investments such as access roads.

If more decision-making power and responsibility for service delivery is to be decentralized to the subnational level, the role of the national ministries could be adjusted. The SEREMIs (the regional representatives of the national ministries) currently retain a dominant role in designing, implementing and monitoring services in the regions. Over time, as the capacity of regional and local governments grows, sectoral agencies could have a more important role to play in the setting of regulations and standards, the provision of technical expertise, and in monitoring performance.

Decentralization as an Opportunity for Government

Streamlining. The basket of services that has evolved in Chile over past decades is complex, and in some cases, outdated. For example, there are 75 development programs that contribute to the goal of rural growth, while in parallel there are another 44 social service programs targeting the rural poor. These 119 programs involve over 25 different national agencies. With such multiplicity of programs, coordination and efficient service delivery at any level - whether national, regional or local - is clearly difficult. As services are increasingly decentralized, and as local priorities increasingly determine local expenditure patterns, regional and local governments will be challenged to juggle and set priorities across this large number of national programs. The very process of decentralization, therefore, provides an excellent opportunity for the government at all levels to consolidate and rationalize these service programs, and thereby achieve higher levels of efficiency and cost savings. Chile Solidario and Chile Emprende have already started this process of streamlining in their respective sectors.

Local Revenue. Clearer functional assignments and stronger intergovernmental coordination could be important in ensuring a more effective role for local governments. However, this would not address the disconnect between expenditure responsibilities and revenue assignments. Currently, Chile has a highly centralized system of public revenues, with transfers financing the bulk of regional and local expenditures. This blurs the link between benefits, which are provided at the local level, and costs, which are borne by the central government via transfers to the local level. This approach can lead to weaker local accountability, but also to inefficiencies due to the existence of the so-called "flypaper effect": intergovernmental transfers stimulate local spending by more than an equivalent increase in private income (Gramlich, 1987).
There are very few countries in which local governments can finance themselves entirely through locally-raised revenue. Chilean municipalities currently collect on average about half of their total revenues at the local level. However, there is great variation: shares range from less than 10 percent to 80 percent. The bulk of own source revenues are accounted for by property and vehicle taxes and commercial licenses. However, high and often discretionary exemptions and lags in property valuation limit reliance on local revenues and thereby constrain the efficient allocation of resources.

Policy Options. The Government could consider granting more control to municipalities over property taxes. An important option - in terms of revenue impact - would be to reduce the level of exemptions (exemptions totaled around 60 percent in the early 1990s) and to keep property valuations updated. Another option would be to grant local governments greater discretion over tax rates within a certain band (between 1 and 2 percent of property valuation, for instance). The advantage of such a band is that it would, on the one hand, allow municipalities to be responsive to local demands for public goods (and exert pressure on them to increase efficiency) and, on the other hand, limit tax competition between municipalities. To prevent municipalities from setting tax rates deliberately low in order to minimize their contributions to the FCM, such contributions could be calculated based on a uniform tax rate for all municipalities - regardless of the actual tax rate in each location - which would not penalize local governments that choose a higher actual rate (World Bank, 1993).

5. Strengthening Institutions and Enhancing Subnational Capacity

A key challenge for Chile's decentralization during the coming administration is to continue enhancing subnational capacity in order to ensure a high quality of service delivery. Programs to strengthen local institutions have intensified in the past years through the PROFIM projects (Programa de Fortalecimiento Municipal), which have focused on municipal planning, financial and human resource management, and management of health and education services. Regional capacity is being strengthened through a program aimed at raising the efficiency and management of regional investment. International experience shows that in addition to direct capacity building programs, there are a number of indirect mechanisms that could help improve local government performance. For instance, nationwide local government associations can be a useful forum for sharing information, disseminating best practices, and identifying training needs. The national government can also influence subnational capacity by setting incentives tied to performance. While overall accounting, reporting and communication standards across levels of government generally function well, subnational governments still lag far behind the national level in terms of systematic monitoring and evaluation with a focus on results management. The national system for management strengthening and results-based controls -- in particular the DIPRES-managed system that has been expanding consistently since 1997 - has not yet been extended to subnational governments (except when subnational governments participate in a national program). Adjustment and extension of the more advanced systems developed by the national government is a key element in strengthening institutional capacity and in creating incentives for good performance.

Clear critical to institutional strengthening is the option of giving municipalities greater flexibility to modify their organizational structure, especially in personnel management. The recent changes in the municipal government law and the Chilean constitution have given municipalities more responsibility for human resource management, but these provisions have not yet been effectively implemented. Human resources management has been found to be one of the most important obstacles preventing improved performance in education and health care, despite increased spending (World Bank, 2005c).

More flexibility could entail greater discretion in hiring and firing of personnel, and the introduction of performance incentives as part of remuneration. Experience from the PROFIM shows that greater flexibility has led to the preparation of plans for human resources management, organizational restructuring, and streamlining of administrative processes.

Policy Options for Institutional Strengthening. A phased-in adjustment and extension to the subnational levels of the DIPRES-based system for Management Control and Budget by Results could be an important element of a broader
program to enable local governments to formulate and implement policies that respond to local preferences, enhancing the capacity of local governments and creating incentives for good performance. The system has proven to be one of the most effective worldwide; it has the potential to evaluate not just programs but government performance and policies as well, including the increasingly important regional development and innovation plans.

The system currently consists of six main programs of which five could, in an adjusted manner, be phased in at subnational government levels.

(i) The evaluation program (EP) could be readily extended to selected priority programs at subnational levels. Implementation of the PE might start with desk evaluations, then extend to impact evaluations. What appears to be most important is to link the EP to regional and local budget cycles so that - like at the national level - evaluations enrich budget decisions. A pilot approach, beginning with the largest regions and municipalities, could be implemented in the early phases of the extension of the EP to subnational levels. Disclosure of evaluation reports - including its recommendations - and government commitments for enhancing the quality of the program would facilitate civil society participation in the monitoring of the evaluation's impact.

(ii) The strategic definitions (SD) could provide the strategic framework of subnational government. SD would enhance the quality of local and regional planning, tie the EP to the budget cycle and link the logical framework of subnational programs with government priorities at all levels - thereby contributing to intergovernmental expenditure coordination.

(iii) The management enhancement program could contribute to the development of standardized, common procedures in subnational administrations. The program would need to be adjusted to the particularities of local and regional administrations (particularly in the areas of Human Resources and Integrated Territorial Management) in order to properly reflect those management features of intergovernmental coordination that dominate the profile of management capacity, particularly at the regional level. Pilot, phased-in introduction could include a bonus for employees of subnational governments with good performance.

(iv) Performance indicators. DIPRES has already accumulated an enormous experience in identifying and increasingly refining performance indicators institution by institution. At this point, the national system has an average of 12 indicators per government institution. Introduction of a rigorous and sustainable program of performance indicators at subnational levels would require technical assistance from the center. Pilot introduction would again be a logical approach.

(v) The integrated management balance includes management reports with an assessment of the overall performance of each regional or local government, its SE, main results achieved during the previous fiscal year, investment projects and expected transfers.

6. Increasing Public Participation and Voice

The public can also play an important role in improving the performance of subnational governments by holding them accountable for their actions. There are at least two important preconditions for increased local accountability: 1) transparency and accessibility of information on public services and local government performance; and 2) mechanisms through which citizens can voice their preferences and concerns to local decision makers.

In order to achieve the objectives of Chile's decentralization reform - better responsiveness, and a more efficient allocation of resources - the Government could consider building on existing initiatives aimed at transparency and public participation.

Public participation in the planning process offers the opportunity both to disseminate information and to receive feedback on what is needed. The municipal government law requires that the preparation of the community development plans (Plan de Desarrollo Comunal, PLADECO) include public participation. Under PROFIM, the process encompasses several mechanisms for the public to provide inputs: surveys, suggestion boxes, personal interviews with stakeholders, community meetings and focus groups. In general, it is up to the municipalities to decide on the extent and form of the participation process.

Territorial planning, if well designed, also offers an opportunity for more public participation. There are already some initiatives underway that are aimed at strengthening the voice of local stakeholders and regional governments: as part of the Infrastructure for Territorial Development Project, territorial development framework plans for infrastructure investment are prepared through a participatory process.
Every municipality also has to have an economic and social council made up of community representatives. The council is chaired by the alcalde and is required to comment on the cuenta pública, and the efficiency of municipal services. This arrangement thus, in principle, ensures a certain level of ex-post accountability of the municipal government to the community. Equally important is the ability of the general public to monitor the performance of their local governments. Expanding the national performance monitoring system to subnational governments would facilitate this, as it would not only provide information for the executive and congress, but engage citizens in the assessment of programs and enable them to better formulate and monitor their own priorities.

Policy Options to Strengthen the Voice of Citizens. International experience with participation and voice mechanisms could help Chile improve and expand its system to strengthen local accountability. The OECD approach generally emphasizes availability of information on local government performance and formal feedback mechanisms. A number of middle-income countries, on the other hand, have had success with more direct models of public involvement. Both approaches are relevant for Chile, given the initiatives that are currently under way. Three areas in particular are of interest:

(i) Strengthening transparency: When local governments make information on local service standards readily available, citizens are able to assess whether local governments perform adequately. In Australia, Citizen's Charters have been adopted at the state/territory level, guaranteeing specific standards for service delivery. In the UK, local governments produce annual Best Value performance plans with public consultation, and the plans are made available to the public. The performance indicators are then published at the national level, enabling citizens to compare their local government's performance against other jurisdictions.

(ii) Participatory budgeting: Participatory budgeting can increase efficiency in budget allocations by reducing agency costs and breaking down information barriers between the state and society. It also ensures that there is a high level of transparency in the budget formulation process. One of the most successful examples of participatory budgets can be found in the municipality of Porto Alegre in Brazil, where citizens take part in determining spending priorities for infrastructure and social services through a system of grassroots assemblies. The share of the municipal budget subject to this process started out small, but has been gradually increased over time. Chile has recently begun to experiment with participatory budgeting on a selective basis; this could be extended to a larger share of the budget.

(iii) Participatory Performance Monitoring: One of the most effective tools to monitor local government performance are citizen report cards. In Bangalore, India, a local NGO first used citizen report cards to assess the quality of local services. Report cards are now a common tool in other countries as well; for instance, in the Philippines, where the results of the local government performance survey are linked to budget allocations. Other tools include public surveys and instruments that assess citizens' willingness to pay for certain services.
References


Covarrubias, Francisco F (2000). La Descentralizacion en Chile. Background paper for the policy note on regional development.


Font et al. (1999)


