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# Chile

## Household Risk Management and Social Protection

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## Currency Equivalents

US\$ 1.00 : Ch\$ 600 (Variable)

## Fiscal Year

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## Glossary of Acronyms & Special Terms

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<b>AFPs</b>	Private, dedicated pension fund managers – the reformed pension system commonly referred to as the “AFP System”
<b>CAEC</b>	Additional insurance coverage for catastrophic health events, provided to ISAPRE affiliates
<b>CASEN</b>	Chile’s national household survey, conducted every two years
<b>DIPRES</b>	Budget Office, Ministry of Finance
<b>Ficha CAS</b>	Questionnaire based targeting instrument used to prioritize recipients of social transfers
<b>FONASA</b>	Chile’s public health insurance system
<b>ISAPREs</b>	Chile’s private health insurance providers
<b>MIDEPLAN</b>	Ministry of Planning
<b>MPG</b>	Contributory minimum pension guarantee
<b>PASIS</b>	Non contributory, social assistance benefit to elderly indigent
<b>PAYGO</b>	Pay-as-you-go financing for social insurance institutions – contributions from active workers pay current benefits
<b>PEPs</b>	Public employment programs, both direct employment and private employment subsidies
<b>SC</b>	Non-contributory benefit for unemployed
<b>SUF</b>	Non contributory single subsidy to poor families
<b>AUGE</b>	Proposed guaranteed minimum package of health insurance coverage

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Vice President:	David de Ferranti
Country Director:	Axel van Trotsenburg
Human Development Director:	Ana Maria Arriagada
Human Development Lead Economist:	Ariel Fizsbein
Human Development Sector Leader:	Jesko Hentschel
Social Protection Sector Manager:	Christopher Chamberlin & Helena Ribe
Task Team Leader:	Truman Packard

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## Abstract

This report is part of the World Bank's advisory and analytical assistance to the Government of Chile. The report examines whether Chile has a social protection "*system*" - broadly defined to include policy interventions, public institutions, and the regulation of private institutions that lower the welfare costs of adverse shocks to income from job loss and extended unemployment, health episodes, old age, and life-time poverty - or simply a set of loosely coordinated programs. Further, we assess whether households are provided with appropriate tools to mitigate risks to their income, identifying gaps in coverage and where instruments are missing. Finally, the report provides the Government with a set of guidelines, grounded in a conceptual framework, that if carefully applied, could increase the effectiveness of social protection.

# Acknowledgements

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The report was prepared by a team led by **Truman G. Packard** (Senior Economist, Social Protection, World Bank, and principal author of this report). The team consisted of **Norbert Fiess** (Economist, Office of the Chief Economist, LCR, World Bank), **Claudio Montenegro** (Research Analyst, Development Economics Research Group, World Bank), **Wayne Vroman** (Urban Institute), **Julie Litchfield** (University of Sussex), **Ricardo Bitran** (Bitran & Associates), **Claudia Serrano** and **Dagmar Raczynski** (Asesorias Para el Desarrollo), **Carola Pessino** (University Torcuato DiTella), and **Juan Yermo** (OECD). **Daniel Oks** (Lead Economist, World Bank) and **Zeinab Partow** (Country Economist, World Bank) provided invaluable guidance and inputs to the final versions of the report.

The Bank's team worked under the guidance of **Myrna Alexander, Axel von Trotsenburg** (Country Directors for Argentina, Chile, Paraguay and Uruguay in 2001 and 2002, respectively), **Ana-Maria Arriagada** (Sector Director, Human Development Department), **Indermit S. Gill** (Economic Advisor to the PREM Vice President), **Ariel Fiszbein** (Human Development Lead Economist), **Jesko Hentschel** (Human Development Sector Leader for Argentina, Chile, Paraguay and Uruguay), **Christopher Chamberlin** and **Helena Ribe** (Sector Managers, Social Protection, Latin America and Caribbean Regional Office in 2003 and 2004, respectively). Invaluable assistance and support throughout the preparation of the report was provided by **Lerick Kebeck, Christina Alquinta, Febe Mackey, Veronica Yolanda Jarrin, Tania Gomez** and **Natalia Moncada**.

This report summarizes the findings and conclusions drawn from eleven specially commissioned background papers prepared by members of the team and cited in the references section. The background papers are available at <http://www.worldbank.org/lacsocialprotection>.

The report has benefited immensely from the comments of senior reviewers inside and outside the World Bank. The reviewers for this task were **Robert Holzmann** (Director, Social Protection Network, World Bank), **Guillermo Perry** (Chief Economist, Latin America and Caribbean Regional Office, World Bank), and **Jose Pablo Arellano** (Economic Commission for Latin America and the Caribbean) who provided detailed comments, and to whom the team owes a debt of gratitude.

# Chile: Household Risk Management and Social Protection

## Executive Summary

### **Part 1. Objectives and Scope of the Report**

This policy report on Household Risk Management and Social Protection was prepared as part of the World Bank’s annual advisory and analytical assistance to the Government of Chile. The objectives of the report are: to determine whether Chile has a social protection “*system*” (which we broadly define to include policy interventions, public institutions, and the regulation of private institutions that lower the welfare costs of adverse shocks to income), or simply a set of loosely coordinated policies and programs; to assess whether households are provided with the appropriate instruments to efficiently mitigate risks to income, identifying gaps in coverage, difficulties in delivery, and missing instruments; and, to provide the Government with a set of guidelines, grounded in a conceptual framework on how to increase the effectiveness and efficiency of social protection, that could serve as a guide to reforms and the formulation of new policies in the medium term.

This report is organized according to specific risks to household income. Separate sections of this report focus on the risk of poverty stemming from job loss, the risk of poverty arising from shocks to health, and other adverse shocks, respectively. In each section the nature of the particular shock is examined using a conceptual framework borrowed from the economics of insurance, and the optimal insurance strategy to lower losses from the shock is identified. Finally, the set of insurance instruments available to households in Chile to mitigate the loss in question are examined and evaluated.

In addition to risks management at the household level, a section of the report is dedicated to actions taken at the country level by governments keen on lowering the risks of future shocks to income, and augmenting the set of instruments available to their citizens. Thus the sections on each specific risk are preceded by a brief discussion of the repercussions of economic and fiscal management on social protection policies, with special emphasis placed on institutions recently established in Chile to ensure counter-cyclical public expenditure.

### **Part 2. Conclusion and Principal Policy Recommendation: To Expand Coverage Against Risks to Income, Eliminate the Distinction Between “Formal” and “Informal” Employment With Regard to Social Protection Policy**

On the whole we find that Chile succeeds in providing households with the instruments that they need to mitigate shocks to income. The institutions Chile has put in place to help households lower losses from these shocks - from the new unemployment insurance system, the retirement security system and the mixed health insurance system - are generally appropriately designed to match the nature of the risks they are intended to cover. This said, while still in a minority, too many Chilean households – even among the non poor - do not have access to the sophisticated, state of the art social protection institutions that are in place.

This lack of coverage is a matter of concern from a public policy perspective. There is evidence that the principal risks to income identified in this report do not occur independently and in fact are highly correlated. This is especially true for poorer groups. Households are made particularly vulnerable to an array of shocks (health, disability, the costs of unexpected additional children or other dependents) if members have lost employment. If they have lost employment without a contract or are among the self employed whose businesses fail in economic downturns, this vulnerability is compounded since they face explicit and implicit institutional barriers to even basic forms of protection. And since a significant number of these uncovered workers are not counted among the poor, the relatively well targeted social safety net that Chile has in place will not catch them soon enough should they suffer a fall.

At this stage few of the current social protection policies and new initiatives –with the exception of *Chile Solidario*, targeted only to the very poorest - directly address the plight of Chile’s unprotected workers (whether this be conditioning access to public employment programs on proof of unemployment and paying beneficiaries the legal minimum wage; phasing out the non-contributory *subsidio por desempleo* to finance the pooled component of the new contributory unemployment insurance system; increasing the complexity of mandated savings in the private pension system without consolidating and lifting the ration on poverty prevention pensions). In fact recent increases in the minimum wage may have even raised barriers and created new obstacles to the social protection system (through increased incidence and duration of unemployment; threats to the sustainability of public employment programs; greater risk of school desertion among younger workers leading to lower probability of formal employment; and lower rates of participation in the pension system).

While small, marginal changes can be recommended to increase the efficiency of each area of social protection (for example, providing self targeting instruments for the unemployed from the informal sector; eliminating flat fees in the private pension system; giving a greater weight to voluntary “third pillar” instruments) the single most important challenge ahead is to close the gap in coverage.

As an over-arching principal of social protection policy, Chile could seek to blur the lines between employment in the “formal” and “informal” sector in order to close the coverage gap. In addition to increasing the efficiency of the labor market, as it debates changes to the social protection system, the Government might consider *where* (that is, to which branch of the system) it needs to increase access most – protection against poverty from job loss; the cost of health events; or poverty from the loss of earnings ability due to old age - and gradually remove the contribution requirement for minimum levels of coverage, financing benefits instead through levies with a wider tax base than pay-roll taxes. To use traditional terms, this would imply changing the current combination of contributory social insurance and non-contributory social assistance, giving greater weight to the later. Recent reforms to the health insurance system and the launch of Chile Solidario are consistent with this over-arching principal.

In fact the conceptual insights drawn in this report show that the largely political distinction between “contributory” and “non-contributory” interventions can be detrimental and an obstacle to reform considerations. On the one hand “contributory” social insurance systems that deny minimum benefit levels to individuals without a history of explicit contributions, but that nevertheless pay benefits that are guaranteed by government transfers, often



redistribute income from all current and future tax payers to those who have accumulated rights. Even where the contribution and benefit parameters of a social insurance system are set to be “self financing”, government (society) still pays for short-falls between benefits and contributions during economic downturns and for indexation to protect the real value of benefits during bouts of inflation. Thus all current and future tax payers “contribute” in one way or another to maintain the number and the value of benefits paid to a relatively smaller group of “covered” workers. On the other hand, separate, seemingly non-contributory transfer arrangements to the poor are perceived as charity rather than just another instrument with which households can manage risks to income, and are often only reluctantly considered in budget allocations. Budget allocations to “social assistance” typically count on the support of small, relatively weak political constituencies, and have been historically vulnerable to cuts.

In countries where labor is very mobile between sectors and the informal economy is large, structuring the premia for social insurance programs as pay-roll taxes is an increasingly ineffective and unreliable way to finance public risk pooling arrangements and can lead to unnecessary exclusion. A more reliable source of financing for public risk pooling mechanisms would be general revenues. In fact, financing basic, minimum levels of protection through taxes other than pay-roll taxes would erase the distinction between the “covered” and “uncovered” sectors of the labor force. However, this requires that minimum benefit levels and transfers be viewed not as the social assistance charity of the state and society, but as additional instruments available to individuals and households to manage shocks to their income should they suffer the misfortune to need them. Chile’s positive experience with providing minimum social assistance financed out of general revenue, primarily VAT – in effect a country-wide risk pooling device – augurs well for this policy course.

However, with the exception of the *Chile Solidario* initiative targeted to the very poorest, instead of placing greater reliance on self targeting, non-contributory benefits financed through general taxation, Chile has chosen policies that require greater participation in its contributory programs, and that will necessitate substantial improvements in monitoring compliance and enforcement capacity. The avenue chosen by the Government will increasingly make social protection policies in Chile similar to those in OECD countries. Given the small size of the informal sector and the low levels of poverty in Chile relative to its neighbors in the region, this policy direction might be the most appropriate. Chile has the information it needs to increase its administrative capacity to monitor and enforce compliance. However, the critical links needed to put these information resources to their most effective use are still missing. Even if successful, the downside of this policy avenue is that in the time it takes for Chile to extend the reach of contributory programs, uncovered workers could suffer unduly from losses, especially should the country be faced with a macroeconomic crisis.

In any case, either policy direction (reliance on self targeting or increased compliance), will require closer synchronization of social protection policy. This will make more centralized coordination – if not direct management - of the various areas of social protection critical. In its attempt to launch *Chile Solidario*, MIDEPLAN is well positioned to take up this coordinating role (at least initially with regard to social assistance). The Government should

focus its efforts on making the new concerted intervention for Chile's 225 thousand poorest families a *first step* in a wider process of integration and coordination of social protection policies – the nucleus of a new, more institutionalized social protection system - rather than miss this opportunity and risk the initiative degenerating into just one more social assistance intervention among the many overlapping programs that already exist.

### **Part 3. Detailed Findings of the Background Analysis Summarized in the Report**

The report summarizes the findings and conclusions of thirteen background papers. Following the executive summary and to motivate the analysis in the remainder of the report, Section I presents updated measures of poverty and income distribution for Chile, using the same methodology employed in the two previous World Bank reports on poverty and income inequality. This update shows that after a period of impressive growth, average incomes in Chile have stagnated in the late 1990s; that there has been a slight increase in income inequality since 1998; and that while poverty has continued its ten year downward trend, progress in eliminating *indigence* in Chile appears to have stagnated.

The poverty and inequality update is followed by an analysis of the risks faced by individuals and households over the life cycle; a set of indicators showing the incidence of these risks among different income groups in Chile; as well as an overview of various government interventions intended to help households manage the losses arising from these events. With few exceptions, in almost every stage of the life cycle, risks to earnings capacity and earned household income is highest among the poorest groups. Further, while Chile's households are relatively well covered by social protection programs, and beneficiaries of key targeted interventions indeed tend to be in poorer groups, gaps in coverage are apparent among the poor and in rural areas.

Finally, to narrow the scope of analysis and sharpen the focus of this report, Section I closes with quantitative and qualitative evidence that identifies the adverse shocks to income that are most commonly occurring and are of greatest concern to households in Chile. These principal adverse shocks to income – job loss, costly health events and a loss of earnings ability in old age - are then taken up separately in later sections of the report.

Section II summarizes the conceptual framework for analyzing risk and social protection employed by the team. The conceptual framework, drawn from a seminal paper on the economics of insurance, offers insights on risk management behavior both at the household level and at the level of government, and provides policy conclusions on how a social protection system could be designed.

First, there is a clear role for government in augmenting the set of instruments that households have at their disposal (pooled insurance, individual saving and prevention measures), stepping in where markets are missing or fail (by providing social insurance to pool risks that the private sector cannot cover); or where factors exist that prevent households from adequately insuring themselves (by regulating the supply, and sometimes even the demand for secure private savings vehicles). Second, the type of instrument government should provide to help household manage risks to their income depends on the nature of the adverse shock in question (whether it is frequently occurring or rare; whether it entails a small or relatively large loss), as well as that country's "*insurance fundamentals*". Third, moral hazard is not an

inevitable outcome of providing social insurance. In fact, as a country's insurance fundamentals improve (that is, as governments remove distortions in product and factor markets, lower the likelihood of financial crises through prudent economic management, and increase their administrative capacity) the dangers of moral hazard arising from public social insurance interventions can be lowered. Finally, since a country's insurance fundamentals change over time and with development, a social protection system that combines risk pooling and individual saving should ideally have flexible parameters that can be adjusted (i.e. to increase the pooling component with respect to the saving component, or vice versa). Designing flexibility into the various branches of a social protection system allows a government to avoid difficult structural reforms (those that replace or introduce institutions), in favor of relatively less contentious adjustments to the parameters of the existing system as conditions change.

Section III presents the rationale for analyzing economic and fiscal management in the context of social protection policy. The importance of social risk management at the aggregate level is illustrated with a discussion of Chile's structural surplus rule. While it is too early to fully evaluate the impact of the new fiscal rule in Chile, we find that the experience to date is positive. In 2001 and throughout 2002 after the new fiscal rule was put into effect, Chile continued its fiscal consolidation effort, while pursuing a counter-cyclical fiscal policy. We find that Chile's fiscal rule is an effective instrument to mitigate macroeconomic risks. The fiscal rule adjusts for the business cycle and for cyclical fluctuations in the price of copper, and thus, like a stabilization fund, transfers resources from good to bad states. However, and perhaps more importantly, by communicating a clear signal of fiscal discipline to the markets, the new fiscal rule should help to protect against the fiscal and financial crises of confidence that currently plague Chile's neighbors in the region. Given evidence from other countries in the region that the poor and those near the poverty line suffer disproportionately in the wake of a crisis, international confidence in Chile's macroeconomic management and the lower likelihood of external shocks this confidence brings about, may be the country's most effective social protection instrument of all. However, there is also doubt as to when Chile will reach the potential GDP growth needed to recoup its accumulated deficits. While Chile is perhaps the only Latin economy capable of running an anti-cyclical fiscal policy without great risk of destabilizing public finances, such a policy can present potential risks during a prolonged downturn, including the risk of worsening credit spreads. Chile's fiscal rule has, however, some in-built flexibility which can lower this risk as potential GDP and copper price estimates are revised on an annual basis. The methodology by which potential GDP is re-estimated every year in fact biases the estimation down when actual GDP is under its potential. Copper price projections have also been lowered as actual prices have not recovered.<sup>1</sup>

The principal shocks to household income identified in Section I – job loss, adverse health events and the loss of earnings ability in old age - and the instruments available in Chile to mitigate the losses from these shocks, are taken up in the sections of the report that follow.

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<sup>1</sup> It should be noted that despite this relatively positive assessment, concern about structural balances as basis for fiscal policy rules is growing among policymakers and academics in Europe. One reason is the inability to foresee and measure cycles, and as such estimate the effects of cyclical fluctuations on the budget. An unavoidable large margin of error may prove to be the Achilles' heel of structural balance rules.

Section IV focuses on the risk of poverty from job loss and extended periods of unemployment. The section opens by examining labor market trends in Chile over the last thirty years, and changes in both the incidence and duration of unemployment with cyclical and regulatory changes. Using time series data extending as far back as 1960, the analysis presented shows that both the increasing incidence and duration of unemployment in Chile are significantly and strongly related to economic downturns and less strongly to increases in the country's minimum wage. However, while the long economic downturn that began in 1998 has taken a tremendous toll on employment, increases in the minimum wage have also raised the likelihood not only of individuals' losing jobs, but of remaining unemployed for longer periods.

The section goes on to present an evaluation of the government's interventions to help households lower their losses from unemployment, focusing primarily on public employment programs – both *direct* employment programs administered at the municipal level, and the centrally administered, *indirect* subsidies to private employment creation preferred by the Government.

We find that although more effectively targeted than direct employment programs, subsidized private employment creation may miss the most vulnerable, as private employers are likely to use government subsidies to hire the most employable or to formalize workers already employed informally. However, a more worrying set of findings are: that setting the level of wages paid by these programs equal to the minimum wage may encourage early school desertion (although there is as yet no direct empirical evidence of this); and that access to these programs is increasingly being restricted to workers who can present proof of unemployment thereby limiting access to what has been traditionally considered the policy intervention best suited to reach otherwise unprotected workers who lose informal jobs and the self employed whose businesses fail in economic downturns.<sup>2</sup>

The section on job loss closes with a review of the new unemployment insurance system that came into effect in May 2002. While analysis for this report finds that the new system is well structured to effectively mitigate the more frequent losses from job turnover (through savings) as well as the relatively rare (but increasing) losses from extended periods of unemployment (through public risk pooling), the new system is unlikely to increase coverage to workers who currently go without protection. Further, we find that the new system, while appropriately designed, may be over-funded, which could provide the government with the fiscal room necessary to either retain a modest non-contributory benefit or preferably to deploy some other self-targeting intervention specifically for workers in the informal sector that remain without cover against the risk of job loss. Public employment programs that are structured to be self targeting – by offering relatively unattractive, labor-intensive employment, and by paying low salaries relative to the economy-wide average – are consistently found to be the most effective way to help informal workers manage risk of job loss.

Section V examines the risks of poverty from shocks to health, revisiting the conclusions of the Bank's last report on health insurance issues, and presenting new empirical analysis to show the effectiveness of Chile's mixed private and public health insurance system at

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<sup>2</sup> Although admittedly requiring proof of unemployment should make it harder for individuals leaving study to seek the relatively high minimum wage in the formal sector to gain access to the subsidy.

protecting households from falling into poverty in the wake of a costly injury or sickness. Our analysis shows that the Chilean population is generally well covered against adverse health events. The number of individuals and households covered by health insurance increased in the period from 1998 to 2000. This increase was mainly attributable to a rise in the number and share of affiliates to the public branch of the system, FONASA.

However, despite this positive increase in coverage, the number of households that fell into poverty in the wake of a health shock increased over the period of analysis. This may be attributable to the fall in incomes during Chile's recent economic downturn that left households more vulnerable to any income shocks. The population at greatest risk from health shocks were those earning the lowest incomes. Our analysis shows that although affiliates to either branch of the health insurance system were less likely to suffer poverty from health expenses, FONASA performed relatively better than the ISAPRES at protecting its affiliates. Furthermore, the additional coverage for catastrophic health events provided by ISAPREs for the last several years (CAEC), slightly lowers the incidence of poverty due to health shocks. However, among the newly poor in 2000 for health reasons, a disproportionately large number were among the uninsured, showing the urgency of extending coverage of the health insurance system.

Although the health insurance system seems to be very effective at preventing poverty due to health shocks, out of pocket health expenses have a substantial impact on household incomes and are very regressive. In 2000, the majority of households whose health expenditures represented more than 15 percent of their income were from the lowest income quintile. These were households who were already poor and who became further impoverished - some moving below the indigence level - as a result of their health expenditures.

The section on adverse health events closes with a review of the Auge Plan, which is being debated in Congress, and which would provide all Chileans with a minimum level of health coverage. The plan includes new mandatory coverage for specific catastrophic illnesses, especially for infants, and increases access to primary, preventive care, and will be financed through an increase in VAT.

Section VI focuses on the risk of poverty from the loss of earnings ability in old age, identifying gaps in coverage of the retirement security system, and presenting analysis at the aggregate and household levels to explain low rates of regular contribution to Chile's multi-pillar pension system. We find an improvement in the incentives workers have to participate in the pension system at the aggregate level (an increase in contributors attributable to the introduction of individual accounts, after controlling for the economic cycle), and at the household level (a significantly greater density of contributions to the pension system among affiliates who entered the labor market after the reform in 1981). However, these improvements in participation rates seem to have stalled, as the share of the economically active populations that fails to contribute to the system remains high.

Further analysis reveals significant determinants of the pension coverage apart from the transition to individual accounts. Participation in the pension system rises with increases in the subsidy the government pays to cover co-payments of FONASA affiliates. The flat commission charged by pension fund managers negatively affects the level of coverage (while the commissions related to earnings have no impact). Finally, increases in the minimum wage

reduce the share of workers who contribute: first, by forcing relatively poorer workers to save higher amounts for old age in an illiquid, relatively costly (and perhaps perceived as relatively risky) savings vehicle; and second, by reducing the amount of minimum pension subsidy they can expect to receive if they complete twenty years of contributions.

Finally, the empirical analysis of individual portfolio decisions suggests that with respect to individual preferences, the Chilean pension system may be over-designed. Affiliated workers are using a system intended as a savings vehicle with a small risk-pooling component (the contributory minimum pension guarantee), primarily as a risk pooling device. Once they meet the contributory requirements to qualify for the minimum annuity guaranteed by the government, affiliates (with average incomes and higher) evade further contributions to the system but continue to save in the form of housing.

The section includes an analysis of recent changes to the retirement security system that give greater importance to “third pillar” voluntary savings and insurance instrument in securing retirement income, and how these policy moves on the part of the Government to shift the weights between the pillars of the system, reflect the preferences that workers are revealing. As the government sees evidence of a greater supply of affordable and secure voluntary retirement savings instruments, it could slowly scale back the mandate to save. The section closes with recommendations for how basic protection can be extended to households that go without cover through consolidation of Chile’s two poverty prevention pensions into a single, financially sustainable “first pillar”. This could involve setting a single minimum level benefit; financed from general taxation rather than pay-roll taxes; indexed to changes in prices; available at a retirement age periodically adjusted to changes in life-expectancy; and either targeted to the elderly poor, or available universally on a taxable basis, or with surcharges for wealthier groups.

Section VII introduces the concept of the “residual” or structural poor, quantitative estimates of the determinants of this persistent form of poverty, and qualitative evidence offering insights on how the Government might identify and reach this most vulnerable group. Our analysis shows that after controlling for unemployment, health shocks and old age, the “residual” or structural poor come from larger households with a greater number of younger children; tend to live in rural areas; tend to be employed (and self employed) in agriculture; and tend to have fewer years of formal education. The concentration of this residual poverty in rural areas comes as little surprise given the rapid structural changes in the rural economy in Chile, and points to an isolation from public and privately supplied risk management instruments as well as social transfers.

Further, the findings of focus group discussions on risks to income reveal that the principal shocks identified and discussed in earlier sections – job loss, adverse health events and loss of earnings ability with old age – do not occur in isolation and rarely do participants report having recovered from a shock. When one of these principal shocks occurs, even minor subsequent shocks can prevent households from fully recovering from the original loss and thus from taking up available instruments to mitigate future losses. In addition, while individuals are generally aware of the instruments available to mitigate losses, most engage in informal coping – adjusting to a loss – rather than ex-ante risk pooling, saving or prevention. This said, we find that among informants of all income levels, rarely is expenditure on children’s education cut back in the wake of an adverse shock to income.

The section on residual, structural poverty closes with a review of the Government's new social protection policy initiative, *Chile Solidario*: a concerted effort to lift Chile's 225 thousand poorest families out of indigence poverty. A preliminary review of the design of the new initiative shows that it is appropriately targeted to the poorest that require a more proactive intervention to draw them into the social protection system. This proactive intervention - more characteristic of social programs in the OECD than those in other developing countries - may be appropriate given the low levels of indigence and poverty in Chile and the country's relatively superior administrative capacity.

Section VIII presents the findings of an institutional audit of social protection programs in Chile, and recommendations for how the social protection system can be made more effective. This section presents a critical evaluation of the current institutional infrastructure, information and data systems in Chile, identifying problems with the existing data available to the government; missing information; and how this missing information may impair the efficiency and efficacy of social protection.

We find that the effectiveness and efficiency Chile's social protection system would be improved by greater coordination. What is currently missing is a single government body with the authority to set standards, monitor programs, evaluate their effectiveness, and propose improvements. However, rather than create a new public agency, and run the risk of introducing an additional layer of bureaucracy, the Government could achieve greater coherence and coordination of its social protection policies - particularly social assistance - by strengthening the Ministry of Planning (MIDEPLAN) to fill this role.

Further, the new social protection authority would ideally coordinate the integration and management of a single data base (or a protocol for integrating data bases held by the separate public agencies) to increase administrative capacity. The critical links between data bases on the poor; targeting and receipt of social transfers; employment and earnings; taxation and compliance; and the property and civil registries in Chile are currently missing. Such links between regularly updated data bases allow governments in OECD countries to minimize both errors of inclusion and errors of exclusion. Integration of the available data (as well as correcting some of the weaknesses of Chile's targeting instruments) will allow government agencies to accurately and continuously identify the poor, weed out tax evasion, and monitor the impact of their social policies and programs. The current information systems fail to identify individuals and households at risk largely through failure to coordinate an enormous amount of data that is already being collected publicly and privately.

# Chapter 1: Trends in Poverty and Inequality, Risk Indicators, and the Reach of Chile's Social Protection System<sup>1</sup>

## CHANGES IN POVERTY AND INCOME DISTRIBUTION SINCE 1998

Although social contracts differ widely between countries, social protection policies are generally intended to safeguard households' investments in human capital. Social insurance – the dominant component of the social protection infrastructure in most countries – should prevent households from falling into poverty in the wake of a shock to income. Social assistance should gradually lift the current poor above the poverty line. Thus, a country's poverty indicators are finally the most relevant criteria against which to evaluate its social protection system. Judged by this criteria, Chile has done extraordinarily well, although its progress in eliminating poverty is mainly attributable to a broader set of policies than just social protection. For almost the entire 1987-1998 period poverty in Chile declined. The rapid decline in poverty was mainly associated with economic growth – the fruit of market-friendly policies and prudent economic management – as well as an increase in targeted social spending.<sup>2</sup> Furthermore, contrary to popular perception, income inequality remained very stable over this period, even if high in comparison with other countries.

This report follows a recently completed World Bank study on poverty and income inequality in Chile from 1987 to 1998 (World Bank, 2001). Rather than repeat the analysis in the last poverty report, this discussion of household risk management and social protection focuses on the efficiency and efficacy of instruments available to household to mitigate the risk of falling into poverty from shocks to income. This said, the availability of new household data allows an updated look at trends in indigence and poverty as well as income inequality, to motivate the discussion of risks to income in the sections that follow.<sup>3</sup>

The three key results of this update are: (i) after a period of growth, average incomes in Chile have stagnated in the late 1990s; (ii) although stable for several years, there has been a slight increase in income inequality since 1998, led by rising dispersion at both the very top and very bottom of the income distribution; and (iii) while poverty has continued its ten year downward trend in the short period since 1998, the fall in *indigence* in Chile (as measured by the lowest of three poverty lines) appears to have stagnated.

Average household incomes per equivalent adult rose by only a very small proportion between 1998 and 2000 (see Table 1). Mean income rose by less than half a percent while median income rose by a slightly stronger 1.6 percent. This has been accompanied by an increase in inequality (as measured by three of four inequality measures GE0, GE1 and GE2). The upward trend, after a reasonably consistent fall in inequality between 1987 and 1994, confirms the suggestions from the Bank's earlier report that inequality in Chile may be

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<sup>1</sup> Poverty and distribution indicators are drawn from a background paper by Julie Litchfield. The risk and coverage indicators were provided by Ximena Quintanilla Superintendencia de AFP.

<sup>2</sup> During the sub-period 1992-1994 and later in the 1990s when the rate of economic growth declined there was also a lower rate of change in poverty

<sup>3</sup> Indicators are updated to December 2000 when the last wave of the CASEN survey was completed.



beginning to rise (World Bank, 2001). The measure most sensitive to the upper tail of the distribution (GE2), shows the largest rise of almost 9 percent. However other changes between 1998 and 2000 are small. Over the 1990s as a whole, the growth of mean incomes has been accompanied by increases in income inequality across the range of summary measures.

**Table 1. Incomes and Income Distribution per Equivalent Adult in Chile, 1987 - 2000**

	<b>1987</b>	<b>1990</b>	<b>1992</b>	<b>1994</b>	<b>1996</b>	<b>1998</b>	<b>2000</b>
Mean	90598	101075	122353	126644	142892	159821	160441
Median	48868	57210	67663	71684	79267	87580	89031
Gini	0.5468	0.5322	0.5362	0.5298	0.5409	0.5465	0.5457
GE0	0.5266	0.4945	0.4891	0.4846	0.5139	0.5265	0.5297
GE1	0.6053	0.5842	0.6151	0.5858	0.6058	0.6264	0.6445
GE2	1.3007	1.3992	1.505	1.5634	1.4123	1.6172	1.7597

Source: Litchfield (2002)

Notes: Author's calculations with CASEN surveys 1987 – 2000. All income values are total monthly household income per equivalent adult, and deflated to Santiago 2000 pesos.

**Table 2. Income Shares per Decile in Chile, 1987 – 2000**

	<b>1987</b>	<b>1990</b>	<b>1992</b>	<b>1994</b>	<b>1996</b>	<b>1998</b>	<b>2000</b>
1	1.34	1.39	1.52	1.43	1.40	1.30	1.31
2	2.41	2.57	2.60	2.57	2.44	2.37	2.46
3	3.17	3.33	3.38	3.36	3.25	3.18	3.26
4	3.97	4.19	4.16	4.18	4.07	4.02	4.08
5	4.88	5.14	5.04	5.14	5.01	4.95	5.02
6	6.04	6.28	6.16	6.33	6.17	6.12	6.14
7	7.66	7.92	7.73	7.93	7.80	7.79	7.62
8	10.24	10.39	10.16	10.55	10.38	10.32	10.07
9	15.71	15.51	14.82	15.76	15.45	15.50	14.87
10	44.58	43.28	44.43	42.73	44.05	44.43	45.16
Top 1%	12.02	12.35	13.68	12.41	12.70	13.22	14.30

Source: Litchfield (2002)

Notes: Author's calculations with CASEN surveys 1987 – 2000.

The rise in income inequality between 1998 and 2000 appears to be due to subtle changes in the income distribution. Table 2 shows income shares by decile group for each year. Between 1998 and 2000 the lower six deciles (i.e. representing the bottom 60 percent of the

distribution) all increased their share of total income, with decile groups 2 and 3 experiencing the largest increase, reflecting the rise in median incomes noted above. This would explain the slight fall in the Gini coefficient whereas the small rise in GE0 may reflect the smaller, almost negligible, increase in the share of the lowest decile group relative to gains further up the distribution. The large increase in GE2 is supported by the rise in the share of the richest decile group, and in particular by that of the top 1 percent of the distribution.

The analysis of poverty estimates using three different poverty lines (two of which correspond to the indigence and poverty lines used by MIDEPLAN) provides further insight into the changes in the distribution of income (see Table 3). Between 1998 and 2000 poverty incidence, depth and severity (measured using the indigence line \$20,887 per month) rose slightly – confirming the evidence of greater dispersion in the bottom of the income distribution. The upward movement in indigence is cause for concern, and confirms the results of MIDEPLAN’s analysis of the CASEN 2000. Estimates of poverty using the two, higher, poverty lines of \$40,562 and \$46,038 per month, show a decline in poverty, continuing the downward trend from 1987. Again, this suggests an improvement in incomes above the first decile.

**Table 3. Poverty in Chile, 1987 – 2000**

	1987	1990	1992	1994	1996	1998	2000
<b>Indigence</b>	\$20,887						
Headcount	12.7	9.0	4.7	5.1	4.2	3.9	4.2
Poverty Gap	4.1	3.1	1.7	2.0	1.5	1.5	1.7
FGT2	2.1	1.8	1.1	1.2	0.9	0.9	1.0
<b>Poverty Line L</b>	\$40,562						
Headcount	40.0	33.1	24.2	23.1	19.9	17.0	15.7
Poverty Gap	15.7	12.0	7.8	7.6	6.5	5.7	5.4
FGT2	8.2	6.1	3.8	3.8	3.2	2.9	2.8
<b>Poverty Line H</b>	\$46,038						
Headcount	47.3	38.9	30.0	29.0	24.6	21.2	19.9
Poverty Gap	19.1	14.8	10.1	9.8	8.4	7.3	6.8
FGT2	10.3	7.8	4.9	5.0	4.1	3.7	3.6

Source: Litchfield (2002)

Notes: Author’s calculations with CASEN surveys 1987 – 2000. Poverty lines are monthly per capita poverty lines, expressed in Santiago 2000 pesos.

However, the results summarized above point to a worrying trend. While increases in dispersion in the upper tail have been a feature of the Chilean income distribution since 1987 (i.e. GE2 has risen almost consistently across the whole period and shares of the top 1% have risen almost continuously – see World Bank 1997 and 2001), this was usually accompanied by a reduced dispersion in the lower tail of the distribution, reflected by increased shares of lower income groups and falling poverty levels across all poverty lines. Visually, one could

imagine the entire income distribution shifting up, with the lower tail compressing and the upper tail stretching out a little further each year. However, the updated indicators show that the distribution has remained essentially static in location (little change in mean income) with increases in dispersion in both tails.

As earlier Bank reports have found, reductions in poverty were largest in years of faster growth, i.e. from 1987 to 1992, and smaller in years after 1992 when growth was slow. Furthermore, when growth slowed down the indigent poor, i.e. those with the lowest incomes of all, seem to be hit worse: in 1994 and again in 2000 all measures of indigent poverty rose.

#### **LIFE-CYCLE RISK INDICATORS IN CHILE & THE REACH OF SOCIAL PROTECTION<sup>4</sup>**

Table 4 presents a set of indicators of risks to individual and household incomes, applying an emerging convention of categorizing risks according to their relevance during different phases of the life cycle.<sup>5</sup> For example, risks to future income-earning capacity relevant from ages 0 to 5 are malnutrition and failure to attend pre-school. Further risks to future earnings capacity among children from 6 to 14 include failure to attend school and child labor. From age 15 to 24 prior to (full) entry into the labor force, risks primarily arise from interruptions in the final years of education, failure to complete secondary school (that is later manifest in lower relative productivity and earnings in the course of individuals' working lives), and failure to enter university – a level of education that is becoming increasingly necessary to remain competitive in the Chilean labor market.

During individuals' working lives – usually from ages 25 to 64 – the primary risks to income are typically unemployment, ill health and disability. A particular phenomenon in Chile – remarkably low numbers of women in this age group participating in the labor force – can also be a risk to earnings capacity and income. Furthermore, in most countries social protection systems condition access to protection on holding a legal employment contract, excluding informal workers without a contract and the self employed. Although there is a large and growing literature that would suggest that self employed individuals often choose to run their own businesses over employment with a contract,<sup>6</sup> unless they are taking measures

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<sup>4</sup> Readers should note that the data appearing in Tables 4 and 5 of this version of the report are different from the printed version. Errors in the estimation of the variables presented were discovered after the report was sent for publication. Tables 4 and 5 in the version of the report in Spanish have also been corrected.

<sup>5</sup> Similar tables are presented in social protection reports prepared for Argentina and Mexico.

<sup>6</sup> Several recent publications focus on whether individuals are queuing for formal employment in Latin America (see Maloney, 1998a, 1998b, 1999, 2000, 2001). Contrary to a large literature on labor markets in developing countries, these studies find little evidence that self employment is the residual sector of a dualistic labor market, or that the self employed are queuing along with the unemployed for formal contract jobs. Data on transitions in and out of the labor market and across sectors in Mexico, Argentina, Brazil and Chile show that movement into self employment is often greatest during periods of economic growth – a direction more consistent with an entrepreneurial “pull” into self employment, rather than the popular notion that workers are “pushed” out of formal jobs into small enterprise. However, unlike self employment, informal wage employment often does exhibit many of the features of the free-entry, residual employment safety net depicted in the literature on segmentation. Individuals in this branch of the informal sector are often indistinguishable in their age and education from the unemployed. In Chile, Packard (2002) finds that informal employees are more likely to have a greater number of dependents as parents and heads of household than those still searching for a job, and thus, are more likely to take up informal employment out of greater income necessity. This raises the concern that informal employers may be unwilling to incur the costs of “formalizing” their workers by providing access to the national retirement security system.

**Table 4. Indicators of Relevant Risks To Earnings Capacity and Household Income Over the Life Cycle**

Population	Risk Indicator	Urban			Rural		
		dec 1	dec 5, 6 & 7	total	dec 1	dec.5, 6 & 7	total
From 0 to 5 years	Malnourished (incidence undernourished, underweight, overweight)	<b>12.2</b>	11.4	11.9	<b>12.9</b>	12.2	12.7
	Does not attend pre-school (only 5 year olds)	<b>30.1</b>	24.0	25.6	<b>62.4</b>	55.8	55.9
From 6 to 14 years	Does not attend primary schools (6-11 years)	<b>10.1</b>	8.7	9.3	<b>8.1</b>	7.8	8.1
	Age does not correspond to grade level (6-11 years) (1)	<b>8.2</b>	3.3	4.9	<b>14.6</b>	6.9	8.6
	Does not attend primary nor secondary school (12-14 years)	<b>8.2</b>	4.8	5.9	<b>11.4</b>	7.4	7.7
	Age does not correspond to grade level (12-14 years)	<b>24.9</b>	14.3	15.9	<b>35.6</b>	24.3	25.7
	Child labor (12-14 years) (2)	<b>1.6</b>	0.8	1.2	<b>1.6</b>	1.4	1.4
	Inactivity- does not attend school and does not work (12-14 years) men	<b>3.2</b>	0.8	1.3	<b>6.5</b>	1.6	2.9
	women	<b>2.9</b>	0.9	1.7	<b>6.9</b>	4.7	4.2
From 15 to 24 years	Does not attend secondary school (15-17 years)	<b>34.9</b>	14.6	19.4	<b>48.3</b>	38.3	39.3
	Does not attend university (18-24 years)	<b>92.1</b>	77.0	76.3	<b>98.3</b>	96.4	93.4
	Unemployed (15-24 years) men	<b>56.2</b>	16.1	21.8	<b>28.5</b>	9.5	12.6
	women	<b>50.7</b>	18.5	23.7	<b>36.1</b>	18.1	19.4
	Inactivity- does not attend school and does not work (15-17 years) men	<b>13.9</b>	5.1	6.8	<b>15.6</b>	8.7	11.6
	women	<b>18.5</b>	7.2	8.9	<b>30.8</b>	20.5	21.4
	Inactivity- does not attend school and does not work (18-24 years) men	<b>49.8</b>	16.6	22.0	<b>39.6</b>	20.0	21.5
	women	<b>62.9</b>	33.4	37.6	<b>73.9</b>	57.1	55.9
From 25 to 64 years	Unemployed men	<b>33.0</b>	6.2	8.2	<b>21.6</b>	4.9	5.8
	women	<b>40.9</b>	7.2	9.7	<b>28.8</b>	8.3	7.8
	Workers without a contract (3) men	<b>34.1</b>	10.4	11.9	<b>42.1</b>	20.6	21.2
	women	<b>49.9</b>	17.4	18.1	<b>44.3</b>	30.5	25.1
	Seasonal workers men	<b>45.6</b>	17.5	17.6	<b>53.2</b>	28.9	28.8
	women	<b>40.7</b>	15.1	15.1	<b>58.8</b>	36.4	30.0
	Self-employed men	<b>18.3</b>	21.7	20.1	<b>40.9</b>	27.6	31.6
	women	<b>18.8</b>	17.5	17.5	<b>25.5</b>	17.2	23.7
	Non professional self-employed (% of self-employed) men	<b>98.8</b>	98.8	94.1	<b>99.7</b>	99.9	99.3
	women	<b>100</b>	99.0	93.0	<b>100</b>	99.7	98.6
	Part-time workers (% of all employed) men	<b>6.5</b>	2.4	3.1	<b>9.1</b>	2.1	2.8
	women	<b>24.2</b>	10.9	12.4	<b>19.9</b>	14.5	12.3
	Non-educated or with incomplete basic education (25 to 40 years)	<b>29.0</b>	7.7	10.9	<b>62.3</b>	45.4	44.5
	Non-educated or with incomplete basic education (41 to 64 years)	<b>44.1</b>	22.6	21.8	<b>77.8</b>	68.8	64.2
	Disabled (4) men	<b>7.7</b>	5.1	5.0	<b>11.4</b>	6.5	7.1
women	<b>7.6</b>	5.4	5.1	<b>9.9</b>	6.5	7.0	
Reports health problems (sickness or accident)	<b>14.7</b>	13.2	12.5	<b>17.2</b>	14.1	14.5	
Head of household with dependents (5)	<b>17.1</b>	48.0	35.5	<b>3.5</b>	37.9	26.3	
Women neither working nor seeking work (% of women 25 – 64)	<b>65.8</b>	48.5	47.7	<b>84.3</b>	75.8	73.9	
65 years and up (5)	Elderly adult (% of the total population) men	<b>3.9</b>	6.6	6.4	<b>11.6</b>	9.1	9.8
	women	<b>4.6</b>	10.1	8.6	<b>8.4</b>	8.6	9.5
	Elderly adult living alone or with spouse men	<b>38.8</b>	36.8	38.0	<b>51.1</b>	26.6	36.2
	women	<b>41.9</b>	36.4	37.6	<b>56.7</b>	24.9	35.8

- (1) Children that are behind in educational level according to their age;
- (2) Includes working and unemployed children;
- (3) Hold a contract can act as a proxy for having access to tenure based severance, pensions & health coverage;
- (4) Disability in hearing, speaking, seeing, mental, physical or psychiatric;
- (5) Heads of household eligible to receive family assistance with dependents of the total heads of household w/ dependents; (6) Note that the legal retirement age for men and women is 65 and 60 years, respectively.

to protect themselves, these individuals (above all non-professional self employed) and their dependents can be especially vulnerable to adverse shocks to income. While the self employed may rely on a relatively greater endowment of private resources for protection, many studies show that employees who do not hold an employment contract are vulnerable.

The risks to income in the last stage of the life cycle are more subtle. The loss of earnings ability that comes with age forces individuals and households with an elderly household head to rely on previously made provisions to finance their current consumption. Actions taken previously to secure adequate consumption in old age vary widely from private savings, to contribution to national pension systems, and investment in family with the expectation that care will be reciprocated. Thus, it is not aging *per se* that poses a risk, but reliance on the returns and security of investments made during working life for current consumption. Therefore, households headed by the elderly and where there are no household members of working age can be particularly vulnerable.

Table 4 presents the incidence of the risks discussed above and others identified for this report. Using data from the 2000 wave of the CASEN household survey, the incidence of each risk is shown among Chile's poorest households compared to households earning average incomes. Readers can compare the incidence rates of different risks among these income groups with those among the population as a whole (under the column labeled "total"). The risk indicators are presented separately for the urban and rural populations, and for men and women where appropriate.

It is immediately evident that the incidence of the various risks – from malnutrition and failure to attend school (incidence among children of the specified age groups), to unemployment, ill health and disability - are typically higher among the poorest households. At every stage in the life cycle, and for most of the risks included in the table, the poor face higher rates of incidence than the population as a whole.<sup>7</sup>

Table 5 is a complement to Table 4 and shows the reach of Chile's main social protection interventions. The indicators in Table 5 closely correspond to the incidence indicators in Table 4. An attempt is made to provide a comprehensive picture of how well Chile's social protection interventions cover individuals and households against the risks discussed above. Thus, each data point in Table 5 shows the portion of the target population of a specific policy intervention that is covered against the risk in a corresponding point in Table 4 (for example, the share of urban children aged 6 to 11 attending a state subsidized school; or the share of unemployed who receive unemployment assistance benefits; and the share of workers who are covered by the health and retirement security systems).<sup>8</sup> Chile's households are relatively well covered by social protection programs, and beneficiaries of these programs tend to be in poorer groups. However, gaps in coverage are apparent especially among the poor and in rural areas.

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<sup>7</sup> A notable exception to this pattern is the incidence of old age, and isolated old age among the indigent and the poor. This is lower than the population mean, due higher mortality among lower income groups.

<sup>8</sup> While every effort has been made to provide a complete picture of the risks and individuals covered by Chile's social protection system, some critical programs may be missing from the table. These omissions are either because questions about the particular program are not included in the CASEN, or, if they are included, the data on participation or the incidence of benefits may be aggregated in the data sets available to researchers.

**Table 5. Coverage of Chile's Principal Social Protection Programs and Interventions**

Population	Social Protection Intervention	Urban Area			Rural Area		
		dec 1	dec 5, 6 & 7	total	dec 1	dec 5, 6 & 7	total
From 0 to 5 years	Receives food from the primary care clinic	<b>84.4</b>	63.5	64.6	<b>88.3</b>	89.7	86.9
From 6 to 14 years	Attends an establishment subsidized by the State (6 to 11 years) (1)	<b>98.9</b>	94.6	89.0	<b>98.4</b>	98.3	97.6
	Attends an establishment subsidized by the State (12 to 14 years)	<b>98.4</b>	96.4	90.0	<b>98.6</b>	98.6	98.1
	Receives food at educational establishment	<b>57.6</b>	25.1	34.0	<b>89.5</b>	79.2	80.4
	Has a state educational scholarship	<b>0.9</b>	0.4	0.6	<b>2.8</b>	1.1	1.4
From 15 to 24 years	Attends a school establishment subsidized by the State (15 to 17 years)	<b>98.4</b>	93.5	87.4	<b>97.9</b>	97.4	96.7
	Attends a school establishment subsidized by the State (18 to 24 years)	<b>97.8</b>	91.0	88.7	<b>95.8</b>	95.9	95.8
	Receives food at educational establishment (15 to 17 years)	<b>43.8</b>	22.0	26.7	<b>77.9</b>	70.6	68.1
	Receives food at educational establishment (18 to 24 years)	<b>27.6</b>	16.4	14.9	<b>50.9</b>	46.2	40.6
	Has a state educational scholarship (15 to 17 years)	<b>5.9</b>	2.2	3.1	<b>13.1</b>	8.2	8.7
	Has a state educational scholarship (18 to 24 years)	<b>12.5</b>	7.8	6.7	<b>14.0</b>	10.2	11.2
	Receives university credit (18 to 24 years)	<b>26.5</b>	37.2	27.7	<b>20.4</b>	23.2	26.2
From 25 to 64 years	Has attended some training	<b>3.3</b>	10.9	12.1	<b>2.1</b>	3.2	4.3
	Participates in emergency workfare program (% of total unemployed heads of household) (2)	<b>11.1</b>	40.8	27.9	<b>7.2</b>	66.8	35.9
	Has received an unemployment subsidy (% of total unemployed) (3)	<b>2.7</b>	2.5	3.3	<b>2.0</b>	0.4	1.7
	Access to social security health (4)	<b>88.2</b>	88.2	88.5	<b>91.4</b>	89.4	88.7
	pensions (5)	<b>42.6</b>	68.4	67.9	<b>13.1</b>	49.3	46.0
	Receives food from the primary care clinic (% of pregnant or nursing mothers)	<b>75.6</b>	66.6	51.5	<b>73.0</b>	71.8	68.5
	Received care during health emergency (% of those reporting receiving medical attention)	<b>11.0</b>	11.2	9.8	<b>5.8</b>	4.2	4.7
	Receives household allowance (% of total number of people eligible to receive the subsidy)	<b>37.0</b>	55.3	49.4	<b>19.2</b>	53.1	48.6
65 years and up	Receives contributory old age pension (6)	<b>12.1</b>	55.9	51.4	<b>0.6</b>	39.4	34.8
	Receives assistance pension	<b>52.3</b>	8.5	10.1	<b>86.7</b>	33.7	36.8

(1) Does not include pre-school care

(2) To be a beneficiary of a workfare program one must be a head of household and must not have any other household income

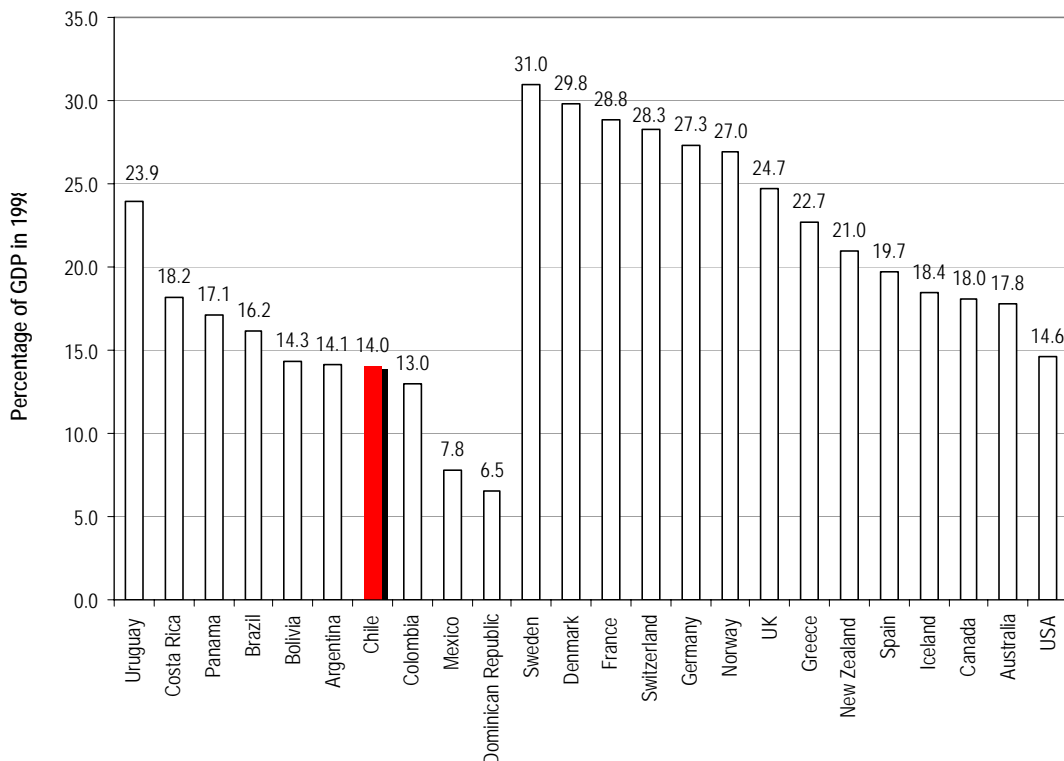
(3) This indicator underestimates the population covered by the unemployment subsidy, since the reasons for categorization include all of the unemployed and not only those that were fired for causes beyond their control, causes that are required to receive the benefit. Additionally, the worker is required to have been registered 52 weeks or 12 months in the prevention system

(4) Includes household dependents

(5) Only an estimate

(6) Note that the legal retirement age is 65 for men and 60 for women. The publicly available CASEN datasets also under-estimate coverage (particularly among elderly women) as contributory survivor benefits are not included.

**Figure 1. Public Expenditure on Social Sectors as a Percentage of GDP in Selected Latin American and OECD Countries, 1998**

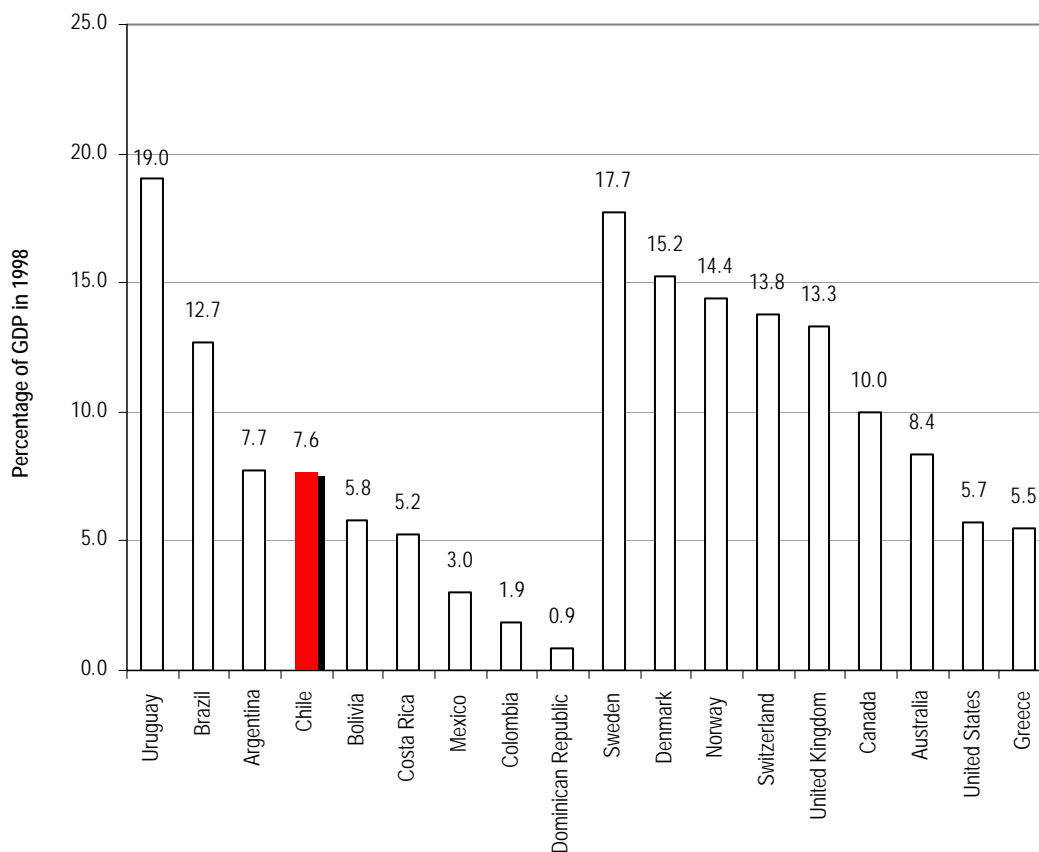


Source: SIMA/WDI Data Base

Notes: Social sectors include health, education, public housing, social security and welfare.

Having examined the risks to income faced by households in Chile, and whether different income groups in urban and rural areas are covered against these risks, a look at public expenditure on social programs and interventions adds a helpful dimension to the brief overview of Chile’s social protection system in this section of the report. Figures 1 and 2 compare public expenditure on the social sectors (health, education, public housing, social security and welfare) in Chile, with that of other Latin American and selected OECD countries. The data in Figures 1 and 2 show that as a percentage of GDP, Chile’s expenditure on the social sectors - 14% in 1998, the latest year for which comparative data are available - is roughly equivalent to that of countries at similar levels of development in the region. While substantially lower than social sector spending in many OECD countries, Chile’s level of expenditure is only slightly lower than that of the US (14.6% of GDP). Chile’s spending on social protection programs (specifically, social security and welfare assistance) as a percentage of GDP, while lower than that of its neighbors in the Southern Cone with very generous social protection systems, like Uruguay, Brazil and Argentina, is much higher than spending in Colombia and Mexico, and is roughly comparable to social protection spending in Australia and the US.

**Figure 2. Public Spending on Social Protection Programs as a Percentage of GDP in Selected Latin American and OECD Countries, 1998**



Source: World Bank SIMA, WDI Database

However, although these comparative data on expenditure are useful, analysis and insights should be drawn with caution. Since structural reforms to education, retirement security and the health system in the 1980s, large portions of social programs and “social security” contributions and expenditure (pensions and health) are now being managed by the private sector. Thus unqualified comparisons between aggregate spending in Chile and other countries with different delivery systems can be misleading. Table 6 disaggregates spending in education, health and social security, by what is publicly and privately managed, providing a more nuanced picture than cross-country comparisons can offer.



**Table 6. Private and Public Social Sector Spending in 2002**  
(Percentage of 2002 GDP)

	Publicly financed and administered		Publicly financed and privately administered		Publicly regulated and privately administered		Privately financed and administered		<b>Total</b>
Education	3.2%	<sup>1)</sup>	1.1%	<sup>4)</sup>	1.7%	<sup>7)</sup>	1.0%	<sup>10)</sup>	<b>6.9%</b>
Health	2.4%	<sup>2)</sup>	0.6%	<sup>5)</sup>	1.7%	<sup>8)</sup>	3.8%	<sup>11)</sup>	<b>8.5%</b>
Social Security	5.2%	<sup>3)</sup>	1.1%	<sup>6)</sup>	7.8%	<sup>9)</sup>	0.0%	<sup>12)</sup>	<b>14.2%</b>
<b>Total</b>	<b>10.9%</b>		<b>2.8%</b>		<b>11.2%</b>		<b>4.8%</b>		<b>29.7%</b>

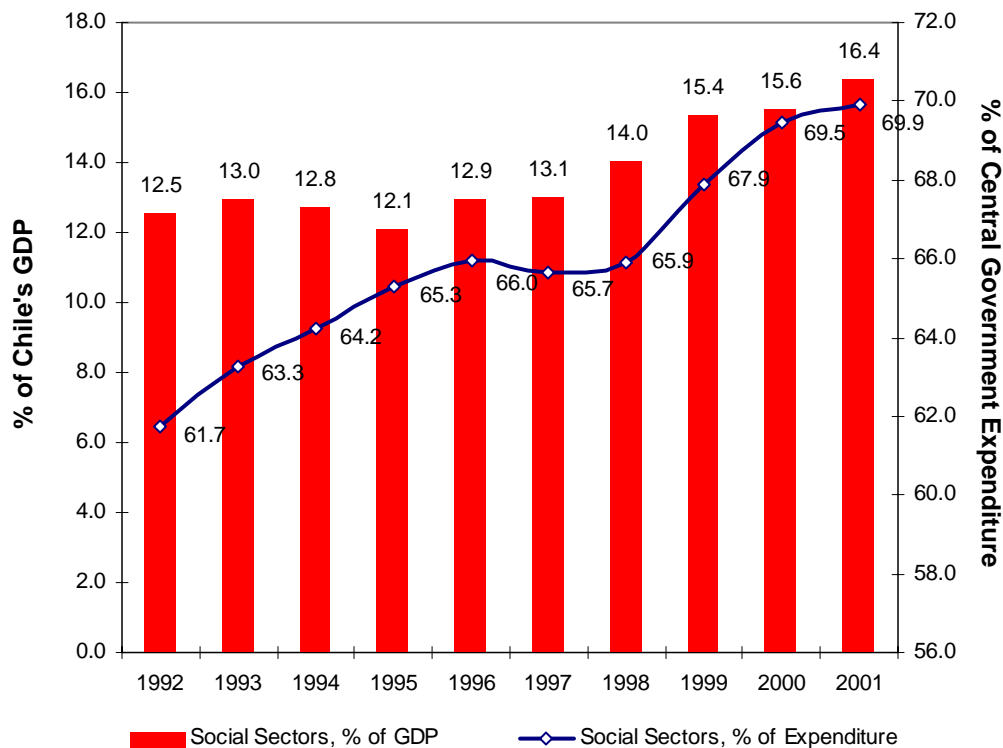
Source: DIPRES

Notes

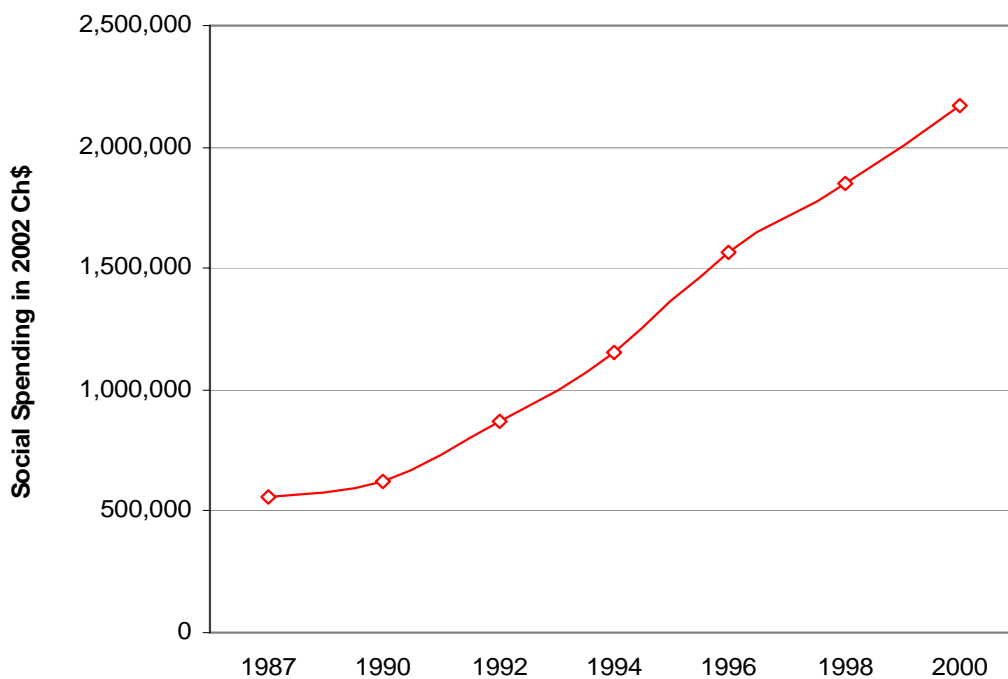
- 1) Central government spending on education, less the subsidies paid to private schools and universities
- 2) Central government spending on health, less spending “free choice” care
- 3) Central government spending on pensions, less recognition bonds and spending on the minimum guaranteed pension
- 4) Spending on subsidies to private schools plus transfers to universities
- 5) Spending on “salud curativa libre elección” plus subsidies paid to mothers in ISAPRES
- 6) Spending on pension recognition bonds, plus spending on the minimum guaranteed pension
- 7) Final household spending on education (source: Central Bank) weighted by percentage of HH spending on schooling reported in Household Expenditure Surveys
- 8) ISAPRES
- 9) AFPs and Mutuales (Private Collective Employer Associations, covering work place injury risk)
- 10) Final household spending in education (source: Central Bank) weighted by the percentage of university and pre-university spending reported in Household Expenditure Surveys
- 11) Final household spending on health (source: Central Bank)
- 12) Voluntary private pension savings

Building on the comparative analysis above and turning to recent trends in Chile, public spending in the social sectors has been rising in the past decade. However, spending on social protection programs has remained relatively stable compared to spending for education and health. Figures 3 and 4 show increasing government spending in the social sectors (both as a percentage of GDP, and total public expenditure), as well as spending on Chile’s social protection programs relative to that on health and education (as a percentage of total spending in the social sectors). As in most countries, earnings-related retirement, survivor and disability pensions make up the largest item of social spending in Chile. While public spending on pensions is falling – a legacy of a structural reform to the pension system in 1981 (discussed at length in section 6 of this report), and a sign of progress – spending on poverty-prevention pensions shows an upward trend. In contrast, spending on family allowances and targeted transfers to poor families, has been declining. Spending on unemployment benefits has remained stable.

**Figure 3. Trends In Public Spending in the Social Sectors in Chile, 1992 – 2001**  
**(a) Aggregate Social Sector Spending**

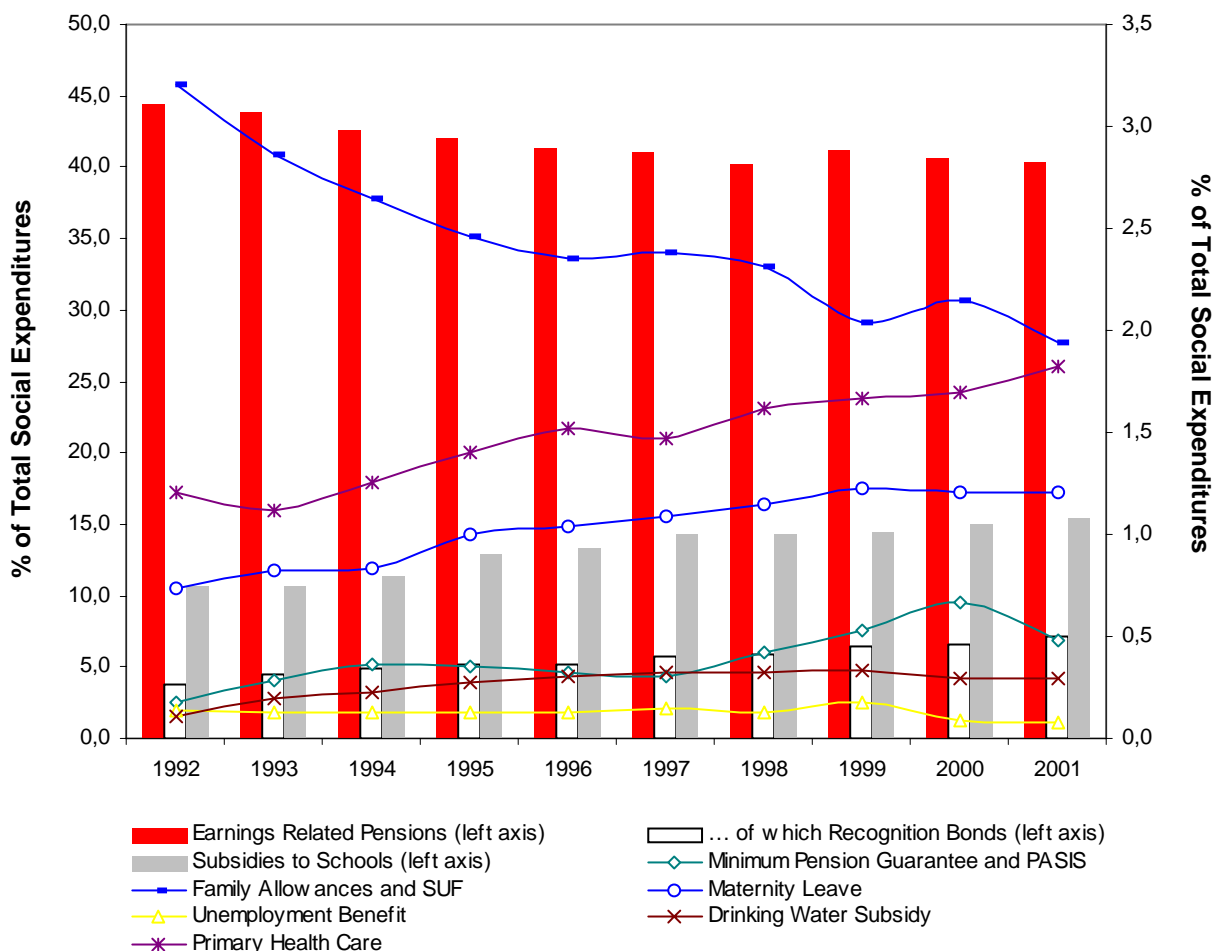


**(b) Social Sector Spending Per-Capita Poor**



Source: DIPRES, Ministerio de Hacienda

**Figure 4. Trends in Public Expenditure on Chile's Principal Social Programs and Interventions, 1992 – 2001**



Source: DIPRES, Ministerio de Hacienda

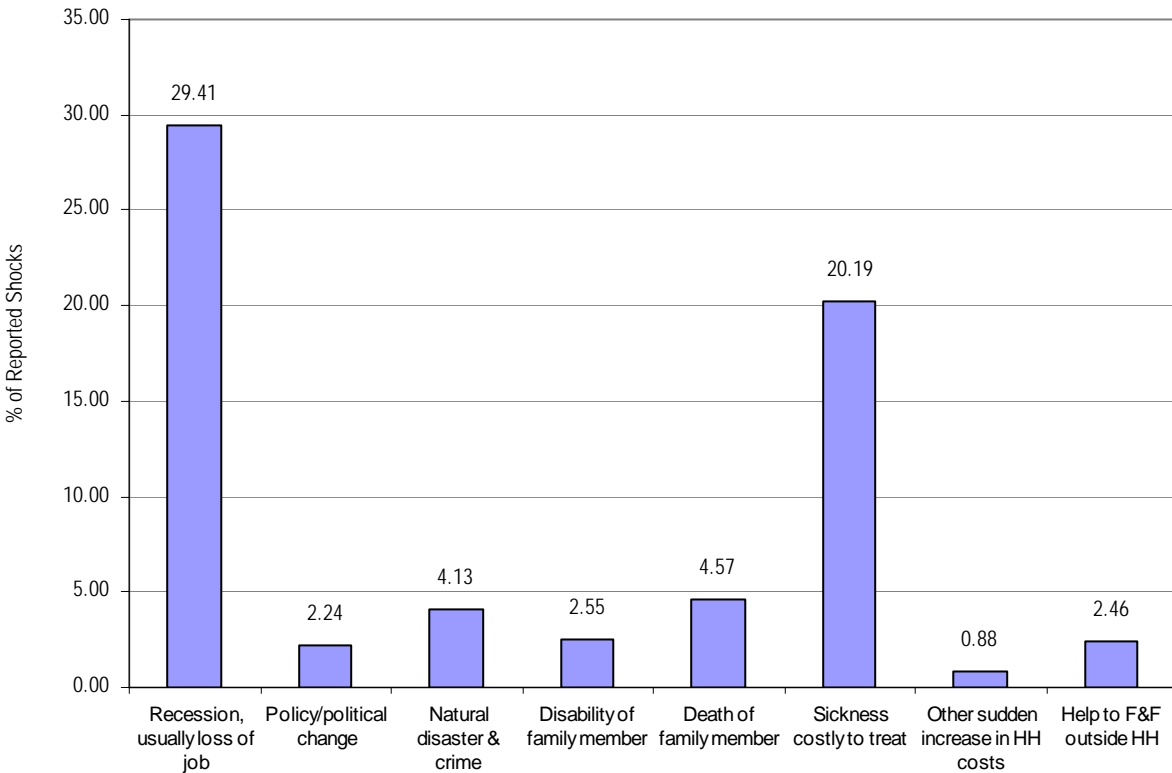
### IDENTIFYING THE PRINCIPAL RISKS TO HOUSEHOLD INCOMES IN CHILE QUANTITATIVE AND QUALITATIVE EVIDENCE

What are the most important risks threatening household incomes in Chile? As shown in Table 4, there are many risks to earnings capacity and eventually to actual earned household incomes. It would be tedious and unwieldy to examine each of the risks identified. Thus, in order to contain the scope and sharpen the focus of the analysis undertaken for this report, first quantitative then qualitative evidence was gathered to identify the set of principal shocks to household income, as well as the risk of future income shocks that Chilean households are most concerned with.

In January 2000, the World Bank conducted a survey of risk, savings and social insurance (*Encuesta de Previsión de Riesgos Sociales* or PRIESO) on a sample of individuals in the

Santiago Greater Metropolitan Area. The survey was specifically designed to identify the strategies taken by households to mitigate risks to income. One of the questions asked in the PRIESO is especially helpful to identifying the most prevalent shocks. Respondents to the survey were asked whether they had suffered a fall in their household income in the three years previous to the survey. The responses to this question are shown in Figure 5.

**Figure 5. Reported Shocks that “negatively effected your household’s economic situation” in the Three Years Previous to January 2000**



Source: PRIESO 2000 (see survey details in Packard, 2002)

Among reported shocks to household income, job loss was the most frequently reported. This may come as little surprise given the timing of the survey – a year into the economic slow-down that began in 1999. Sickness of a household member that was costly to treat, was the second most frequently reported shock to household income. In follow up questions eliciting respondents’ concerns about future shocks and their motivations to insure, job loss, sickness, accidents and other catastrophic health conditions were regularly ranked highest among respondents’ worries.

To complement these results (as well as the quantitative analysis in each section of this report) a qualitative study was conducted to identify which risks to income households perceive as the most immediate; what households do to mitigate or cope with losses; and how they perceive government provided mitigation and coping instruments, if indeed they perceive

them at all. Thirty focus groups were drawn from the sample of respondents to the CASEN 2000, to achieve the greatest degree of representation possible in a qualitative study.<sup>9</sup>

The groups were composed to form a qualitative analogue to Tables 4 and 5. Thirty focus groups were formed representing the extreme poor (income deciles 1 and 2), the poor (deciles 3 and 4), and the Chilean middle class (deciles 5 – 7), at various stages in the life-cycle (early adulthood 18 – 35; early work and family formation, 35 – 50; late work approaching retirement, 50 – 65; and retirement, over 65). As with the indicators reported in Tables 4 and 5, separate focus groups were convened for men and women and informants from urban and rural areas. Additionally, two groups of indigenous informants were interviewed – one consisting of indigenous people living in urban areas, and the other of those living in rural areas – to capture possible significant differences in risk perceptions and mitigation strategies among this population.

The qualitative study provided very rare and rich data with which to analyze household risk management, and the results of the study are cited throughout this report. The finding most relevant to this section is that across all of the focus groups, shocks to income from unemployment and adverse health events (sickness and disability) were cited the most. Among the groups of informants in the last years of their working lives and approaching the age of retirement, the prospect of no longer being able to count on regular income from work, and the heightened probability of suffering costly sicknesses, were cited as a major concerns. Thus, among older active and retired participants in the qualitative study, old age, while not a risk per se, combined aspects of the most frequently cited risks of job loss and incurring high health care costs (Raczynski, *et al*, 2002).

Having identified the principal risks to income that will be examined in greater detail in later sections of this report, we now turn to the conceptual framework that has been employed throughout the analysis.<sup>10</sup>

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<sup>9</sup> The exact composition of each focus group, the procedure followed to select the sample, and an example of the interview are reported in Raczynski, Serrano and Valle, (2002), prepared for this report.

<sup>10</sup> This report is limited to the principal social protection policies and institutions designed to cover the risks of job loss, adverse health events, old age, and extreme poverty, and is not intended to be a full catalogue of social protection in Chile. An excellent and exhaustive overview of Chile's social protection policies and institutions can be found in Arenas de Mesa and Benavides (2003).

## Chapter 2: A Conceptual Framework for Analyzing Risks to Income

The conceptual framework applied in this report, drawn from Ehrlich and Becker (1972), is straight forward. In the face of a prospective loss from an adverse shock, individuals can either insure against the loss, or take steps to lower the likelihood that the loss will occur. The “comprehensive insurance” problem of the individual (and by extension, of the household) is to determine the optimal expenditure on a set of alternative instruments – “market insurance”, “self-insurance” and “self-protection”.

Both market and self-insurance transfer income from “good” states, to the “bad” states of the world. Where it is available, market insurance can be purchased at a price – the “premium”. Self-insurance differs from market insurance in that there is no market for it and therefore no explicit price. However, a shadow price can be imputed from the costs incurred by the individual in self-insuring. The critical difference between the two instruments for insuring is that market insurance functions by *pooling* risk across individuals, while self insurance – essentially individual *saving* - does not. Individuals who neither insure through a market nor self insure – whether by choice or because both instruments are missing – are forced to cope with the losses from the bad states that occur. The third instrument, self-protection or *prevention* measures, reduces the probability of the bad state, although since it does not transfer income from good to bad states, it does not affect the size of the loss should the bad state come about.

According to the framework, agents – individuals or households - smooth consumption over good and bad states of the world. Where insurance markets are missing the individual is forced to smooth consumption using only self-insurance and self-protection. In a world where the option of both market insurance and self-insurance exist, the individual sees these as substitutes. Market insurance - available at or near actuarially fair prices - reduces take up of self-insurance. However, greater coverage of market insurance does not inevitably result in individuals spending less on self protection (moral hazard). If self-protection leads to a lower likelihood that the bad state will occur, and if this is rewarded by the market in the form of lower premia, market insurance and self-protection can become complements, and the risk of moral hazard can be lowered.

There are four main results derived by Gill and Ilahi (2000) from their application of the framework to examine unemployment insurance and the “market augmenting” role of government. First, market insurance and self-insurance are substitutes: an increase in the price of market insurance lowers the demand for pooling risks, and increases demand for self-insurance.

Second, the framework predicts that market insurance will be preferred to self-insurance for insuring losses that are *rare*, because the “shadow price” of self-insurance does not fall as the probability of loss decreases, while the price of market insurance does. As losses become

more rare, and/or if the individual has more to lose, the incentive to insure through the market rises.<sup>11</sup>

Third, market insurance does not inevitably lead to moral hazard. This is because while market insurance reduces the prospective loss, creating a tendency toward lower self-protection, since it also reduces the probability of the bad state, self-protection should make market insurance relatively cheaper, thereby increasing incentives to use the market to pool risks. However, this complementary relationship between market insurance and self protection can only obtain where the price of market insurance (the premium) is set to accurately reflect the probability of loss – a task that is especially difficult for large government social insurance schemes for both administrative and political reasons, and which has led to widespread moral hazard, especially in the “welfare states” found in many European countries.

**Figure 6. Prescribed Mitigation Instrument According to Size and Frequency of Potential Losses**

Size of Loss	Frequency of Loss (i.e. probability of occurrence) →										
	Rare										Frequent
<b>Small</b>	do nothing (coping)										more SI more SP
<b>Medium</b>	some SI more MI										more SP less SI
<b>Large</b>	MI										SP
<b>Catastrophic</b>	MI										

MI: Market (or market type) insurance- “pooling”  
 SI: Self insurance – “saving”  
 SP: Self protection – “prevention”

Finally, individuals enjoy higher welfare when *all* options are available than when one is missing. If only market insurance and self-protection are available, the individual would be worse off since he would be forced to use market insurance for losses that are not rare. If only market insurance and self-insurance are available and agents are unable to engage in self-protection, individuals who are better at self-protecting would be worse off because they

<sup>11</sup> “This is to say that a person is more likely to insure large rather than small losses. On the other hand, the incentive to save for rare losses is small.” Erlich and Becker (1972), p. 635.

would be denied the possibility of reducing the premium they pay for market insurance. In some instances individuals are better off “coping” with the loss in the bad state of the world – it is sometimes more efficient to just “take one’s lumps” rather than incur the costs of mitigating relatively small losses.

Figure 6 illustrates (albeit imperfectly) the prescriptions of the comprehensive insurance framework on two axes: *frequency* (probability of occurrence) and *size* of the prospective loss. It is more efficient for individuals to cope with rather than try to insure against small, rarely-occurring losses (the top-most, left-hand corner of Figure 6). However as prospective losses become more frequent, it is relatively more efficient to engage in prevention and savings to mitigate the loss. As a prospective loss becomes less frequent but increases in size, it is more efficient to engage in risk pooling. For losses that are frequently occurring and catastrophic in size (the right-hand, bottom-most corner of Figure 6) there is little individuals or households can do on their own to effectively mitigate the loss, and a clear need for public intervention to provide a larger risk pool, usually in the form of tax-financed social assistance – in effect, risk pooling across all taxpayers.

The rationale for policy intervention arises when individuals fail to attain optimal levels of market insurance, self-insurance, and self-protection. This could be either because one or more of the instruments are not available to the individual, or if all three instruments are available, because market inefficiencies prevent individuals from employing each instrument optimally. There are four clear arguments for social policy:

- (a) Market insurance for some risks (such as the risk of becoming unemployed) does not exist. Government can step in to correct market failures by providing risk-pooling instruments.
- (b) Private agents may self-insure using “bad” instruments (e.g., using cattle or land as a medium of precautionary saving) because “good” instruments (such as diversified financial assets) are not available. Government can intervene to foster the development of more efficient instruments for self insurance through prudential *regulation* of capital markets.
- (c) Investing in human capital – education and health – can be an effective and powerful means of self protection. Healthier individuals are less likely to be unable to work, and more educated or better trained workers may be less likely to suffer long-term unemployment. However, where credit is constrained, individuals may chose lower-than-optimal holdings of human capital in favor of assets with greater collateral value. To prevent individuals and households from tilting their portfolios away from human capital, government can subsidize its acquisition through public spending on education and health.
- (d) It is usually better to insure than to cope. The instruments for individuals and governments to pool risks and self insure are not always available. The resources to self protect are often scarce. Where individuals and governments are constrained, bad coping in the short run can result. Some protection and insurance is always desirable. Effective social protection policy should place greater emphasis on enabling individuals to insure against losses and lower the probability of losses, rather than coping with losses after a shock.



Just as the comprehensive insurance framework can determine the most efficient combination of risk-mitigation strategies at the individual and household level, the framework also offers guidance in examining the implications of economic management and fiscal policy for social protection. Just as individuals and household facing a risk can pool, self insure or self protect where these instrument are available – or cope with a losses should they fail to insure – governments face the same decision. Governments can pool the risks of a limited range of possible losses through private market insurance; “self insure” by accumulating surpluses in good time to spend on social programs during bad times (ear-marking, stabilization funds, counter-cyclical spending policies); and “self protect” by practicing prudent monetary and fiscal policy, engaging in reforms that increase the efficiency and safety of factor markets, and by investing in increasing their administrative capacity.

Finally, governments that fail to insure against aggregate losses from systemic shocks, or practice sound economic management that can lower the likelihood of these shocks occurring, are forced to engage in coping. De Ferranti, et al (2000) find that governments forced to cope, are likely to cope badly by cutting investment in public education, health and infrastructure.

The policies governments choose to pursue when facing a prospective loss, have direct implications for the set of instruments they can in turn provide (or *augment*) for individuals and households. Governments that *self protect* through reforms that encourage fiscal and monetary prudence, and eliminate distortions in product and factor markets, lower the likelihood of future shocks. In such countries the cost of pooling risks with market-type insurance will be low since the probability of the bad state has been lowered by reforms.

Alternatively, profligate public spending, failure to reform and lingering market inefficiencies can both raise the likelihood of macroeconomic shocks, and keep prices of self insurance and market insurance from adjusting to accurately reflect risks. Where prices cannot adjust and administrative capacity to correctly price risk is low, the complementary link between self protection and market insurance is broken, increasing the likelihood that social insurance will succumb to moral hazard and adverse selection.

The optimal mix of instruments governments can put in place is ultimately determined by a country’s “insurance fundamentals”. These are the macro and micro economic circumstances resulting from the policies taken in the past, as well as factors that lie outside policy makers’ domain. A country’s insurance fundamentals are: (a) that country’s likelihood of facing future microeconomic or macroeconomic crises, given its track-record of adjustments and reforms; and (b) its institutional and administrative capacity to identify and correct market failures and appropriately price the risks to income covered by social insurance. These assembled criteria will indicate which interventions will be most effective – augmenting market insurance through risk-pooling, social insurance; self insurance through mandatory savings accounts; or a combination thereof – and the relative weight given to each, that will increase welfare by augmenting the capacity of individuals and households to mitigate the risk of falling into poverty in the wake of an adverse shock to income.

## Chapter 3: Prudent Fiscal Management as Social Protection Policy

### IS ECONOMIC AND FISCAL MANAGEMENT A RELEVANT ASPECT OF SOCIAL PROTECTION POLICY?

As discussed in Section II, the policies governments choose to pursue when facing a prospective loss, have direct implications for the set of instruments they can in turn provide to households to manage risks to their income. Governments that *self protect* through reforms that encourage fiscal and monetary prudence and minimize distortions, will lower the likelihood of future shocks. Alternatively, profligate public spending, failure to reform and lingering market inefficiencies can raise the likelihood of macroeconomic shocks. The optimal mix of risk-mitigating instruments governments can put in place is determined by a country's "insurance fundamentals". These are the macro and micro economic circumstances resulting from the policies taken in the past, as well as factors that lie outside policy makers' domain. A country's insurance fundamentals are: (a) that country's likelihood of facing future microeconomic or macroeconomic crises, given its track-record of adjustments and reforms; and (b) its institutional capacity to identify and correct market failures, and correctly price risk.

Chile currently finds itself in the midst of international economic instability. However, on the strength of its record of sound economic management, it is one of the countries in Latin America least vulnerable (although not immune) to external shocks. Furthermore, it is one of few developing countries which can afford counter-cyclical fiscal and monetary policies. A flexible exchange rate regime and moderate inflation have allowed the government to pursue an expansive monetary policy – continued with the maintenance of a low reference interest rate this year - to counteract adverse external shocks. A strong fiscal position during the 1990s, and various fiscal stabilization mechanisms, have placed Chile in a good position to engage in counter-cyclical spending policies.

As a critical part of the report on household risk management and social protection in Chile, the conceptual framework presented in De Ferranti, *et al* (2000) has been applied at the aggregate level to examine the extent to which sound economic and fiscal management can be one of the most effective social protection policies. This analysis at the aggregate level pays particular attention to the counter-cyclical policies and institutions Chile has put in place; derives the implications of these measures for household risk management; and, perhaps most importantly, identifies lessons for other countries in the region whose *insurance fundamentals* may be considerably less sound. This analysis shows that Chile is successfully engaging in country-level self insurance and self protection.

#### AGGREGATE LEVEL SELF INSURANCE AND SELF PROTECTION IN CHILE

Macroeconomic volatility is a measure of instability, uncertainty and risk. Volatility has long been a trademark of Latin America's economic performance. For individuals, macroeconomic instability translates most directly into the risk of earnings loss from inflation and unemployment. In the aggregate level, macro volatility has a direct negative impact on

long term growth (Serven, 1998; Fatas and Mihov 2002). Like households, governments faced with prospective losses can insure and protect themselves against risk. In an attempt to explain the variation in macroeconomic volatility in the region, De Ferranti, *et al* (2000) find that only a third can be explained by exogenous shocks;<sup>12</sup> another third by insufficient financial integration and underdevelopment of domestic financial markets; and the remainder by *pro-cyclical* fiscal and monetary policies. While the impact of volatile monetary policies in the region has been reduced over time, there has not been similar progress in fiscal policy. Fiscal policy remains highly pro-cyclical (Gavin et al. 1996)<sup>13</sup>, tending to accentuate rather than smooth the impact of the economic cycle.

The pro-cyclical bias in fiscal policy in Latin America has been attributed to limited access to capital markets in downturns, and to a lack of fiscal discipline in upturns, due to the political pressures on spending and missing budgetary institutions. However, procyclical fiscal policies not only accentuate the cycle but are especially harmful for the poor. De Ferranti et al. (2000) show that in Latin America social expenditures as a percentage of GDP are at best held constant during downturns. Furthermore targeted social expenditures tend to fall as a percentage of GDP, when they should expand as the number of poor increases. As a consequence, in a typical downturn social expenditures per poor person are reduced by 2% for each 1% of reduction in output. By contrast, social expenditures usually grow as a percentage of GDP in upturns, when they are less needed. This procyclicality of safety nets – as a consequence of the procyclicality of fiscal policies - adds substantial policy risk to the income risk for the poor. The poor thus suffer both from higher consumption losses and from higher cuts in social transfers during deep recessions. A fiscal rule that reduces the procyclicality in social expenditure fits into the comprehensive insurance framework as a self-insurance instrument deployed at country level that helps to reduce the income risk of the poor. In an effort to eliminate the pro-cyclical bias of fiscal policy, ensure fiscal discipline and macroeconomic stability, many countries have been implementing rule-based fiscal policies.

Gill and Ilahi (2000) identify precautionary fiscal targets and contingent fiscal rules as self-insurance at country level. According to this classification, Chile's new fiscal rule can be seen as a measure of country-level self-insurance (see Box 1). The fiscal rule adjusts for the business cycle and for cyclical fluctuations in the copper price, and thus, like a stabilization fund, transfers resources from good to bad states. By pursuing debt-sustainability and communicating a clear signal of fiscal discipline to the markets, the new fiscal framework should help to protect against fiscal crises, and helps to lower the costs of external financing. By signaling fiscal discipline to the markets, the rule should also reduce the risk of financial contagion. The very fact that despite running a actual fiscal deficits in both 2001 and 2002 sovereign bond spreads in Chile have been declining substantially, and that the correlation with other emerging market spreads has been falling for some time, provides powerful evidence that a credible and efficient fiscal rule can serve as a measure to self-protect against macro risk.

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<sup>12</sup> Latin American countries face volatile terms of trade, due to concentration in a few commodity exports; capital flows are also more volatile, although not as volatile as usually thought (De Ferranti, et al 2000).

<sup>13</sup> Gavin, M. R. Haussman, R.Perotti and E. Talvi (1996): "Managing Fiscal Policy in Latin America and the Caribbean: Volatility, Pro-cyclicality, and Limited Creditworthiness," IADB working paper # 326.

### **Box 1. Country Level Self Insurance and Self Protection: Chile's Structural Surplus Rule**

In 2000, the government of Chile introduced a fiscal rule based on a structural surplus of 1 percent of GDP to reaffirm its commitment to fiscal responsibility. This rule allows automatic stabilizers in the budget to work uninhibited, while avoiding a fine tuning of fiscal policy to the phases of the cycle.<sup>14</sup> At the heart of Chile's new fiscal policy, lies the concept of the structural balance. The structural balance reflects the amount of revenues and expenditures reached if the economy were operating at full potential and if copper – the mainstay of Chile's exports - were trading at its medium-term price. The structural balance factors out the cyclical and random effects of changes in GDP and the copper price.

The calculation of the structural surplus in Chile follows established IMF and OECD methodology.<sup>15</sup> Two adjustments have been made to capture particularities of the Chilean economy. First, only revenues and not expenditures are adjusted for the business cycle. Second, given the importance of copper revenues to public finances, the structural balance is further adjusted for the copper cycle. By construction, Chile's fiscal rule is counter-cyclical and automatic stabilizers are allowed to operate fully. While fiscal revenues are allowed to vary freely with the cycle, expenditure follows a path determined by potential output. As such, the actual surplus in a given period will be larger during an up-cycle and the actual deficit will be smaller in a down-cycle, avoiding pro-cyclicality in spending and abrupt revisions of the fiscal stance at the extremes of the cycle.

Source: Fiess (2002) for this report.

### **COUNTRY LEVEL SELF INSURANCE AND SELF PROTECTION, AND IMPLICATIONS FOR SOCIAL PROTECTION**

As shown in Section II, Chile has an outstanding track record in reducing poverty. Due to a combination of strong growth and well directed social programs, poverty has been reduced by practically half during the 1987 and 2000 period, from 40% to 17% (World Bank 2001, Litchfield, 2002). Fiess (2002) attempts to evaluate the potential impact of the new fiscal rule on social protection.

The fiscal rule implies that expenditures will follow the relatively smoother path of structural revenues. Public expenditure should therefore be less volatile and achieve a smoothing of social expenditure over the cycle. While it may be early to fully evaluate the impact of the new fiscal rule in Chile, the experience to date is positive. Figures 7 and 8 graph the cyclical component of GDP as estimated in Marcel et al. (2001) against the cyclical component of total and social expenditures.<sup>16</sup> A value close to zero implies that the cyclical component is close to its trend level.<sup>17</sup>

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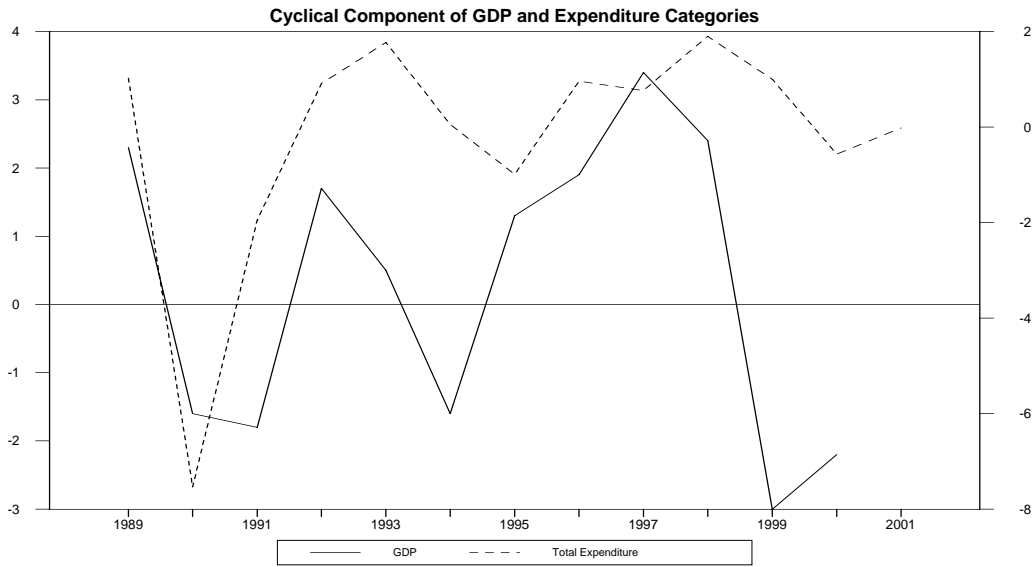
<sup>14</sup> The structural surplus rule in Chile does not qualify as a fiscal rule in the strictest sense as it is not law. The new rule is a self-imposed measure by the present government on its fiscal policy from 2001 to 2005.

<sup>15</sup> For a detailed description of the calculation of the structural balance and the implementation of fiscal rule see Marcel et al. (2001) ([http://www.dipres.cl/pdf/publicaciones/balance%20mh\\_1.pdf](http://www.dipres.cl/pdf/publicaciones/balance%20mh_1.pdf))

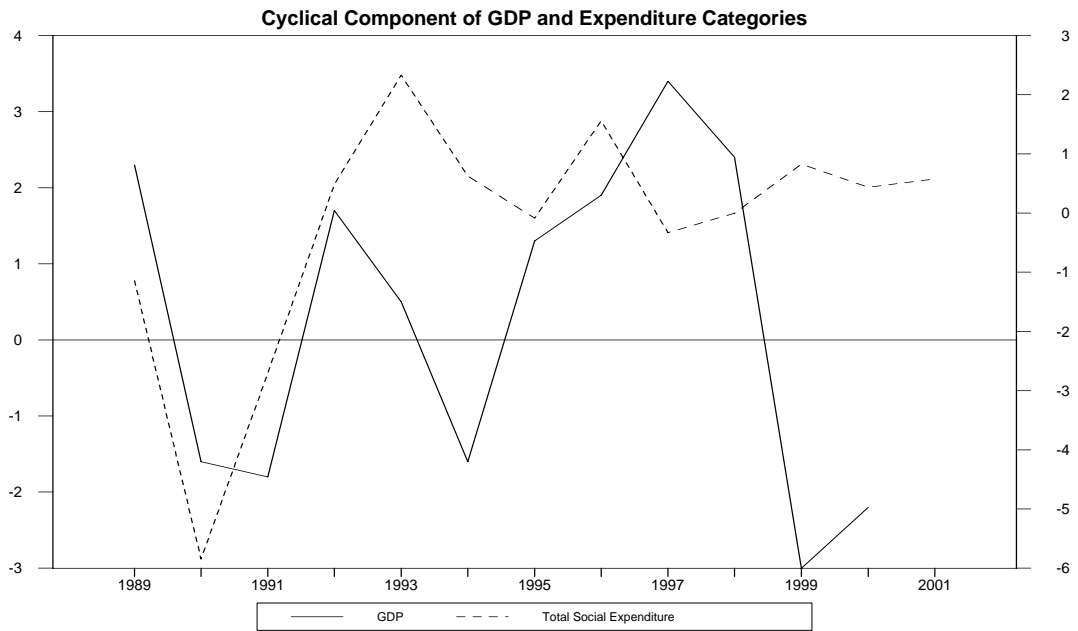
<sup>16</sup> Both variables are expressed as percentage deviations from their trend components.

<sup>17</sup> The focus is on the directional change and less on the level of the trend deviation of the expenditure variables, which makes methodological differences in estimation less important.

**Figure 7. Cyclical Component of GDP and All Public Expenditure**



**Figure 8. Cyclical Component of GDP and Total Social Expenditure**



1. As shown in Figure 7 total expenditure has remained close to trend level since the implementation of the structural surplus rule and the variance in the changes of expenditures has decreased substantially. This finding is even more evident for social expenditure. Figure

8 show the results for social expenditure. The cyclical deviation of the social expenditure has been decreasing since the implementation of the fiscal rule.<sup>18</sup>

### A GENERAL CONCERN WITH FISCAL RULES

However, there is reason to be cautious in our positive assessment. Within Chile's new fiscal rule, the concept of the structural balance takes center-stage. The structural balance as well as its main determinants (potential output and long-run copper price) are not actually observable and hence no single method of measurement exists. This implies that different estimation techniques will result in different estimates of structural revenues and (thus) of the structural balance. Even though the authorities are delegating the calculation of potential output and the copper reference price to an independent panel of experts - which helps to increase transparency - it does not necessarily increase predictability.<sup>19</sup>

One possible concern is that the panel may systematically overestimate potential output and/or the long-run copper price thus creating a bias in the actual balance beyond what the fiscal rule per se would imply (as part of the anti-cyclical objective). It should be noted though that this is a general concern with structural surplus rules,<sup>20</sup> and not with its application in Chile where to date, the method whereby potential GDP is calculated has been conservative with annual downward corrections to potential GDP estimates.

The fiscal rule combined with the growth slowdown over recent years helps to explain the actual fiscal deficits in 2001-02 - and the 0.7 percent deficit expected by Government for in 2003. While a financing/debt-sustainability problem might arise if actual deficits were to persist along with even slower growth, this danger is greater for emerging economies where debt-sustainability and actual deficits have a high relevance when evaluating country risk. The risk of such fiscal instability is low for Chile, where public debt-to-GDP ratios have declined dramatically over the last decade and where sovereign debt risk premia have declined to close to 160 basis points over the last year. If anything, to avoid a potential deficit bias that leads public finances down an unsustainable path (originated in systematic overestimates of potential GDP for example), it might be worth monitoring consolidated debt-GDP ratios to eventually trigger a revision of the fiscal rule or the way potential output is being forecasted.

To summarize, although it is still too early to fully evaluate the impact of the new structural surplus rule on Chile's fiscal policy - and by extension, spending on social programs - the experience to date is positive. In 2001 and 2002, Chile continued its fiscal consolidation effort, while at the same time pursuing a counter-cyclical fiscal policy. If implemented efficiently, and keeping the above caveats in mind, Chile's structural surplus rule represents a

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<sup>18</sup> The exception are subsidies which show a strong decline. However, this can be explained by a declining importance of severance payments as the current severance system will be replaced in 2002 by an individual-accounts based severance insurance system, where the fiscal impact will be independent of the unemployment rate.

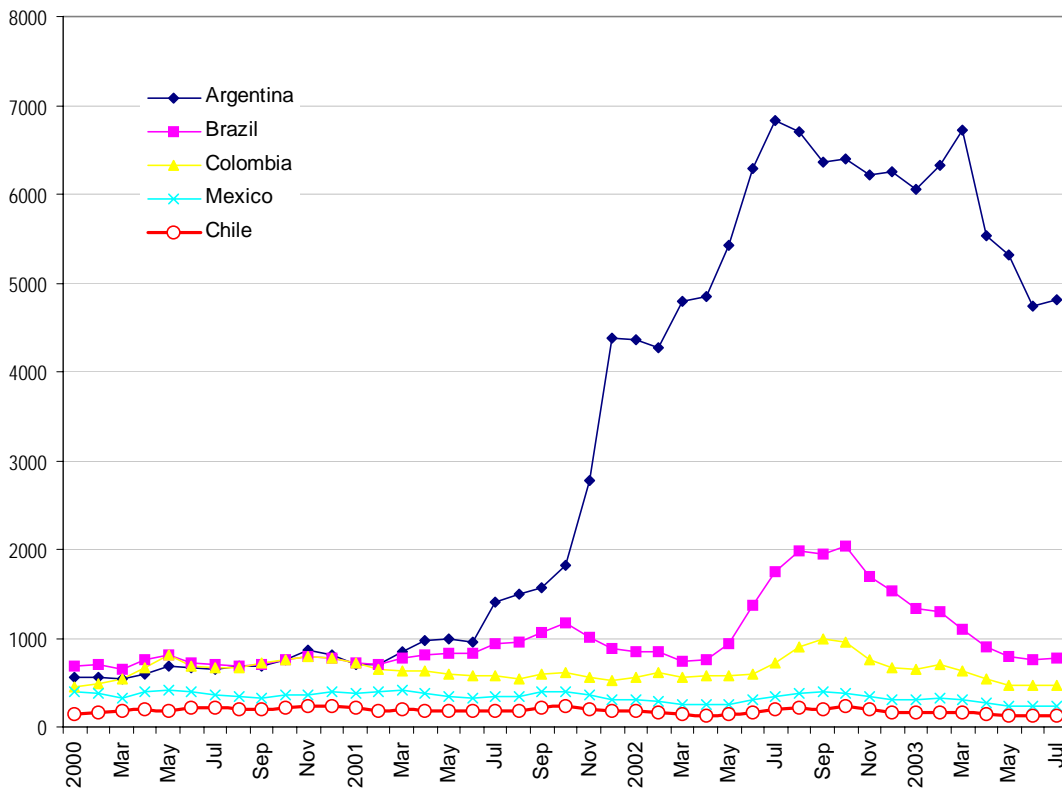
<sup>19</sup> For instance, if the two variables follow "random walks".

<sup>20</sup> In Europe, concern about structural balances as basis for fiscal policy rules is growing. One reason is the inability to foresee and measure cycles, and as such, to estimate the effects of cyclical fluctuations on the budget. As Wyplosz (2002) puts it, an unavoidable large margin of error may prove to be the Achilles' heel of structural balance rules.

successful attempt at self-insurance at aggregate level. The rule complements Chile's monetary policy and facilitates efficient macro management. To the extent that the structural surplus rule succeeds in signaling responsible fiscal discipline to financial markets, the mechanism also serves as a self-protection measure to lower the likelihood of financial contagion from the crises currently affecting other corners of the region. The best measure of the effectiveness of Chile's fiscal policies as a self protection, preventative device against future shocks, is the relatively low risk premium paid on the governments debt and its investment grade rating relative to that of its neighbors (see Figure 9).

**Figure 9. Country Risk Measures for Chile and Selected Countries in Latin America, 2000 – July 2003**

(Basis Point Spread Over US Treasury Bonds Paid on Sovereign Dollar-Denominated Debt)



Notes: (i) The EMBI Global index is calculated using U.S. dollar-denominated Brady Bonds, Eurobonds, traded loans, and local market debt instruments issued by sovereign and quasi-sovereign entities. The spreads are calculated over US treasuries.

Source: JP Morgan, EMBI Global

## Chapter 4: Mitigating the Risk of Poverty from Job Loss

### THE RISK OF JOB LOSS

Labor is the most important asset held by the poor, and employment earnings are typically the largest source of household income. Thus, the income losses to most households from job loss and extended periods of unemployment are substantial and can even tend toward catastrophic. However, unemployment in most countries can be regarded as a relatively “rare” loss, depending, of course, on factors in and outside of government’s control. If a labor market is relatively free of distortions and operates efficiently, although *turnover* can be very high, the risk of losses from *extended periods* of unemployment is usually rare. For this reason, as indicated by the framework (see again Figure 6), individuals are more likely to rely on self insurance (savings) to mitigate the income losses from relatively frequent turnover and movement from one sector of employment to another, but turn to the market to pool risk to protect against the relatively rare, but larger losses from extended periods of unemployment.

This said, the risk of becoming unemployed is generally not considered insurable by private agents since it can be a highly systemic risk – that is, when unemployment strikes, say in a recession, a large number of individuals in the risk pool are affected. Since there are typically not enough “winners” to compensate “losers”, it becomes too expensive for private insurers to cover losses. For this reason unions and governments step in to provide insurance instruments: from pooling at the firm level in the form of severance programs, to pooling across the working population in pay-as-you-go (PAYGO) systems of unemployment insurance, and even systems based on individual savings accounts with minimum benefit guarantees backed by pooled funds. Although not explicitly intended as the “insurance instrument” for workers in the informal sector, many governments have designed non-contributory unemployment assistance and employment creation programs (that do not condition access to benefits on whether workers have paid premia or contributed to an individual account), that become the public intervention that succeeds in reaching workers who lose employment without a contract or the self employed whose businesses fail in a downturn (De Ferranti, et al, 2000).

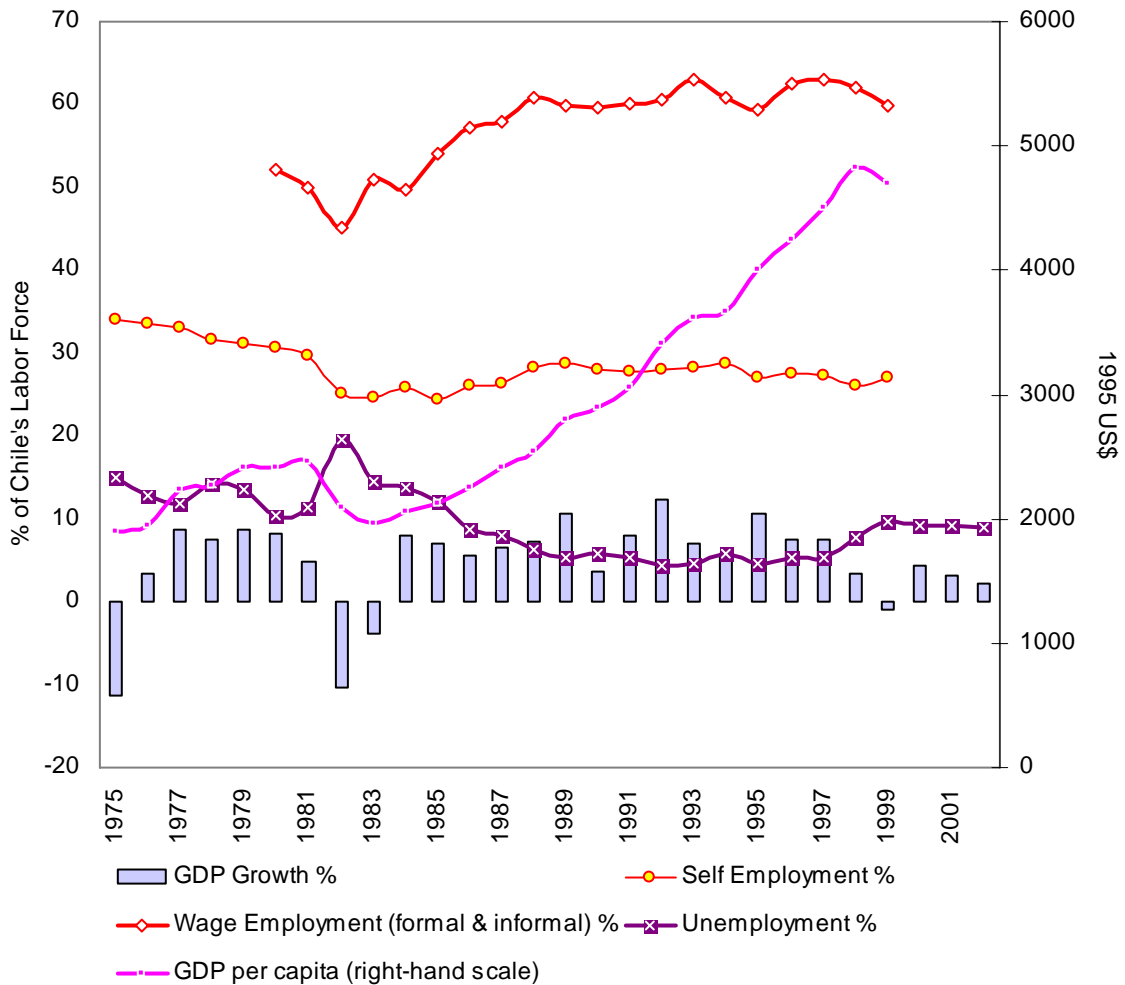
With some recent notable exceptions, analytical work suggests that the labor market in Chile is relatively efficient and free of barriers to employment. Using data from 1987 to 1994, Gill and Montenegro (2002) find that the labor market functions well, that workers’ human capital is rewarded, and that labor incomes contribute to lower income inequality. Focusing on the period between 1990 and 1996, Cuesta (2000) finds that high growth in Chile led to tight demand for workers, and finds little evidence of constraints on workers’ desired labor supply. Further Gill, Haindl, Montenegro and Sapelli (1998) show that, contrary to expectations, as Chile’s economy has become increasingly integrated with international markets, employment has not become more precarious, and that prior to the 1998-2000 recession, long-term unemployment was practically non-existent. These findings notwithstanding, studies by Pages and Montenegro (1999), Heckman and Pages (2000), Montenegro and Pages (2003), and Cowan, Micco, Mizzala, Pages and Romaguerra (2003) find that in terms of wage adjustments and job security provisions, Chile’s labor market is very rigid and that these



provisions discriminate against younger workers, increasing their number among the unemployed.

Figure 10 plots annual data on economic growth, income, unemployment and the composition of the labor force in Chile from 1975 to 2002. There is a clear downward trend in the rate of unemployment with improvements in the rate of growth in the late 1980's and 1990's. However, the data also show an increase in unemployment since Chile entered a recession in the wake of the Russian debt default in August 1998 that initiated a flight of capital from emerging markets, an increase in domestic interest rates, and an economic slowdown in most of Latin America.

**Figure 10. Labor Market Trends and Macroeconomic Indicators in Chile, 1975 - 2002**



Source: World Bank SIMA, Instituto Nacional de Estadísticas (INE)

### **Box 2. Low Labor Force Participation Among Women: A Barrier to Effective Risk Management\***

Participation in the labor force among women is particularly low in Chile – considered among the lowest in the region and internationally. While the regional average rate of women's participation in the labor force is about 35%, the share of women of working age who participate in the labor force in Chile has historically been much lower, and has hovered at only 30% in the later half of the 1990's. This share is remarkably low for a country of Chile's level of development and degree of urbanization. Further, as shown among the risk indicators in Table 4 using data from the CASEN 2000, labor force participation is lowest among women in poorer households, and lowest of all among the rural poor.

Is this phenomenon a cause for concern? Low labor market participation among women can impede economic growth. However, in the context of an individual or household faced with a prospective loss, and turning to the conceptual framework presented in Section III, low labor force participation among women can increase vulnerability to the extent that staying in the home *builds barriers* between women and a complete array of risk-mitigation instruments: market (type) insurance, self insurance and self protection.

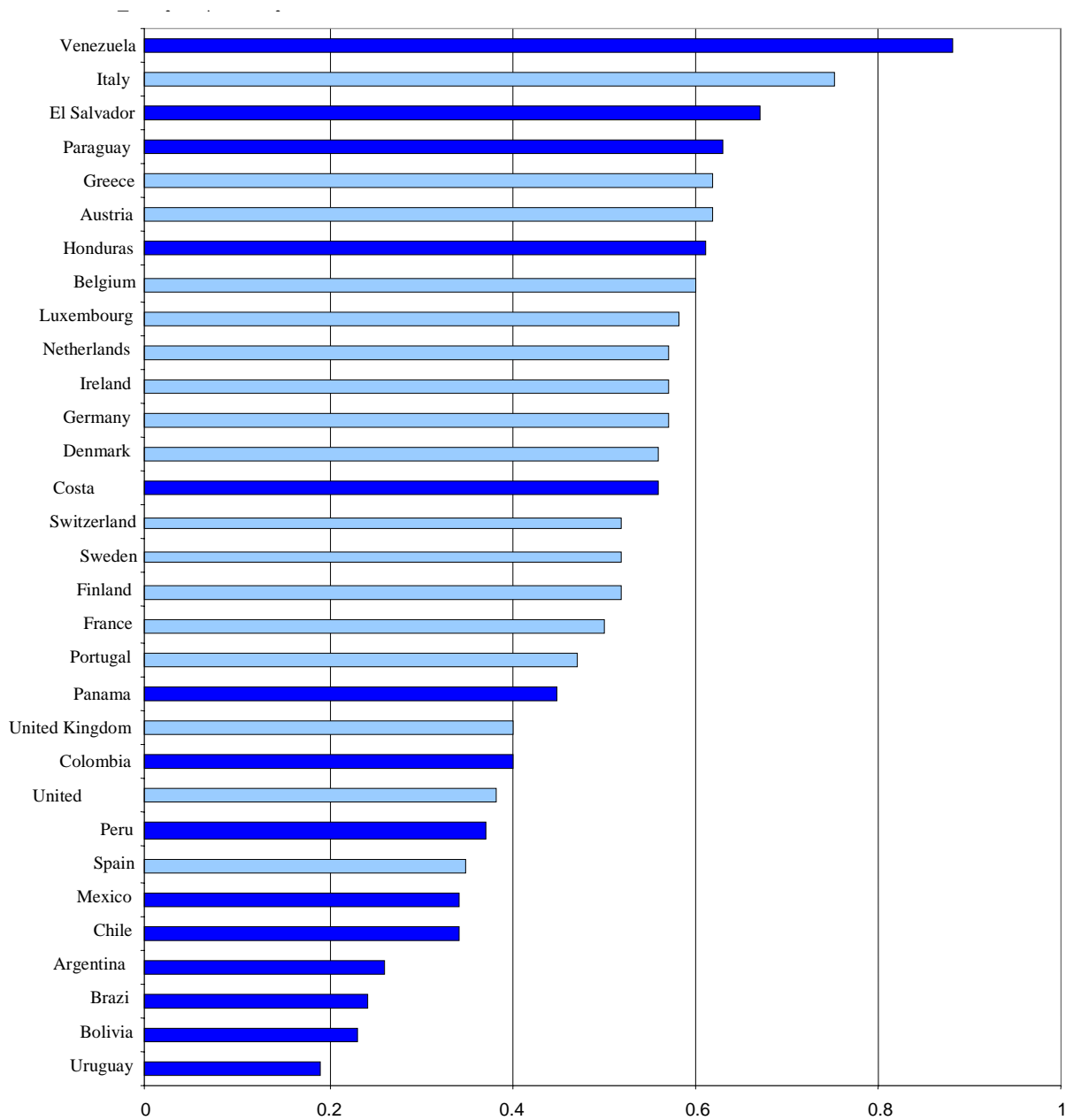
- ◆ **Less access to formal risk pooling:** Women who work in the home are less likely to be contributing to a social security system. Restricted access to market (and market type) insurance may force women to rely on informally organized risk pooling mechanisms, that due to their smaller risk pool, are less effective at covering certain losses.
- ◆ **Fewer opportunities to self insure:** Less income independently earned by women, means less to save to mitigate potential losses from separation and divorce. To the extent that income going directly to women will be better funneled to young children, if less is going to women, children could also go without, and their development can be impaired.
- ◆ **Fewer opportunities to self protect:** labor market participation can give women a greater degree of independence, an opportunity to build human capital (experience, skills), and the opportunity to build social capital (networks for future job searches or advancement) that they can use to strengthen their bargaining position in intra-household negotiations and disputes. The smaller their accumulated human and social capital, the less independence they have, and the less they are able to lower the probability of suffering losses from abusive partners

The low rates of labor force participation among women in Chile could be explained by several factors. Cultural attitudes may dictate that women's sphere is in the home while men's is in the labor market. However, this is also true of other countries in Latin America with higher participation rates among women. Alternatively, average incomes in Chile may be sufficiently high that household's can afford the opportunity costs of women staying at home - although, as shown in Table 4, participation is lowest among poor women. Finally, women may still face discrimination in the labor market that discourages their searching for employment outside the home.

Bravo, Contreras and Puentes, (1999) show that women's participation in the labor force is largely pro-cyclical, that participation increases with levels of schooling, but falls with number of children. Further, the authors show that while still low, women's participation in the labor force is rising among younger generations of Chilean women.

\*The team would like to thank **Wendy Cunningham** and **Claudio Montenegro** for their insights on this issue.

**Figure 11. Minimum Wages as a Share of Average Wages in Selected Latin American and OECD Countries**



Source: Maloney and Nunez (2001)

Among international observers and academics, there is increasing concern that Chile’s labor market is losing efficiency. Recent research shows that the minimum wage in particular is relatively high and binding (Maloney and Nunez, 2001). Figure 11 presents comparative data on minimum wages in selected Latin American and OECD countries in 1998 – the last year for which comparative data have been assembled. Since simple comparisons of the minimum wage across countries of different levels of productivity and development reveal very little,

Figure 11 presents each country's minimum wage as a share of average wages. While Chile's minimum wage in 1998 was certainly not the highest in the region, and is even low relative to most OECD countries, as a portion of average wages, Chile's minimum wage is higher than that of several of its neighbors in the region. Table 7, from Maloney and Nunez (2001) takes the comparative analysis a step further, by showing how the minimum wage in selected countries compares with the wage distribution.<sup>21</sup> As a share of the median wage and of the earnings of the 10<sup>th</sup> decile of the income distribution, Chile's minimum wage appears even higher. Maloney and Nunez (2001) find that, contrary to expectations, the minimum wage in Chile is even more binding than in the heavily regulated labor markets of Argentina and Uruguay.<sup>22</sup>

**Table 7. Minimum Wages and the Wage Distribution in Selected Latin American and OECD Countries, Late 1990's**

(Ratio of the Minimum Wage (MW) to Comparison Wages)

	MW/Mean	MW/Median	MW/10th percentile wage
Argentina (urban)	0.26	0.33	0.67
Bolivia	0.22	0.34	0.80
Brazil (all)	0.24	0.43	1.00
Brazil (urban)	0.22	0.37	<b>1.00</b>
<b>Chile</b>	<b>0.34</b>	<b>0.55</b>	<b>1.09</b>
Colombia (urban)	0.40	0.68	1.00
Honduras	0.62	0.90	2.26
Mexico (urban)	0.34	0.48	0.87
Uruguay (urban)	0.19	0.27	0.64
Spain	0.35		
Portugal	0.47		
Italy	0.73		
Germany	0.57		
Netherlands	0.58		
UK	0.40		
USA	0.38		

Source: Maloney and Nuñez (2001)

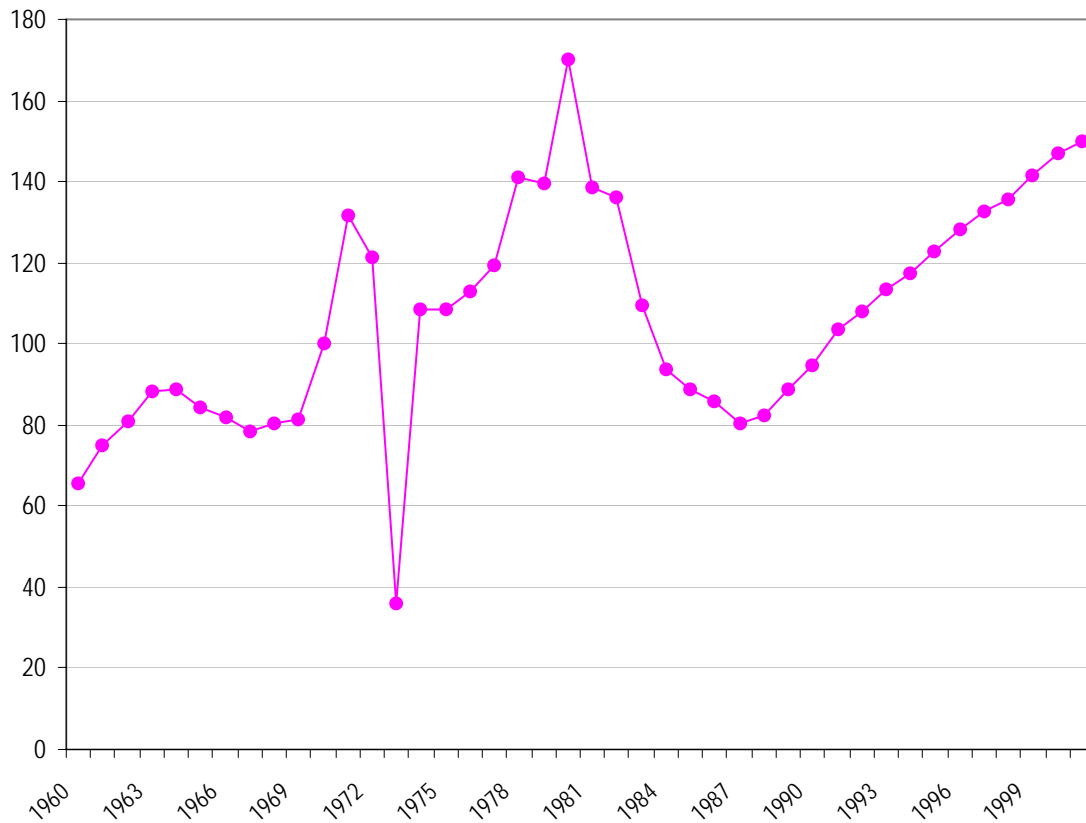
Note: For most countries, the analysis presented in this table employs data from 1998

<sup>21</sup> Unfortunately the relative measures of the minimum wage in OECD countries that are included in Table 7 are not available.

<sup>22</sup> Maloney and Nunez use data from the CASEN 1996 in their analysis. Their findings for Chile were confirmed in a background paper for the World Bank's last poverty report for Chile (World Bank, 2001) that employed the CASEN 1998. The same result is found by Cowan, et al (2003).

There is also increasing concern that the average duration of unemployment in Chile may be increasing, changing the nature of the prospective loss from relatively rare to relatively frequent. With the rate of joblessness remaining high, at 9 percent through 2002, there is a growing worry that current unemployment is rooted not only in lower aggregate demand, but the realignment of relative prices. While the cost of capital has been declining significantly in Chile, the cost of labor has been rising. Since 1998 minimum wages have increased by about 20% in real terms (see Figure 12), affecting mostly small and medium enterprises, which are the major generators of employment in the private sector. Although it is too early to judge definitively, recent changes to the labor code may raise the cost of labor even further through greater restrictions on employers in dealing with strikes and dismissals, and a new unemployment insurance program based primarily on private savings accounts.

**Figure 12. Changes in Chile's Minimum Wage, 1960 – 2001 (Index, 1970 = 100)**



Source: Bravo (1998), as extended in Montenegro (2002)

In response to high unemployment, the Government has resurrected public employment programs last deployed in the 1980's. About 150,000 workers, or 2.5% of the labor force, were employed by these programs in August 2003. Taking the national rate of unemployment

reported by INE, and adding the 150,000 employed in public work programs, gives an unemployment rate for Chile of 11%.<sup>23</sup> Although there has been an increase in job creation in 2003, prospects of reducing unemployment to the low levels observed in the mid 1990s in the short- or medium-term are not promising, due to the low likelihood of a meaningful economic recovery, and the structural factors mentioned above.

#### **INCREASING INCIDENCE AND DURATION OF UNEMPLOYMENT: CYCLICAL OR STRUCTURAL?**

This section examines how the frequency, and thus the nature of prospective losses from unemployment (the incidence rate and the average duration of unemployment) are determined by changes in the minimum wage and job security legislation in Chile, after controlling for the effects of the economic cycle. Changes in the incidence and the average duration of unemployment are shown in Figures 13 and 14. The results of regression analysis on data extending from 1960 to 2001 are presented in Table 8 (a & b).

Figure 13 shows that along with the increase in unemployment mentioned earlier, spells of joblessness are getting longer in Chile. Average duration of unemployment has risen. Figure 14 shows the actual number of people in unemployment. The spikes in the figure show the recessions that Chile faced in 1975-1976, 1982-1983, and 1998-1999. The figure also reveals that, when a recession occurs, the people who are in the first bracket (one to five weeks of unemployment) increase, but tend to rapidly decrease in the following one or two years. Most interesting of all is the behaviour of the number of people in the last bracket, or people with long-term unemployment (53 or more weeks of unemployment): their number was relatively low until 1973, since then and until approximately 1990 their number was unusually and stubbornly high. During the period 1991 up to 1999 their number was relatively low again, but it starts to increase in 2000 and especially in 2001 when the people who were laid off in 1998 begin to accumulate in the pool of unemployed.<sup>24</sup>

Unsurprisingly, GDP growth significantly reduces both the incidence of unemployment and average duration. After controlling for the strong effects of the cycle, increases in the minimum wage significantly increase unemployment incidence, and duration. However, the effects of changes in the job security enjoyed by workers with an employment contract are less obvious. On one hand, higher job security can be viewed by firms as a tax on dismissals, reducing turnover of workers and lowering the incidence of unemployment. On the other hand higher severance payments lower the cost of searching, increasing the duration of unemployment, and raising the unemployment rate. Finally, higher expected firing costs may

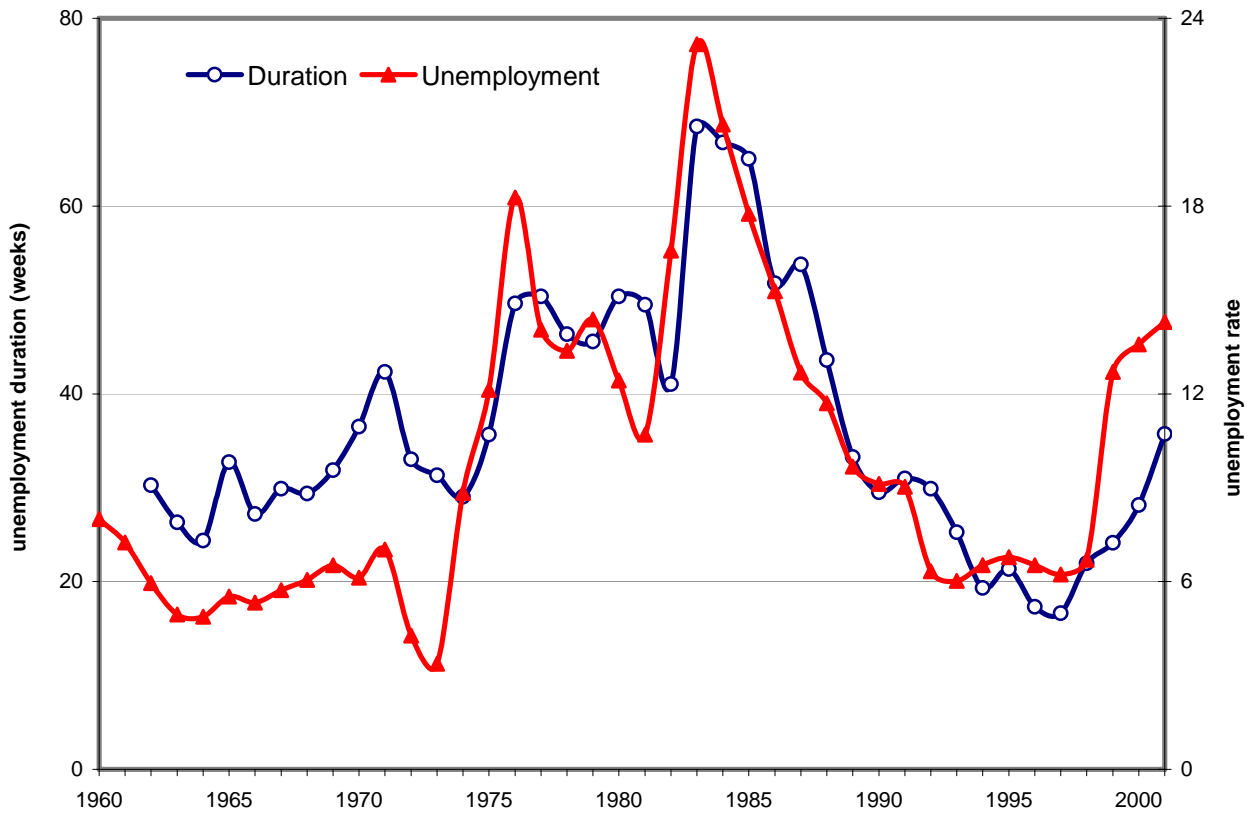
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<sup>23</sup> This is a very conservative estimate. Readers should note that unemployment in Chile has a significant seasonal component. The figure of 150,000 is for peak months and not annual averages. Further, the government is still not precisely sure about how many beneficiaries of the new employment subsidy (discussed in late paragraphs) are actually newly employed. Another factor that could inflate this figure, is the number of formally inactive individuals drawn into the labor market by the redeployment of work programs.

<sup>24</sup> The figure reveals a well known fact: that the distribution of weeks of unemployment is right-skewed. This means that the average duration of unemployment is, in general, the product of a large number of workers with only a few weeks of unemployment plus a relatively small number with very long spells of unemployment that tend to heavily weight the mean to the right.

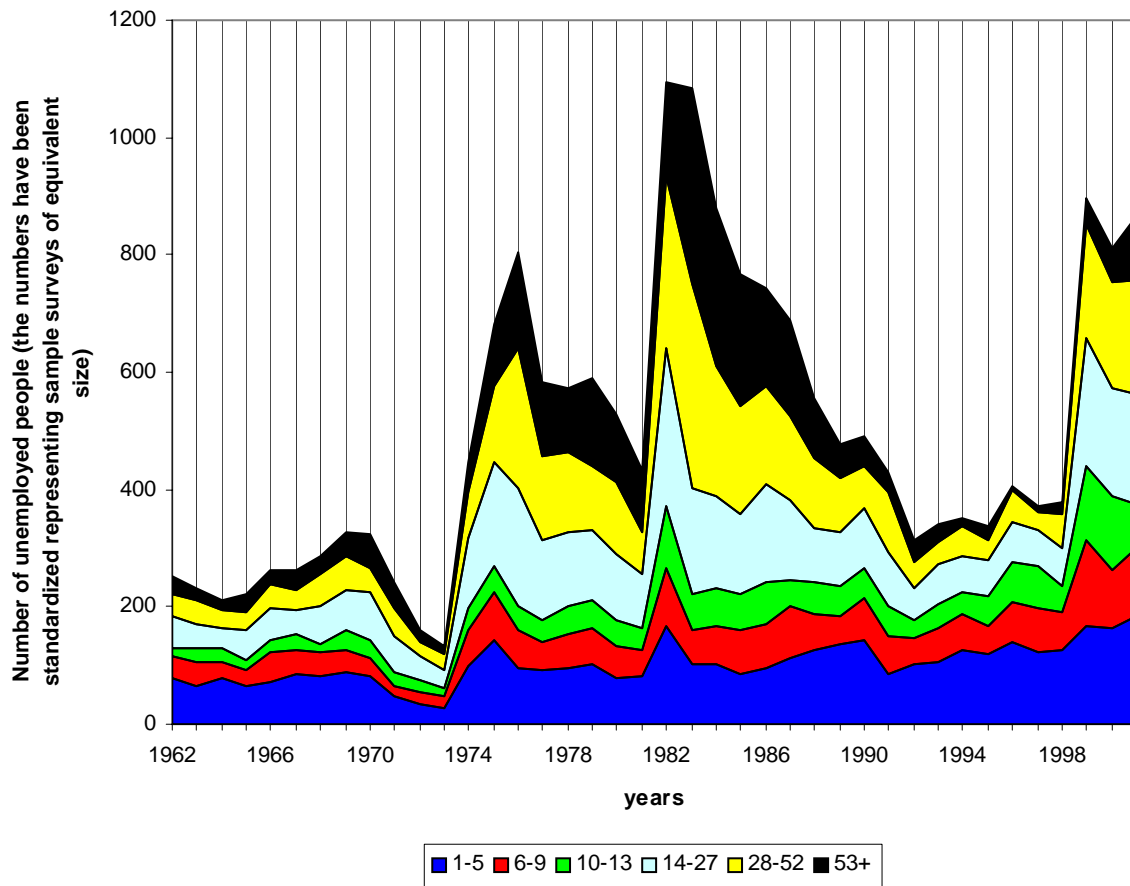
deter employers from hiring new workers, lowering the supply of legal jobs and increasing unemployment and employment without a contract. Given that these two effects have opposite expected impacts on the unemployment rate, the final impact of increases in job security for formal-sector workers on overall unemployment is ambiguous.

**Figure 13. Changes in Unemployment and Average Unemployment Duration in Chile 1960 – 2001**



Source: Montenegro (2002)

**Figure 14. Number of Unemployed by Their Duration of Unemployment**  
(Duration in Number of Weeks)



Source: Montenegro (2002)

The analysis presented shows that, although the long economic slowdown that began in 1998 has taken a serious toll in the number of jobs, a portion of the increasing incidence and duration of unemployment in Chile can be attributed factors determined by policy makers. Although the effect of changes in job security are still ambiguous, after controlling for the impact of the cycle, increases in the minimum wages significantly raise not only the risk of unemployment but the risk of losses from protracted periods of joblessness.<sup>25</sup> The changing nature of this risk has direct implications on the set of instruments the government is providing for households.

<sup>25</sup> This analysis is consistent with Cowan, et al (2003) who found changes in the minimum wage, and wage rigidity overall, explained a significant portion of unemployment in Chile from 1998 to 2002, particularly in the construction sector. Further, Cowan, et al (2003) find that a portion of labor market rigidity in Chile can be explained by a relatively flat wage curve, which may result from job security regulations that bias job losses towards younger workers.



**Table 8.a. Unemployment Rate, Incidence and Duration, Chile 1960 – 2001<sup>26</sup>**

	(1)		(2)		(3)		(4)	
	Unemployment Rate		Unemployment Incidence		Unemployment Duration		Unemployment Duration	
	$\beta$	t-test	$\beta$	t-test	$\beta$	t-test	$\beta$	t-test
Constant	2.012	2.0	1.510	1.1	12.841	2.0	11.093	2.6
$Y_{t-1}$	0.038	0.2	-0.680	-4.9	-0.292	-2.3	-0.327	-2.5
$Y_{t-2}$	-0.202	-1.2	0.339	2.2	0.149	1.0	0.229	1.4
Growth <sub>t</sub>	-0.306	-3.5	-0.364	-3.2	-0.963	-3.8		
$\Delta$ Min. wage <sub>t</sub>	0.032	2.9	0.043	4.6	0.103	2.7		
JS <sub>t</sub>	1.779	1.2	3.251	2.9	-2.326	-0.6		
JS <sup>2</sup> <sub>t</sub>	-0.456	-1.3	-0.741	-3.1	0.328	0.4		
Growth <sub>t-1</sub>							-0.958	-3.5
JS (2 year ten.) <sub>t-1</sub>							-2.822	-1.9
JS (20 year ten.) <sub>t-1</sub>							0.490	1.4
$\Delta$ Min. wage <sub>t-1</sub>							0.080	1.7
Number of observations	40		38		38		38	
R-squared	0.52		0.69		0.55		0.57	
$\partial \Delta Y_t / \partial Index_t$	-0.30		-0.12		-0.83			
Test F H <sub>0</sub> : $\partial \Delta Y_t / \partial Index_t = 0$	F(1,33)		F(1,31)		F(1,31)			
Test F	1.15		7.23		0.44			

Source: Montenegro (2002)

<sup>26</sup> The basic equation estimated is:

$$\Delta Y_t = \beta_0 + \beta_1 Y_{t-1} + \beta_2 Y_{t-2} + \beta_3 \Delta gdp_t + \beta_4 \Delta mwage_t + \beta_5 JS_t + \beta_6 JS_t^2 + \varepsilon_t$$

Where Y is either unemployment, incidence or duration of unemployment;  $\Delta$  gdp is the growth rate;  $\Delta$  mwage is the change in the real minimum wage; JS is the job security index, and JS<sup>2</sup> is its square. The lagged variables capture the fact that firms may choose not to adjust their number of workers immediately to changes in the independent variables (gdp, minimum wage, and the JS index). Two lags are included to allow for non-linear adjustment costs. The minimum wage and the GDP are included in growth rates instead of levels and this is justified by the fact that the dependent variables are ratios (unemployment and incidence), and because we don't expect that unemployment duration should exhibit any time tendency. The square of the job security index is included to allow for non-linear effects. Chilean data for the period 1960 to 2001 was used in the estimations. Given that we use the average incomplete duration of spells measure (which is a lagged indicator), the explanatory variables in the unemployment duration equation were entered with one lag.

**Table 8.b. Unemployment Rate, Incidence and Duration, Chile 1960 – 2001, Controlling for Average Wages**

	(1)		(2)		(3)		(4)	
	Unemployment Rate		Unemployment Incidence		Unemployment Duration		Unemployment Duration	
	$\beta$	t-test	$\beta$	t-test	$\beta$	t-test	$\beta$	t-test
Constant	2.032	1.98	1.519	1.13	12.730	1.95	11.118	2.59
$Y_{t-1}$	0.036	0.23	-0.661	-5.36	-0.283	-2.28	-0.312	-2.57
$Y_{t-2}$	-0.200	-1.21	0.303	2.28	0.138	0.95	0.213	1.43
Growth <sub>t</sub>	-0.299	-3.30	-0.370	-3.27	-0.948	-4.28		
$\Delta$ Min. wage <sub>t</sub>	0.033	2.93	0.040	5.49	0.104	2.45		
JS <sub>t</sub>	1.733	1.06	3.382	2.91	-2.134	-0.51		
JS <sup>2</sup> <sub>t</sub>	-0.444	-1.14	-0.774	-3.02	0.285	0.34		
Growth <sub>t-1</sub>							-0.930	-4.05
JS (2 year ten.) <sub>t-1</sub>							-2.879	-1.90
JS (20 year ten.) <sub>t-1</sub>							0.503	1.44
$\Delta$ Min. wage <sub>t-1</sub>							0.083	1.67
$\Delta$ average wage <sub>t</sub>	-0.0999	-0.30	1.994	1.14	-1.579	-0.21	-2.733	-0.36
Number of observations	40		38		38		38	
R-squared	0.53		0.70		0.55		0.57	
$\partial \Delta Y_t / \partial Index_t$	-0.29		-0.14		-0.83			
Test F H <sub>0</sub> : $\partial \Delta Y_t / \partial Index_t = 0$	F(1,32)		F(1,30)		F(1,30)			
Test F	0.94		7.40		0.37			

Source: Montenegro (2002)

There is a body of literature that would argue that average wages should be included in the econometric estimation presented in Table 8.a. However, including average wages raises issues of endogeneity in the unemployment duration equation since average wages are an equilibrium variable. Changes in the minimum wage, on the other hand, is an exogenous variable. Cowan, et al (2003) use both minimum wages and public sector wages in their analysis as both these variables are exogenously (policy) determined, and thus can be used as independent variables. Their results are consistent with those presented in Table 8.a. Despite these concerns for endogeneity bias, average wages have been included in a second set of estimations presented in Table 8.b.. As shown in the table, there is no significant change in the results.

## CHILE PUBLIC EMPLOYMENT PROGRAMS

Chile has had a very mixed experience with implementing public employment programs (PEPs). In their earlier deployment in the late 1970's and the 1980's, as now, it has been very difficult for the government to establish the PEPs as the self-targeting employment safety net conceptualized in the best-practice literature (see Ravallion, 2000). Unlike in the 1970's and 1980's the government has diversified its interventions away from providing direct employment, to other "active" labor market programs, such as job-training, and paying time-bound subsidies for employment creation in the private sector.

There are several features that distinguish the current PEPs from the earlier programs. The first is that the programs offer employment that pays the legal minimum wage and requires contribution to the pension/social security system; the second is that the government is slowly moving toward a policy of conditioning access to all of its active labor programs (whether these are direct employment at the municipal level, or programs of subsidizing employment creation in the private sector) on beneficiaries presenting proof of unemployment.

These features could present a number of problems that might hinder the effectiveness of the new programs in mitigating losses from unemployment. Although the jobs offered by direct public employment programs have been made relatively less attractive<sup>27</sup>, and there has been some improvement in targeting from the transition away from direct employment to subsidizing private job creation, the new programs are not likely to reach the most vulnerable. Employers are likely to use the subsidies to hire the most employable workers – that is, those who need the subsidy the least – or to formalize workers already employed informally. Further the high wages paid by the PEPs (relative to the programs deployed in the 1970's and 1980's) could encourage early entry into the workforce of young Chileans who would otherwise still be attending secondary school, although there is as yet no direct empirical evidence of this. The flat structure of payments, and the generosity of the minimum wage paid by the PEPs relative to the market clearing wage, could prove attractive to a segment of the younger population with lower endowments of human capital. The danger here is that individuals enticed into the labor force by public employment creation paying the minimum wage, may cut their education short and impair their future earnings ability.

By paying the minimum wage, and offering pensions and social security coverage, the government may have created relatively attractive jobs (offering wages at above the market-clearing wage, as well as social insurance), unlike the low-paying, labor intensive jobs created in the 1970's and 1980's. To the extent that publicly created employment is relatively attractive (especially to workers who otherwise would not join the labor force), it will be politically very difficult to eliminate positions and move workers into private sector jobs in periods of economic growth. If the government cannot then easily dismantle what could

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<sup>27</sup> Jobs offered by direct employment programs managed at the municipal level have been reduced to half a day's labor, instead of a full day, with a corresponding reduction in the minimum monthly wage paid to beneficiaries.

become costly public employment programs, it may be loath to launch these interventions in future recessions.<sup>28</sup>

Furthermore, conditioning access to programs on proof of job loss, presents an additional barrier between informal workers and what could be the only effective, publicly-provided, risk-mitigating instrument at their disposal. Although the direct employment programs administered at the municipal level do not require proof of unemployment, the government would like to phase this PEP model out by simple attrition, and move toward indirect employment promotion, (as mentioned earlier, job training and time-bound subsidies to private employers who offer jobs). In these new programs, access will be conditioned on the unemployed person presenting a "*finiquito*" (similar to a pink slip in the United States). By design, this limits access to those who lost a job with a legal contract in the formal sector (or those who can forge proof of unemployment).

This presents a fundamental problem. Public employment programs are widely considered to be the public intervention to which workers in the informal sector, and the self employed who are suffering from earnings loss in a down-turn, have access, unlike contributory institutions like unemployment insurance. However, the government's policy of conditioning participation on presentation of a *finiquito* eliminates this access, leaving informal workers in Chile without an instrument with which to mitigate losses from unemployment. This exclusion could be significant. In 2000, 12% men and 18% of women in urban areas were employed without a contract. In the same year, 20% of men and 17% of women in urban areas were self employed.<sup>29</sup>

The Government is correctly concerned that its public employment programs be effectively and efficiently targeted, but requiring proof of unemployment is a poor targeting device.<sup>30</sup> A more effective way of targeting active labor programs to those who truly need them and to avoid early entry into the labor force by younger Chileans who would otherwise be in school, would be to pay wages below the legal minimum, and ensure that the work is relatively undesirable (to the individual). This said, although offering pension coverage (by requiring contribution to the pension system) also makes the jobs created under these programs relatively attractive and difficult to phase out, since pension coverage also offers protection against the more immediate and potentially catastrophic losses from disability and sudden death, subsidizing protection against these losses may be justified.

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<sup>28</sup> It is worth mentioning that since 2000 direct employment programs have been progressively dismantled, despite substantial political opposition. All new employment programs have operated through the private sector. However, the cautionary note in the above can equally be extended to indirect employment subsidies.

<sup>29</sup> Employment without a contract and self employment is even higher in rural areas. In 2000 21% of rural men and 25% of rural women worked without a legal employment contact. Just over 31% of men and 23% of women were self employed.

<sup>30</sup> Although admittedly requiring proof of unemployment should make it harder for individuals leaving study to seek the relatively high minimum wage in the formal sector to gain access to the subsidy.

## CHILE'S MIXED UNEMPLOYMENT INSURANCE SYSTEM

In the 1990's the cost of unemployment protection in Chile has been very low compared with other countries in Latin America and the OECD (see Table 9). This is largely due to the low level of benefits paid to a very small share of the unemployed. Chile is gradually replacing a *non-contributory* unemployment benefit - the *subsidio por cesantía*, available to all who can present proof of job loss, and financed out of general revenues - with a *contributory* unemployment insurance system.

**Table 9. The Comparative Costs of Unemployment Protection**  
(Chile and Selected LCR and OECD Countries)

Country	Beneficiaries/ Unemployed	Rep. Rate	G - Index of Generosity	Unemp. Rate %	Ben Cost Rate - B%
Chile	0.068	0.060	0.004	7.3	0.030
Argentina (1993-1999)	0.062	0.421	0.026	14.7	0.384
Brazil	0.296	0.510	0.151	6.6	0.996
Uruguay (1990-95, 98, 99)	0.146	0.105	0.015	9.4	0.144
Australia	0.954	0.291	0.278	8.9	2.471
Canada	0.602	0.448	0.270	9.5	2.562
France	0.822	0.527	0.433	11.2	4.852
Germany	0.758	0.475	0.360	10.2	3.673
Japan	0.383	0.393	0.151	3.0	0.452
Netherlands (1990 - 1998)	1.434	0.581	0.833	6.5	5.416
Portugal (1990 - 1998)	0.766	0.473	0.362	5.7	2.065
United Kingdom	0.849	0.176	0.149	7.2	1.076
United States	0.336	0.339	0.114	5.8	0.661

Source: Estimates developed by Vroman (2002) using information from country sources, the ILO and the OECD. Unless otherwise indicated the data are averages for the ten years 1990-1999. The generosity index (G) is the product of the reciprocity rate (Beneficiaries./Unemployed) and the replacement rate (weekly benefits/ weekly wages). The benefit cost rate (B%) shows benefit costs as a percent of payroll. It is derived as the product of the unemployment rate and the generosity index (Vroman 2002).

The new system combines aspects of savings and market-type risk pooling. Employer and worker contributions accumulate in privately managed individual savings accounts - similar to Chile's retirement savings accounts - and covered workers are granted limited access to a government-financed pool of funds to top-up benefits if they exhaust the balance in their accounts.

The new system came into effect in May 2002, and applies to all new employment contracts. Workers with existing contracts can choose to participate in the new system, but will be forced to join upon negotiating a new contract. The non-contributory *subsidio por cesantía* will be phased out, and the government funds that currently finance *subsidio* will be diverted to finance the pooled component of the new system.

Vroman (2002) reviews the evolution of publicly mandated and administered assistance to the unemployed in Chile (see Table 10) and how this compares with the development of similar systems in the OECD. Vroman finds three features of the new unemployment insurance system to be particularly attractive. First, the new system provides more adequate levels of compensation than the present non-contributory unemployment benefit. Second, the new system offers automatic benefit indexation that will protect the value of benefits from inflation and stabilize replacement rates at their starting levels. Between 1975 and 1985 and again between 1985 and 2001 replacement rates declined dramatically in the unstable macroeconomic climate (see Table 10). In the 1975-1985 period payment limits were tied to the minimum wage which did not keep pace with overall wage increases. In 1985-2002 payment levels were adjusted only infrequently, again much less than wage growth. The current system will avoid this erosion as long as it keeps adjustments tied to changes in the CPI as stipulated in the law. Third, the present system has a sound financial basis. Several design features ensure adequate funding: limiting benefit duration to five months; limiting each individual's access to resources of the pooled fund to two draws every five years; and limiting the overall payout rate from the common fund to one fifth of its current balance in any given month.

However, Vroman also find negative features of the new system. First, the potential maximum benefit duration of five months is short, especially in the face of rising average duration of unemployment shown in Figures 13 and 14. The existing system has not compensated more than 10 percent of the unemployed in any year since 1989. Reducing maximum potential duration from one year to five months will only reduce the portion of recipients among the unemployed. Many workers who actively seek work during their five months of entitlement will not be successful despite explicit design features such as replacement rates that decrease from one month to the next. This problem will be especially apparent during downturns when the private labor market generates fewer new job openings than during periods of growth.

A second negative feature is that the new system does nothing to increase coverage against losses from unemployment to a greater share of the employed labor force. While benefit-seekers were required to present proof of unemployment (by presenting a "*finiquito*,") to receive the non-contributory *subsidio*, to the extent that informal workers could produce such proof, they could gain access to benefits. By shifting to employer and worker contributions as the main source of financing, the system draws a sharper distinction between the protection enjoyed by workers with a legal contract, and those without, including the self employed.

Nor is access to unemployment insurance based primarily on individual accounts likely to generate a positive incentive effect leading to greater “formalization”. This is because the new accounts are not replacing a pay-as-you-go (PAYGO), pay roll-tax financed system, as old age savings accounts did in 1981. The introduction of the new accounts will add to non-wage labor costs, rather than lead to the type of reductions in the tax-component of mandatory contributions that accompanied Chile’s pension reform.

**Table 10. Principal Features of Unemployment Insurance and Assistance Programs in Chile, 1953 – 2002**

	<b>Phase 1</b> 1953-1974	<b>Phase 1</b> 1937-1974	<b>Phase 2</b> 1974-1985	<b>Phase 3</b> 1985-2002	<b>Phase 4</b> Starting 2002
<b>Base Period Work Requirement (Months)</b>	36	12	12 (last two years)	12 (last two years)	12
<b>Waiting Period (Days)</b>	3	3	0	0	30
<b>Potential Benefit Duration (Months)</b>	6 (or less, from individ. account bal.)	3 (6 in special cases)	3 (12 in special cases)	12	5
<b>Wages Used to Compute Benefits</b>			last 6 months		last 12 months
<b>Statutory Replacement Rate (%)</b>	75	Flat benefit	75	Flat benefit	50 declining to 30
<b>Minimum Benefit</b>		75% Min. Salary in Santiago	160% Min. Salary in Santiago	8,669 days 181-360 (1996-2001)	65,000 (26% avg. mon. Salary)
<b>Maximum Benefit (Pct. of Min. Wage)</b>		200% Min. Salary in Santiago	360% Min. Salary in Santiago	17,338 first 90 days (1996-2001)	125,000 (50% avg. mon. Salary)
<b>Type of Financing</b>	Defined Contribution	Pay-Go	Pay-Go	Pay-Go	Defined Contribution
<b>Contributions From:</b>					
Employer	2% Wages				2.4% Wages
Wage Earner					0.6% Wages
Salaried Employee		1% Wages			0.6% Wages
General Revenue			Full Cost (most years)	Full Cost	

Source: Vroman (2002)

A final observation pertains to the balance of revenues and expenditures in the new unemployment insurance system. It seems that the new system will generate annual revenues that are two to three times annual payouts. This inference is based on three considerations: the rate of payouts of the current system, the likely increase in the rate of payouts (higher benefits but shorter duration compared to the present system) and the likely revenues of the new system. Vroman (2002) finds that there may be a substantial excess of revenues over expenditures on a year to year basis, with exceptions occurring only during recessions. This said, the initial contribution rates are not fixed. Should the system be over-funded, there will be ample opportunity to adjust benefits and/or contributions in the future. For the initial years in a new system, it is certainly safer to err on the side of over-funding. Benefits and/or taxes can be adjusted later should accumulations in the individual accounts and the common pooled fund prove excessive. Otherwise, the new unemployment insurance system could, in effect, become an additional mandatory retirement savings plan.

This possible over-funding of the new system, may provide the Government with an opportunity to repair a dangerous hole in the current safety net with respect to the risk of job loss. As mentioned previously the direction of social protection policy with respect to unemployment protection seems to be moving increasingly toward systems that benefit workers who lose jobs with a contract, leaving workers in the informal sector and the self employed without any protection. Instead of eliminating the non-contributory *subsidio por cesantia*, the Government might possibly afford to keep the benefit separate as an additional instrument in its unemployment protection system, removing the requirement that those seeking the benefit present proof of unemployment.



## Chapter 5: The Risk of Poverty from Health Shocks<sup>31</sup>

### ANALYZING THE RISK OF LOSSES FROM ADVERSE HEALTH EVENTS

The application of the comprehensive insurance framework to health risks is the most straight-forward. Sickness strikes in a wide variety of conditions. Frequent illnesses are, for the most part, not serious nor do they imply huge losses or costs. To mitigate these relatively small, frequent losses, the comprehensive insurance framework would prescribe self protection (nutrition, better hygiene, preventative and primary medicine, exercise), and self insurance (savings to pay for medication, or routine medical attention). However, treatment of less frequently occurring, more serious illnesses can quickly incur significant costs: both direct costs of treatment and the opportunity costs of lost earnings. For less frequent sicknesses the framework clearly prescribes market insurance or market-type pooling. As the potential losses from sickness grow - as they tend to “catastrophic” - the need for instruments to pool risks, and for the intervention of government where these do not exist - becomes rapidly apparent.

Coverage of health risks was partly privatized in Chile to give workers a greater range of choices in health coverage. Most individuals are covered under the publicly administered branch of the health system, FONASA (*Fondo Nacional de Salud*). However, workers can also opt to purchase coverage from the privately managed ISAPREs (*Institutos de Salud Previsional*). Coverage under FONASA is differentiated by income group and can be either fully or partially subsidized for the poor and low income workers.<sup>32</sup> Those who do not qualify for the subsidy make income-based copayments to the public health service. The premia for health coverage to both the public and private branches are set at 7% of workers’ earnings in the reform law that created the mixed system. However, for the private branch, the mandated 7% acts as a floor on the price of cover (which varies greatly between private insurers) that leads to a number of distortions in co-payments and deductibles, and that leaves a substantial share of affiliates “under-covered” against costly health shocks.

### ANALYSIS OF THE HEALTH SYSTEM AT THE AGGREGATE LEVEL

While the largest share of the population is still insured against health risks under the public pooling arrangement, a smaller, younger and relatively richer population is covered by the ISAPREs (World Bank, 2000, Bitran, 1995, Diaz, Torche and Valdes, 1995). Not only are

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<sup>31</sup> The health chapter focuses on monetary risks derived from general diseases. Other health-related risks that may have an important effect on income, mainly the risk of temporal or chronic disabilities resulting from injuries or disease, are not explicitly treated in this report. There is an on-going discussion over disability subsidies, and the increasing abuse in their prescription. See Rodriguez and Tokman (2001) on subsidies for "general disease" and maternity events. More analysis is needed in the area of work-related pathology and injury.

<sup>32</sup> FONASA has four health groups. Group A include the poorest. These are individuals who have undergone a means test carried out by a licensed public entity and who have been classified as needy through this test. Groups B, C, and D are defined on the basis on the gross monthly income of the affiliate. Those in Group A can obtain health services in ambulatory and hospital public facilities at no direct charge. Beneficiaries in groups B, C, and D can use public services through the *Institutional Modality* and private services through the *Free Choice Modality*. In both cases, beneficiaries must make a co-payment which increases with income.

there age and income differences between FONASA and ISAPRE affiliates, but significant differences in health service utilization patterns as well (Bitran, 1995).

The ISAPRE system offers individual insurance policies for each family group, where the level of coverage depends directly on the family's income and its health risk (determined by the family's age and gender composition, as well as medical history and pre-existing conditions). The system is based on individual, short term contracts, which allow the private providers to alter the cost of cover according to changes in the price of medical services. Several studies conclude that this pricing mechanism in the private branch of the system can lead to "cream skimming", by which the ISAPRE system covers younger, wealthier individuals with the lowest risks of suffering adverse health events (Bitran, 1995, Diaz, Torche and Valdes, 1995, Titelman, 2000).

Another feature of the private system is that it fails to offer a uniform, minimum package of coverage. Despite this there is a high degree of competition between private providers. This feature reinforces the short-term nature of ISAPRE contracts, and results in private insurance policies that cover frequently occurring health events – those that are least costly to individuals. Until recently, this left less frequent, events – those considered *catastrophic* from a household's perspective - uncovered. Workers are aware that ISAPRES offer the best specialized attention, but that until recently they offered no coverage of catastrophic events. In contrast, FONASA does not discriminate by a household's health risk, and offers a single level of coverage. Further, the public branch of the health insurance system offer coverage against catastrophic health events, and even acts as the health insurer of last resort. This could lead to adverse selection into FONASA that could jeopardize the sustainability of the public branch.

In the past two years the ISAPREs have extended coverage to catastrophic events, largely in response to widespread public criticism, through the introduction of *Additional Coverage for Catastrophic Illnesses* (CAEC).<sup>33</sup> This additional coverage may be effective in reducing catastrophic losses among beneficiaries of the private insurers (see Bitran, et al (2002), summarized in the next section). However, CAEC does not entirely eliminate the financial risk of health shocks, but instead limits out-of-pocket spending through a deductible. CAEC is mandatory for all those covered by ISAPREs and has been financed through a small increase in the monthly premium or via marginal reductions in benefits for non-catastrophic health events.

The Government is especially concerned that population ageing and the possible systematic migration of the elderly from the private to the public system will potentially increases the fiscal burden of FONASA. The World Bank conducted a country study, published in 2000, largely to address this concern.<sup>34</sup> The Bank found that care for "catastrophic" (variously defined) events is not primarily a problem affecting the elderly. For most age groups the most frequent health interventions are not necessarily the most expensive, with the exception of the

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<sup>33</sup> CAEC defines as catastrophic any health expense above about 2 monthly salaries of the affiliate. It outs a ceiling to out-of-pocket payments equal to Ch\$1 million (\$1,428) for individuals with monthly income below \$1,371 and to Ch\$ 2 million (\$2,856) for those with higher income.

<sup>34</sup> This section draws heavily from the World Bank's country study "Chile Health Insurance Issues: Old Age and Catastrophic Health Costs", Washington D.C., 2000.

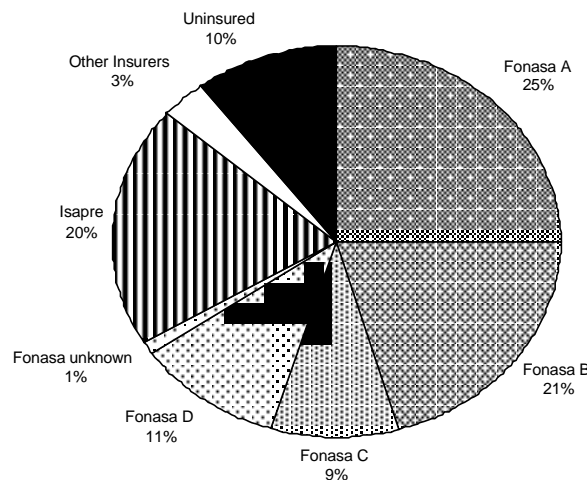
health attention required by the very young. Further, the most frequently occurring health incidences for the elderly are not the most expensive. While the elderly require attention more frequently, their conditions are not typically the most expensive to treat.

Further, the Bank’s study finds that FONASA does not assume a disproportionate relative burden of catastrophic events. While FONASA is responsible for a large absolute number of catastrophic events in the case of the elderly, this is due mainly to the timeline of the reform and because most of the elderly population is affiliated to the public system. The report could not conclude that the relatively greater share of catastrophic events covered by FONASA was the result of moral hazard. This said, the Bank’s study found that population ageing will worsen FONASA’s finances. All else equal, ageing will increase FONASA’s net fiscal burden by 31% by 2015 (assuming current unit costs and utilization patterns). However, the covered population under 65 will continue to be responsible for the largest share of the public system’s deficits. Future migration of elderly from the private ISAPRE’s to FONASA will have a negligible financial impact on the public system. The fiscal impact of poorer ISAPRE affiliates moving to FONASA upon retiring, or that of all individuals moving from private to public coverage at retirement, are negligible.

**HOW WELL DOES CHILE’S HEALTH INSURANCE SYSTEM COVER HOUSEHOLDS?**

The Bank’s last report on Chile’s health system addressed the specific concerns of a government eager to escape being unduly burdened with costs that the private branch of the health insurance system might seek to avoid. Guided by the conceptual framework presented in Section II, the analysis begins by taking the perspective of individuals and households faced with losses to income from adverse health events, and how effective existing institutions are at keeping them from falling into poverty in the wake of a health shock. Before examining the effectiveness of the system at mitigating losses, this section presents data on the extent of coverage of individuals and households and how this has changed in recent years.

**Figure 15. Coverage of Chile’s Health Insurance System**



Individuals and households in Chile are relatively well covered against health shocks, with only 10% of individuals going completely without health coverage (see Figure 15). CASEN survey data for the years 1998 and 2000 were used to examine the access to health insurance instruments among Chilean households. Results from this analysis are presented in Tables 11 and 12. In 1998, only 6.0 percent of Chilean households were completely uninsured. This percentage dropped to 4.3 percent in 2000. The percentage of Chilean households in which at least one household member was insured increased from 94 percent in 1998 to 96 percent in 2000. Although relatively few households went completely without protection, many households (15.6 percent, as shown in the last row of Table 11) contained one or more uninsured members. Just over two-thirds (67.9 percent) of all Chilean households had at least one member insured in 1998. This percentage increased to 69.5 percent by 2000.

**Table 11. Health insurance coverage in Chile by Income Group, 2000**

Insurance coverage	Income quintile					Total	
	1 (Lowest)	2	3	4	5 (Highest)	People	Percent
FONASA	3,077,736	2,687,567	2,029,262	1,425,034	698,350	9,917,949	66.4
FONASA A	1,880,897	1,010,399	520,394	248,209	58,390	3,718,289	24.9
FONASA B	723,695	870,071	724,591	525,392	237,934	3,081,683	20.6
FONASA C	270,549	397,265	337,746	246,954	99,585	1,352,099	9.1
FONASA D	178,587	375,286	411,959	365,847	278,169	1,609,848	10.8
FONASA unknown group	24,008	34,546	34,572	38,632	24,272	156,030	1.0
ISAPRE	107,774	262,586	532,915	788,291	1,279,527	2,971,093	19.9
Other Insurers	21,104	62,018	142,412	165,677	128,871	520,082	3.5
Armed Forces	17,296	53,395	132,236	150,169	113,874	466,970	3.1
Other	3,808	8,623	10,176	15,508	14,997	53,112	0.4
Not insured	309,639	343,361	324,114	291,231	256,084	1,524,429	10.2
Total	3,516,253	3,355,532	3,028,703	2,670,233	2,362,832	14,933,553	100.0

Source: Bitrán (2002) CASEN 2000.

FONASA remains the dominant branch of Chile's health insurance system. In 1998 nearly one-half (48.7 percent) of all households relied exclusively on FONASA for health cover. This proportion increased to 53 percent by 2000. In 1998, 16.8 percent of all households had only a private ISAPRE as their health insurer. This percentage dropped to 14.4 percent, in 2000. The increase in the proportion of households insured by FONASA over this two year period – by 4.2 percentage points – mirrors the sum of households that lost coverage from ISAPRES (2.4 percent) and the fall in the those that previously went without any cover (1.7 percent). Thus, FONASA has become the country's principal insurer, apparently by receiving all those who left the ISAPRES, and by extending coverage to 55,165 households that in 1998 had no insurance of any kind.

**Table 12. Health Insurance Coverage Among Chile's Households**

(Changes from 1998 and 2000)

Kind of health insurance in household	1998		2000	
	Number of households	Percent	Number of households	Percent
<b>Single</b>				
FONASA	1,801,100	48.7	2,037,447	52.9
ISAPRE	622,297	16.8	553,455	14.4
Uninsured	222,676	6.0	167,511	4.3
Other (including Armed Forces)	87,171	2.4	86,626	2.2
Total	2,733,244	73.9	2,845,039	73.8
<b>Double</b>				
FONASA-ISAPRE	333,059	9.0	292,355	7.6
FONASA-Uninsured	358,852	9.7	441,586	11.5
FONASA-Other	46,200	1.2	61,263	1.6
ISAPRE-Uninsured	90,478	2.4	75,181	2.0
ISAPRE-Other	26,543	0.7	25,067	0.7
Uninsured-other	17,271	0.5	15,837	0.4
Total	872,403	23.6	911,289	23.7
<b>Triple</b>				
FONASA-ISAPRE-Uninsured	67,099	1.8	60,270	1.6
FONASA-ISAPRE-Other	10,026	0.3	10,340	0.3
FONASA-Uninsured-Other	7,458	0.2	18,775	0.5
ISAPRE-Uninsured-Other	4,764	0.1	5,196	0.1
Total	89,347	2.4	94,581	2.5
<b>Quadruple</b>				
FONASA-ISAPRE-Other-Uninsured	1,297	0.0	1,822	0.0
Total number of households in Chile	3,696,291	100.0	3,852,731	100.0
Households with one or more persons insured by:				
FONASA	2,625,091	71.0	2,923,858	75.9
ISAPRE	1,155,563	31.3	1,023,686	26.6
Other	183,459	5.0	209,089	5.4
Households with one or more members uninsured	752,624	20.4	770,341	20.0
Households with one or more members, but not all, uninsured	529,948	14.3	602,830	15.6

\* Other includes Armed Forces.

Source: Authors from CASEN 1998 and 2000.

**MITIGATING POVERTY FROM ADVERSE HEALTH EVENTS AT THE HOUSEHOLD LEVEL**

Chileans seem chronically unhappy about their health care system. This is true among those covered by FONASA, by ISAPREs, and those who go without any cover. There are multiple sources of frustration with the system: poor quality of care and long waiting lines in FONASA; rising premiums among ISAPREs; cost escalation among private health care providers; increasing out-of-pocket spending by all individuals; the cost of catastrophic health care for all but the (relatively) richest covered by the ISAPREs' CAEC plan. Accordingly, reform of the health sector tops the list of voters' concerns in opinion polls. In May 2002 the Government announced a major health reform initiative known as the Auge Plan. The Plan has been submitted to the Congress where it is expected to be examined, modified and

perhaps approved over the next 2-3 years. The plan seeks to introduce basic a basic package of health benefits for all Chileans irrespective of income, employment, or insurance status, through a mix of public and private financing (see next sub section).

While several aspects of the reform remain unclear, one of its objectives appears to be to reduce the uncertainty that many Chileans face with regard to health problems that occur unexpectedly and that can consume a large share of a family's income and savings. Many Chileans who are without insurance and even those who are covered both in FONASA and by the ISAPREs, might face the risk of falling into poverty as a consequence of health shocks. Further, even if some households do not fall below the poverty line from health shocks, they may see their wealth substantially reduced through treatment costs and also through the detrimental effects of poor health on the household's capacity to earn income.

Bitran, *et al*, (2002) determine the degree to which out-of-pocket health payments made by Chileans reduce income or lower income below the poverty line. As discussed in Section II, where instruments are available, individuals and households can protect themselves against the risk of high out-of-pocket health expenses – health shocks – through a combination of self-insurance (personal or family savings); self-protection (risk reduction through habit changes such as better nutrition, drop in substance abuse, exercise, stress reduction, consumption of preventive health services); and market (or publicly provided market-type) catastrophic health insurance (purchased or obtained through partial or full public subsidies). Bitran, *et al*, (2002) apply the framework presented in Section II to examine the degree to which Chileans use the above protection methods, and determine the extent of financial protection that individuals derive from these instruments.<sup>35</sup>

As might be expected, the authors find that the prevalence of self insurance (savings) increases with income among individuals affiliated with both branches of the health insurance system. Further, the authors find that the take up of self protection (behavior that lowers the likelihood of health shocks, including preventative care) is significantly higher among ISAPRE affiliates. This finding may reflect household reaction to the private industry's use of health risk rating to price its policies, or may simply reflect higher average education or "health awareness" among ISAPRE affiliates. However, among individuals that go without cover, the take up of preventative behavior is lowest. Since this lack of preventative care among the uninsured increases the likelihood of health shocks, this finding is worrying and points to the need for greater access to primary, preventative care.

The percentage of individuals who fall below the poverty line as a result of catastrophic health care costs is very low throughout the health system and population groups, but rising. Bitran, *et al*, (2002) find that the number of people who fell into poverty as a consequence of a health shock was considerably lower in 1998 (82,659) than in 2000 (242,851). Since the poverty line for the two years was constant in real terms, and since it was assumed that the extent of coverage granted by insurers did not vary at any given income level and for any given family

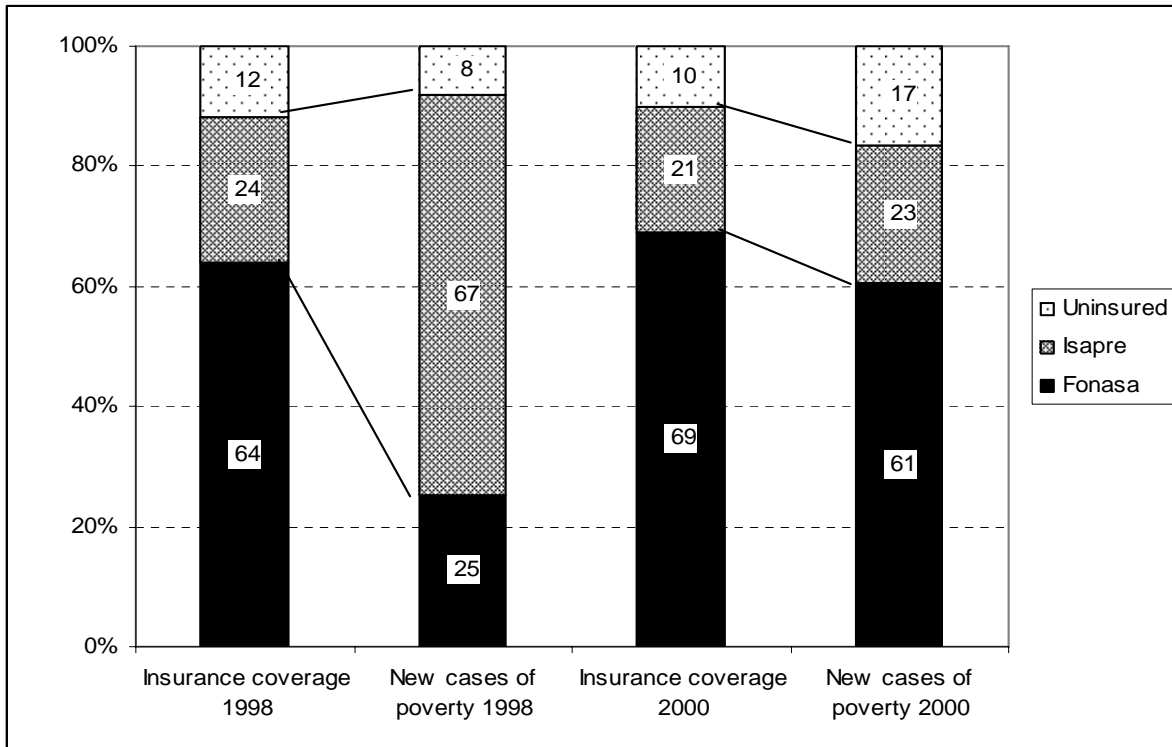
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<sup>35</sup> The analysis in Bitran, et al (2002) consists of the determining of the presence and kind of insurance coverage individuals enjoy, as reported in the CASEN, and the inference of out-of-pocket payments for health care. Once payments are imputed to individual and households, they are then expressed as a proportion of income, and also subtracted from income to determine whether income net of health spending falls below the national poverty line.

risk structure, this finding may simply reflect falling household incomes since 1998. Further, poverty arising from health shocks did not strike income quintiles equally, but instead and as expected, fell somewhat more heavily on the lower quintiles. In other words, the population at greatest risk from health shocks were those earning the lowest incomes.<sup>36</sup>

The protection against health shocks varied somewhat according to individuals' health insurance coverage: FONASA provided slightly superior protection than ISAPREs and both these insurers provided significantly better protection than that obtained by the uninsured. To illustrate, in the 2000 FONASA covered 67 percent of individuals, ISAPREs covered 20 percent, and the uninsured represented 10 percent. However, in the same year, of the 242,851 people who became poor from a health shock, 61 percent (146,977 people) were from FONASA, 23 percent were from ISAPREs (55,769 people), and 17 percent (40,105 people) were uninsured (see Figure 16). Thus, among the newly poor in 2000 for health reasons, a disproportionately large number were among the uninsured.

**Figure 16. Distribution Of Insurance Coverage And Of New Cases Of Health-Related Poverty, 1998 And 2000**

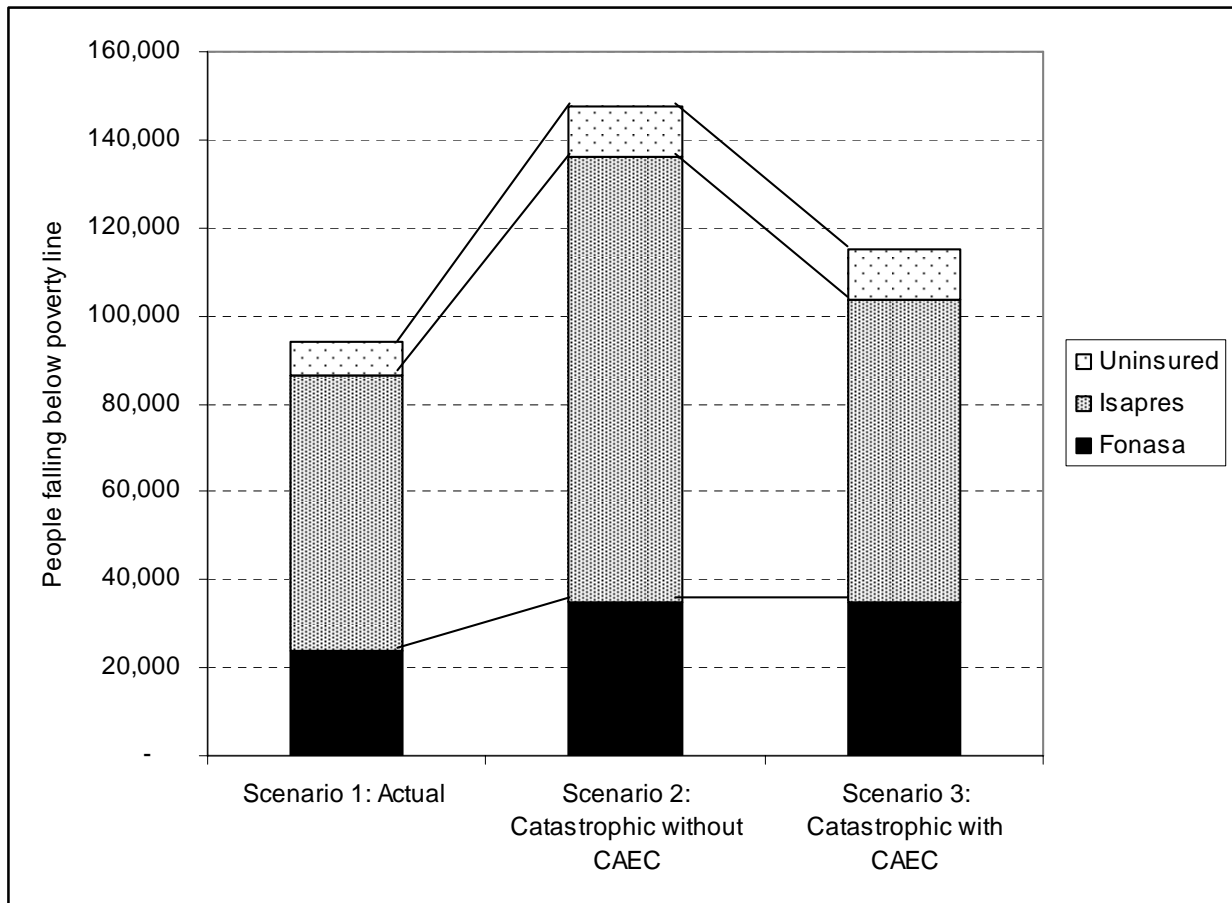


Source: Bitrán (2002)

<sup>36</sup> About 80 percent of those whose out-of-pocket health expenditure represented more than 15 percent of their income were people in the bottom quintile. The people falling in poverty in 1998 were from the top four income quintiles whereas in 2000 they were only from the three upper quintiles. This difference may be explained by the fact that the (urban) poverty line for 1998 was Ch\$40,658, or an amount within the second quintile. In 2000, instead, the poverty line of Ch\$40,562 was within the third quintile.

As mentioned earlier, in 2000 the ISAPREs voluntarily decided to create catastrophic health coverage and provide it to all of their beneficiaries. Studies carried out by the *Asociación Gremial de Isapres* – the trade association of private insurers - show the benefits of this new coverage, in terms of number of catastrophic events, amount financed by the ISAPRES, and out of pocket cost to the beneficiary – show that this new mechanism is quite effective in preventing impoverishment. Bitran, *et al* (2002) evaluate the effectiveness of the ISAPRE’s CAEC plan to cover catastrophic events, employing simulations of out-of-pocket costs in the wake of such an event with and without CAEC cover (see Figure 17). They find that among the top three quintiles – where ISAPRE affiliation is highest – the share of individuals that fall into poverty in the wake of a catastrophic health event is only slightly smaller assuming CAEC coverage than without the additional policy.

**Figure 17. Number of People Falling Under Poverty Line from Health Shocks by Insurance Type, (with and without Catastrophic Coverage) 1998<sup>37</sup>**



Source: Bitrán (2002)

Among FONASA beneficiaries the incidence of poverty is greatest in quintile 3, in the year 2000. Among ISAPRE beneficiaries poverty from health shocks strikes more heavily those in

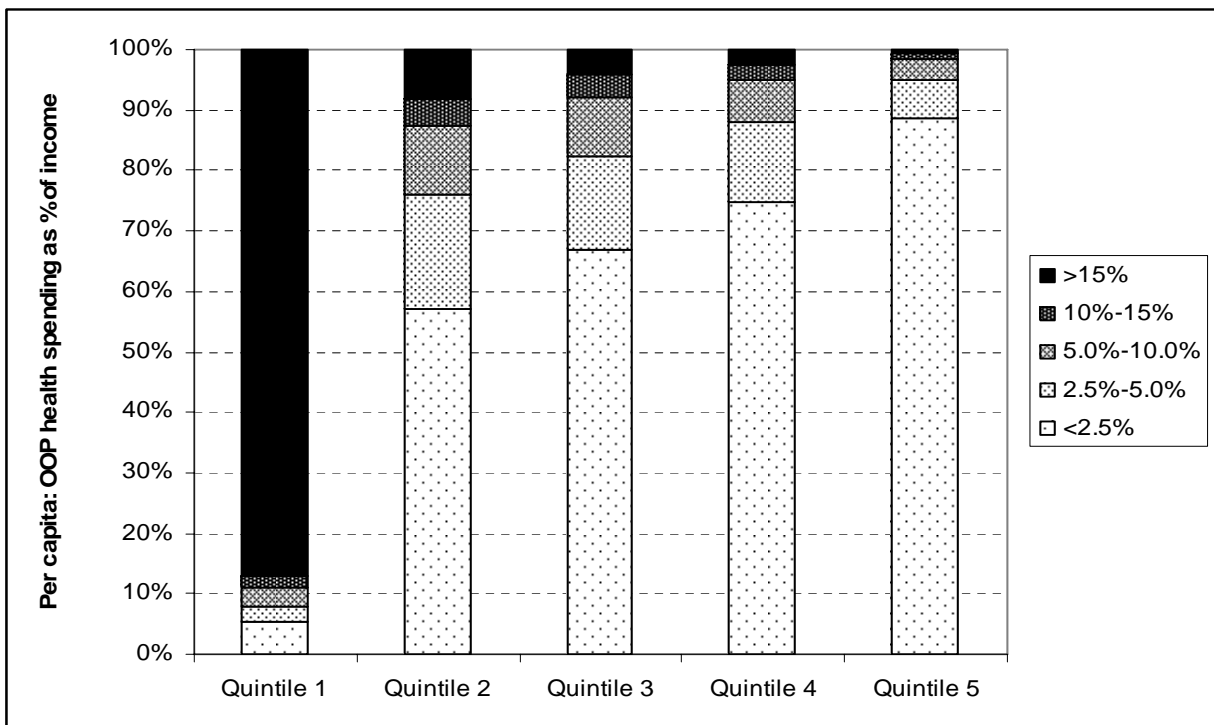
<sup>37</sup> Source: Bitran, et al (2002)



quintiles 2 and 3 in 1998 and in quintile 3 in 2000. Among the uninsured, it is also those in quintile 3 who suffer the most from health shocks, especially in the year 2000.<sup>38</sup>

Although the system seems to be very effective at preventing poverty due to health shocks, out of pocket health expenses have a substantial impact on household incomes and are very regressive (see Figure 18). The authors find that out-of-pocket health spending was highly regressive in both years analyzed. In 2000, the majority of households whose monthly per capita health expenditures represented more than 15 percent of their monthly per capita income were from the first income quintile. These were people who were already poor and who became further impoverished - some moving below the indigence level - as a result of their health expenditures. In 1998 the percentage of individuals with positive out-of-pocket health spending was highest among those in quintiles 1 and 5 -54 percent and 53 percent. The high incidence of spending in quintile 1 may be a reflection of accessibility problems among FONASA’s Group A (the poorest) beneficiaries, who to obtain adequate or timely care may find themselves compelled to seek private, paid care elsewhere. The relatively high proportion of individuals in quintile 5 incurring out-of-pocket spending may reflect the nature of many of their ISAPRE health plans, which confer free choice of provider but require co-payment.

**Figure 18. Incidence of Out-of-Pocket Health Spending, by Income Quintile in 2000**



Source: Bitrán (2002)

<sup>38</sup> It is interesting to observe that in all sub-groups it is the middle income quintile that suffers greater shocks. This may be due to a mixture of insurance coverage malfunctions in real life and household behavior seeking better and more timely health care. This is a finding worth further investigation in the future.

## **PLAN AUGE: TOWARD PROVIDING ALL CHILEANS WITH UNIFORM MINIMUM COVER**

In most Latin American countries the public health system theoretically covers all health events. However, in effect, public health systems are financially constrained, and resort to rationing and are forced to offer lower quality attention to deliver coverage within their limited budget allotments. This restriction on supply (and quality) of health care, leave a large unsatisfied demand for attention.

Rather than continue to offer unrealistic promises to cover all health events; to address rationing; and to improve the services of FONASA, the Government's new AUGE initiative seeks to establish a guaranteed minimum, basic package of health cover for all Chileans. This package of basic care will come with guarantees of attention within specified time periods; set ceilings on co-payments individuals and households (other than the poorest) will have to make; and act as the (currently missing) minimum, benchmark package of cover to increase the efficiency of the private health insurance market. FONASA will continue to cover health events not specified in the basic package, but these will be rationed to give priority to providing the minimum level of attention.

The specific parameters of the AUGE plan are still being debated. In theory, the plan looks like a positive development that should increase the quality of services offered by FONASA, as well as correct some of the distortions in the ISAPRE market. As a mandated benefit plan for ISAPRES, it levels out premiums and co-payments, putting a lock on "cream-skimming" practices; as an enforced patient's charter or bill of rights for FONASA affiliates, it would theoretically reduce waiting lines and other malfunctions among public providers that today induce greater out-of-pocket expenditures, specially among the poorest. Additionally, the plan (a) includes new mandatory coverage for specific catastrophic illnesses (specially for infants, identified in the last red cover report on health, as increasingly important due to technology improvements) and (b) intends to strengthen access to primary, preventive care.

The guaranteed basic package of health attention was selected by a panel of experts, and reflects those health events that are most directly linked to mortality in Chile. This is to say that the package of basic attention was selected with greater consideration given to health priorities than to costs. For this reason, although the plan has been well received, sources of financing for the new guarantees and the subsidies implied by the ceilings on co-payments, are a concern. The government's original proposals would have increased taxes on tobacco and alcohol, as well as force the self employed – exempted from participating in both the health and pension system - to either contribute to FONASA or to an ISAPRE.

This last measure intended to increase coverage will necessarily require improvements in the government's ability to track the incomes of the self employed and enforce compliance. The government may find that many of those that it will be able to easily capture – among the more "formal" self employed professionals - already are affiliated to an ISAPRE, and that and thus that there will be little additional coverage. Argentina's experience of trying to enforce the participation of the self employed has not been positive. Financing the minimum health package through taxes with a wider base, such as the value added tax, would be more efficient, and might even allow a reduction in Chile's pay-roll taxes.

The government expects an increase in participation and compliance from the creation of an explicitly guaranteed minimum package of services and quality of care. Thus, while developing greater enforcement capacity will still be important, the government expects that a large portion of Chileans who currently evade or choose not to participate in the health insurance system, will seek cover. This expectation may be well founded. Public health insurance is regularly cited in surveys and opinion pools as a high priority, even among the poor who find it difficult to pay premia. Evidence presented in the next section of increases in participation in the pension system linked to changes in the health system, indicate that the government might expect a small increase in affiliation to FONASA and perhaps even the ISAPRES. However, a significant portion of the currently uninsured might still remain uninsured for structural reasons. Thus the move toward guaranteeing minimum care and financing these guarantees through broad based taxes are extremely positive.

## Chapter 6: The Risk of Poverty Due to Loss of Earnings Ability in Old Age<sup>39</sup>

### THE RISKS OF LOSING EARNINGS-ABILITY AND POVERTY IN OLD AGE

Old age is not a bad state, *per se*. In most societies, it is considered a blessing to live a long life, and advances in technology and healthcare have brought longevity to a greater share of the population. The “bad state” that individuals and policy makers are concerned with in this context, is falling into *poverty* in old age. This risk is increased by loss of earnings ability (the inability to draw sufficient income from work due to the body’s natural deterioration); accompanied by the greater likelihood of facing “catastrophic” health expenses; insufficient accumulated savings or other assets to meet consumption needs; and/or isolation, with no other means of support such as family.

The factors that increase the probability of the bad state - poverty in old age – occurring are; (i) failure to save a sufficient amount during active life<sup>40</sup> and (ii) lack of access to efficient forms of saving and insurance, due primarily to missing and imperfect capital and insurance markets.

As life-expectancy increases, the probability that most people will face a period of life in which they will need to consume but be unable to work can also rise. This is to say that an increasing share of the population faces a relatively predictable disability as the *incidence* of old age becomes more frequent.

As a period of old age without the ability to work becomes a greater certainty, the comprehensive insurance framework predicts that rational individuals should increasingly turn to self insurance (savings) and self protection (prevention) to mitigate the loss of earnings ability. All else equal, pooling to mitigate this loss at the aggregate level (with market-type, old-age insurance, on a defined-benefit basis) will become more expensive relative to individual saving as the probability of long-life and the “frequency” of old age (relative to working age) in the population increases. The need to raise pay-roll taxes to finance defined-benefit social security systems in countries with “aging” populations (and transfers from government general revenues to pay public pensions where contributions fall short), are strong indications of the increasing relative cost of pure-pooling arrangements.

At the household level, if market insurance (pooling) and self insurance (saving) are substitutes an increase in the relative price of pooling increases demand for saving and prevention. Rising pay-roll taxes needed to finance PAYGO benefits in demographically “mature” countries, increase the cost of pooling relative to saving outside the system, and may drive workers into informal employment. In time the burden of pay-roll taxes can even increase political support for a partial or total transition to saving in individual accounts.

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<sup>39</sup> This section draws extensively from Gill, Packard and Yermo (2004), which provides a wider analysis of structural reforms to retirement security systems in Latin America during the 1980s and 1990s.

<sup>40</sup> An individual can fail to save due to myopia, bounded rationality, frequent shocks such as periods of unemployment, and/or employment in sectors of the economy where social insurance is rationed or unattainable, and life-time poverty.

However, as losses become more rare, the incentive to pool rises. In the context of sustained growth and economic development, all else equal, the opportunities to accumulate wealth over the life-cycle will increase. Each generation should reach old age with increasing accumulated wealth. Thus, although increasing life-expectancy can make the loss of earnings ability (that is consumption during a period of life that must be financed without the ability to work) more frequent, the incidence of *poverty* in old age should become increasingly rare. This logic not only affirms the move toward individual savings to smooth consumption over the life cycle, but indicates a clear role for government administered risk pooling to prevent poverty in old age.<sup>41</sup>

This said, the conceptual framework also predicts that where pooling is available, the optimal amount of pooling to engage in depends on relative costs to the individual of saving. To the extent that certain groups in the population do not enjoy increasing life expectancy relative to the mean – workers who engage in risky activities, the life-time poor and certain minorities – saving may be relatively expensive and pooling to insure against what still may be a relatively rare incidence of “old age” may be the preferred instrument.

Thus, where defined benefit pension systems have been eliminated entirely in favor of mandated individual accounts, it may be more efficient for certain groups to turn to informal pooling mechanisms. Where informal pooling is no longer reliable (due to economic development, urbanization or other factors), these groups may rationally prefer to rely on tax-financed, targeted social assistance to the elderly – essentially, a country-level pooling device.

Chile enacted structural reforms to its retirement security system in 1981, shifting from a purely publicly-administered, defined benefit, PAYGO system, to a publicly mandated and regulated system of individual retirement accounts. The architects of Chile’s social security reform expected that the combination of private and public coverage of risks to retirement income would not only lower future government liabilities and increase efficiency, but also provide workers with added incentives to save and invest for retirement.

Two decades after the introduction of individual retirement accounts (mandated self insurance for retirement) in Chile, there is growing concern that workers are not making sufficient contributions to the pension system to effectively mitigate the risks of losing earnings ability and poverty in old age. Edwards and Edwards (2000) find that in 1997, only 62% of the labor force in Chile was contributing to the pension system – about the same share of workers who contributed to the PAYGO system prior to reform. Cortazar (1997) and Arenas de Mesa (1999) similarly find no change in the portion of contributing workers.

However, the findings of these studies rely solely on simulations and casual observation of the aggregate data, rather than econometric investigation. The results of the panel analysis by Packard (2001) show a positive incentive effect after the introduction of individual retirement accounts that increases the share of the economically active population who contribute to the

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<sup>41</sup> This said, individuals do not know the exact age at which they will die (although Packard, 2002, finds that peoples subjective life expectancy can be explained by education, demographic and family history variables). The risk of an individual far outliving mean life-expectancy of their age cohort (“longevity risk”) is relatively rare. Private markets step in to pool this relatively rare risk by providing annuity policies. However, the monthly amount of the annuity payment is still largely a function of how much the individual managed to accumulate in savings and earnings from their investment.

pension system. These results affirm Chile's transition away from pure pooling, defined benefit arrangements toward individual savings as the primary means of securing income for old age (that is, mitigating the loss of earnings ability). This said, the numbers of workers who contribute to the formal retirement security system in Chile relative to that in OECD countries is still very low, and guards strongly against complacency. The significant share of the working population that fails to contribute to the pension system may indicate that the wedge created by the payroll tax to social security prior to reform, was just one of many possible factors that still lead certain groups of workers to ignore government mandated retirement-income protection.

Pointing to the substantial share of the workforce that fails to contribute to the pension system, Arenas de Mesa (1999), Uthoff (2001), Mesa-Lago (2001) Arenas de Mesa and Hernandez (2001) conclude that the Government of Chile still faces a large contingent liability in the form of minimum pension guarantees and social assistance pensions. The low rate of participation in the system (and the future contingent liability this may represent) is the most pressing issue in old-age income security in Chile, and the most revealing indicator of the need to reexamine design issues surrounding the "multi-pillar" model (Gill, Packard and Yermo, 2004).

#### **COVERING THE POPULATION AGAINST LOSS OF EARNINGS ABILITY AND OLD AGE POVERTY: AGGREGATE LEVEL ANALYSIS**

Valdes (2002) shows that participation in the contributory pension system can be increased through several policy avenues. Wider economic and social protection policy - other than pension policy - has a significant and substantial impact on coverage. Valdes finds that changes in labor and social legislation that impose costs on participation in covered labor markets, as well as confer benefits to covered workers, may induce some to leave or join these markets, affecting also the overall coverage of the pension system.

Using time-series analysis of quarterly data on the share of the labor force that contributes to the pension system from 1990 to 2001, Valdes finds that the main policy levers to increase coverage, in order of importance, are: the level of the minimum wage; the level of the flat commissions charged by pension fund managers; the rate of economic growth; and the size of subsidies to utilization of the state hospitals.<sup>42</sup> The share of contributing workers in the labor force falls with increases in the minimum wage and the level of the flat commission charged by the *Administradoras de Fondos de Pensiones* (AFPs). Participation in the pension system increases in periods of economic growth, as well as with increases in the subsidy the government pays to cover the health expenses of workers who contribute to Chile's public health system, FONASA.

Surprisingly, Valdes finds that neither the level of salary-based AFP commissions, nor the level of financial performance of pension fund managers influence coverage. The only pension policy lever that influences coverage is the level of the flat commission charged by pension fund managers: a higher flat commission reduces the share of workers who contribute. This may be due to its saliency and transparency for self-employed and inactive

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<sup>42</sup> For readers familiar with the health system in Chile, this is the amount of health costs the government subsidizes to workers in FONASA B, C and D.

people who are considering entry to the covered sector. The flat commissions is considered a “policy” lever for two reasons. First, the government may cap the flat commission charged by fund managers for equity reasons (as has been done in several Latin American countries where flat commissions have been found to be regressive and even been eliminated). Second, in some cases the authorities set the level of commissions, bargaining with what has become a tight oligopoly of pension fund managers (Valdes, 2002).

Another important finding is that the minimum wage does not reduce coverage by forcing low-productivity workers out of formal employment, as is usually assumed. Increases in the minimum wage effectively raise the minimum amount affiliates have to contribute to the system, since contributions on salaries below the minimum are not allowed. Thus an increase in the minimum wage reduces coverage through two channels previously unnoticed in the literature: first, by forcing poor workers to save higher amounts for old age in a savings vehicle that suffers from illiquidity and large commissions; and second, by reducing the amount of minimum pension subsidy they can expect to receive if they complete twenty years of contributions (Valdes, 2002).

#### **MITIGATING LOSS OF EARNINGS ABILITY AND OLD AGE POVERTY: HOUSEHOLD ANALYSIS**

Critical to an analysis of whether workers are adequately covered against loss of earnings ability and poverty in old age, are data on workers’ density of contributions to the pension system (that is, the period of contribution to the system, as a share of their working lives). These data are held by the private fund managers, and not available to the authorities.<sup>43</sup> However, data on contribution history recalled by a representative sample of affiliates to the system, collected in the PRIESO survey in January 2000, can be used in lieu of an actual registry of earnings and contributions.

Figure 19 presents data on male and female affiliates to the pension system by the average *contribution density* of each contribution decile. Taking eligibility for the minimum pension guarantee as a measure of minimum coverage offered by Chile’s pension system, a “contribution density threshold” can be constructed by dividing the months of contribution necessary to qualify for the minimum pension (240, or 20 years) by the average number of working months for men and women. This threshold is shown as the bold, horizontal axis in each graph. Assuming that workers will maintain their current rate of contribution to the system, affiliates whose contribution density places them above the threshold will qualify for (at least) the minimum level of coverage, while those below will not.

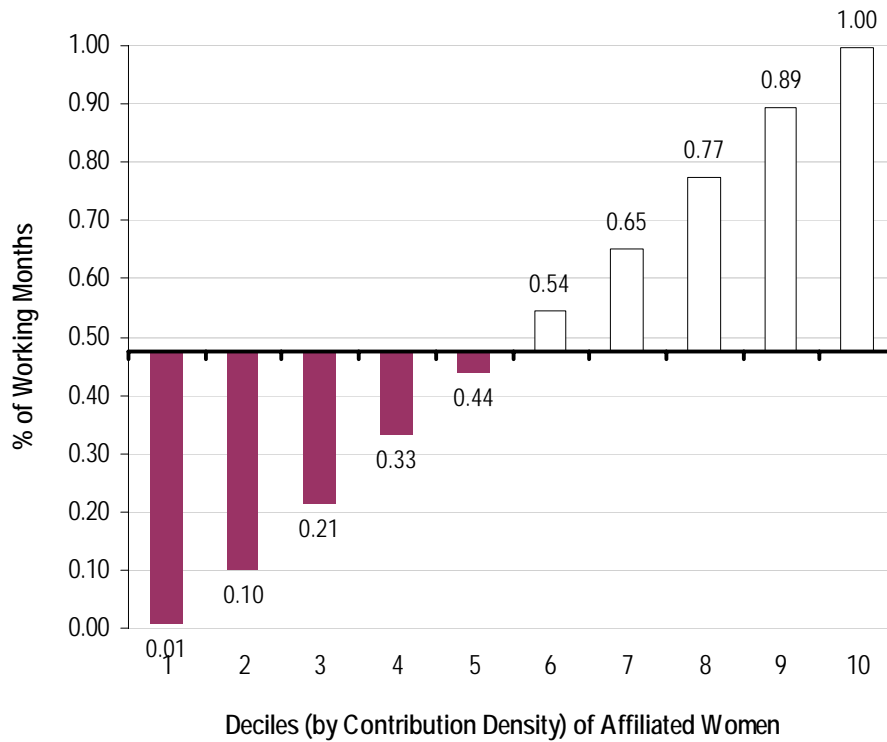
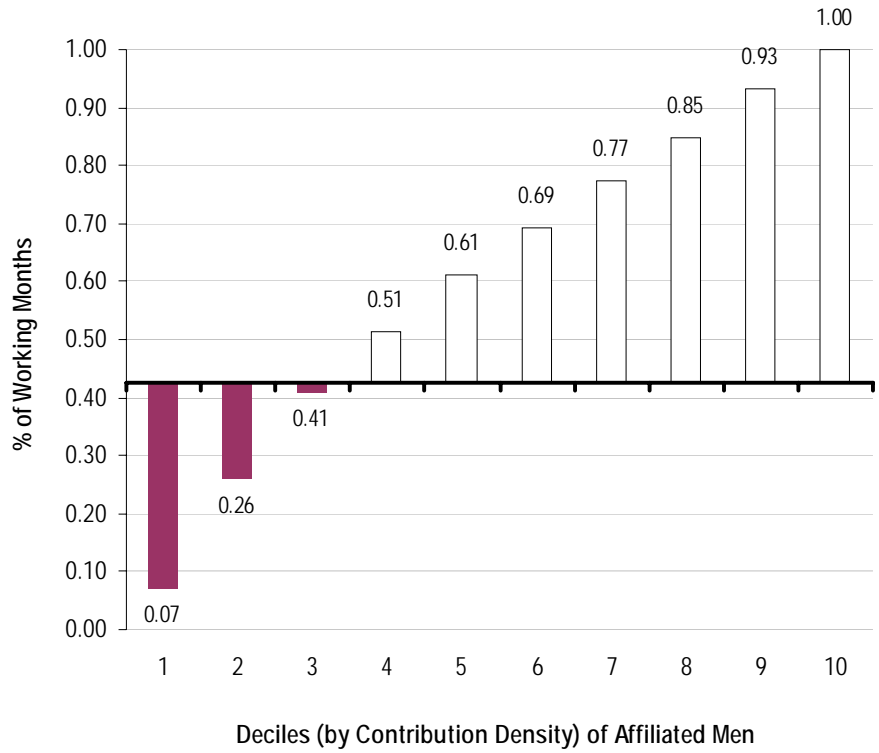
Among affiliated workers in Santiago, it is immediately apparent that a larger share of affiliated women – roughly half - lies below the threshold of contributions necessary to receive the minimum pension guarantee. However, many of these women may be entitled to some benefit through the current and past contributions of a husband. What is particularly worrying is that 30% of affiliated men are unlikely to qualify for the minimum contributory benefit.

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<sup>43</sup> The private and decentralized structure of the reformed system in Chile has made data on contribution history unavailable to the system’s regulators.

**Figure 19. Reported Contribution Density (Contribution Months/Months in EAP)**

(Affiliated Men and Women who Responded to the PRIESO, Santiago, January 2000, Source: Packard 2002)





Packard (2002) presents the results of regression analysis using the PRIESO data. The author finds that workers who entered the labor market under the new regime of individual retirement accounts have a significantly higher contribution density than those who entered under the PAYGO regime, affirming the transition away from pure PAYGO pooling in 1981 from the individual/household perspective. However, he also finds that among workers of average incomes and higher, those who have met the contributory requirements to qualify for the minimum pension guaranteed by the government – the reformed system’s remaining pooling element against poverty in old age – are significantly less likely to continue making contributions. The likelihood of additional contributions beyond the eligibility threshold is lowered further the greater the rental value of respondents’ homes. Rather than rely on the pension system as an instrument for further savings, respondents who cross the eligibility threshold for the formal pooled benefit may prefer to diversify their retirement portfolio by saving for retirement outside the system in the form of housing.

Barr and Packard (2002) construct measures of risk aversion for a sub-sample of respondents to the PRIESO. They find that the demand for cover from the pension system seems to be largely determined by workers’ risk preferences. However, those with a greater tolerance for risk contribute to the AFP system, suggesting that there are retirement security investments (that is, potentially competitive substitute forms of retirement saving) in Chile that are perceived as relatively less risky than saving in the pension system. The results in Packard (2002) indicate that housing could be one such investment. These results could also show that what individuals and households in Chile are seeking from the mandated pension system, is a relatively greater degree of security, even if this comes in the form of the modest annuity guaranteed by the government. Contributing to the system only long enough to qualify for the minimum benefit secures an “income floor” below which affiliated worker will not fall, and which allows them a relatively greater degree of security to take up other investments outside the pension system.

#### **GRADUALLY SHIFTING THE RELATIVE WEIGHTS OF CHILE’S MULTI-PILLAR PENSION SYSTEM**

The most recent changes to the retirement security system in Chile have been made to the private mandated second pillar, and to options for private savings and insurance in the voluntary third pillar. Chile has moved towards making the mandated AFP system more flexible, allowing workers greater choice over their investment portfolios. From May 2000, Chilean workers close to retirement were offered the opportunity to trade out of the so-called *Fondo 1* (the original pension fund available since 1981) into a fund invested exclusively in fixed income securities (*Fondo 2*).

The response to this initial change was disappointing. Among those eligible, the *Fondo 2* had limited popularity. The option to switch was only taken up by a handful of workers—there were only 64 contributors in September 2000. This bumpy start of the *Fondo 2* appears to have been caused by the limited publicity extended to the new investment option. The pension fund administrators, who have been under pressure from the government to cut commissions, have reduced the number of sales agents they employ. For many workers, these agents were the main source of information on changes to the pension system, and in their place the government could have done much more to promote the second fund.

The government drew important lessons from the experience with *Fondo 2*. Despite the low take up of the second fund, a law passed early in 2002 extended individual choice over investment even further. A multi-fund system has been approved which permits workers to choose between five funds, all with varying exposure to equities. Men older than 55 and women over 50 will only be able to choose between the four funds with the lowest risk. Pensioners will only be able to choose between the three funds with the lowest risk. Those workers that do not select a specific fund will be assigned one according to their age: the young will be assigned a fund with a higher investment in equities while older workers will be assigned a fund with a higher investment in fixed income securities.

The Government's efforts to increase the appeal of the pension system by increasing choices in the mandated second pillar, have been complemented with steps to strengthen and provide greater tax incentives for individuals to participate in the voluntary, third pillar. Since March 2002, Chilean workers have been able to save up to 50 UF of their monthly pre-tax income in any government authorized voluntary pension plan, in addition to any AFP. There are no restrictions on the number of plans or AFPs in which workers may deposit their tax-advantaged, voluntary savings. Workers may also cash out these plans at any time before retirement subject to a 10% special excise tax (in addition to the relevant income tax). Employer contributions, however, may still only be liquidated at retirement.

While workers' reaction to the *Fondo 2* does not augur well for the new multi-fund system, the government has made a greater effort to publicize the new funds and take up in the first few months of the new plan has been more promising. However, the multi-fund proposal fails to acknowledge the fact that the main asset for diversification is not domestic equities, but foreign securities. Furthermore, because they enjoy a trapped market, the AFP's have little incentive to incur the costs of educating individuals on optimizing their returns from the system by shifting their portfolio allocations. Making the affiliates' investment decisions more complex is increasingly inconsistent with the mandate to save itself: if individuals are insufficiently informed or too myopic to save and invest responsibly for old age and need to be forced to save in the AFP system, how can they be expected to rationally take full advantage of the investment options the system offers? Since the number of competitively priced voluntary savings and insurance instruments in Chile is increasing, the possibility that distortions in the financial sector and capital markets could arise from the government mandating a particular form of private retirement saving, is being investigated with increased scrutiny (Shah, 1997, Gill, et al, 2004).

In fact, the results of the analysis using PRIESO data from Chile indicate that with respect to individual preferences, the Chilean pension system may be over-designed. Workers seem to be using a system intended to act as a vehicle for savings and investment with a small pooling component, primarily as a risk pooling device. As mentioned earlier, each cohort of workers that completes the minimum required months of contributions to the system, may be content to have secured the right to the government's minimum pension guarantee. Given the modest amount of the guarantee (which has averaged between 80% and 90% of the minimum wage in the last ten years), one would hope that these workers would continue to save or invest for retirement outside the system. Contrary to the default assumption of worker irrationality and myopia held by academics and policy makers in the pensions field, the evidence drawn from the PRIESO survey in Chile suggests that many do, since the likelihood of further contribution to the pension system is lower the greater the market value of affiliates' property.

Several researchers have attributed the fall in regular contribution after 20 years to moral hazard since simulations will show that for lower income workers every additional contribution above the threshold necessary to qualify for the minimum pension benefit is a pure tax (Vittas, 1996, Edwards and Edwards, 2000, Cox-Edwards, 2000, James, Cox-Edwards and Wong, 2002).<sup>44</sup> However, it is important to point out that the portfolio behavior apparent among affiliates to the pension system in Chile is seen not among the working poor, but among respondents in the fifth income decile and higher. Once they have contributed for twenty years, affiliates have the right to the minimum benefit - the pension systems remaining public pooling instrument – but only should they need it. Given their likely life-time earnings, many will not. Each additional contribution to the AFP system above the eligibility threshold for the minimum pension guarantee is purely a form of savings. If affiliates *perceive* the AFP system to be a relatively risky, costly and illiquid savings instrument, it comes as little surprise that they manifest a preference for alternative, voluntary forms of savings - such as housing - once they have secured the guaranteed minimum annuity.

Furthermore, the analysis from Chile not only indicates that households save outside the mandated system, in the form of housing, but that with regard to that portion of their retirement portfolios that the government has mandated, they may place a relatively greater value on security than on real rates of return. In Chile, those who freely choose to contribute to the system show a significantly higher tolerance for risk. Further, households are content to gain eligibility for the low, government guaranteed annuity and continue to save outside the system, despite the variable, but high real returns they could earn in the system.

Seen in this light, Chile's recent moves to strengthen the third pillar by providing workers a greater degree of choice and incentives are extremely positive. However, since tax incentives for voluntary retirement savings have been found to be regressive in several countries,<sup>45</sup> the improvements to welfare from giving greater weight to the third pillar could be enhanced by consolidating and strengthening the set of instruments intended to prevent poverty in old age – both the non-contributory, rationed PASIS, and the contributory minimum pension guarantee.

In a country where all workers contribute to the earnings related pension system, the current structure of the minimum pension guarantee is relatively good: it encourages workers to save

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<sup>44</sup> A valid alternative explanation for these results, is that the minimum pension guaranteed by the government is set too high. Workers with lower life-time earnings would not be able to accumulate a balance at retirement that could purchase an annuity for an amount higher than the guaranteed benefit. For these workers, contribution up to the eligibility threshold may be a high-return investment option, but every additional contribution will be a pure tax (Cox-Edwards, 2000, Edwards and Edwards, 2000). Yermo (2002) uses contribution density and income data from the PRIESO survey to simulate likely accumulated savings at the age of retirement for the sample of respondents, using the parameters employed by Cox-Edwards (2000). He finds that, assuming workers cross the eligibility threshold for the minimum benefit, 25% of the women and 5% of men who responded to the survey will not accumulate sufficient funds to purchase an annuity greater than the minimum pension guarantee. For these individuals, contributing beyond the twenty years required to qualify for the minimum pension would be a pure tax.

<sup>45</sup> 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. However, various schemes such as matching government contributions for potential savers from poorer groups can be put in place to counter these effects.

privately and guarantees a minimum level of retirement income at a minimum cost to tax payers. However, in countries like Chile where many workers will not have a sufficiently long history of contributions to the pension system, a top up conditioned on participation can not only exclude large segments of the population by also lead to perverse transfers. Furthermore, while the cost of the targeted, non-contributory PASIS is relatively low, means testing to target the benefit efficiently comes with a host of complications and costs. Means tests increase administrative costs and provide opportunities for corrupt behavior on part of public officials. Means tests can also discourage private saving and wealth accumulation for retirement (Hubbard, Skinner and Zeldes, 1993 and 1994) as well as continued work in old age. Finally, means tested benefits are often regarded as charity, which both reduces their political appeal, makes the benefits vulnerable to budget cuts especially in economic downturns (Snyder and Yackovlev, 2000) and may discourages eligible applicants dissuaded by social stigma (Barr, 1992).

Chile could move toward consolidating and simplifying its poverty prevention pensions (the PASIS and the MPG) into a single (perhaps prorated) public risk pooling device against poverty in old age. This would ideally involve setting a single minimum level benefit; financed from general taxation (such as VAT) rather than pay-roll taxes; indexed to changes in prices; available at a retirement age periodically adjusted to changes in life-expectancy; and either targeted to the elderly poor, or available universally on a taxable basis, or with surcharges for wealthier groups.

As the financial sector gradually continues to provide a greater array of competitively priced saving and insurance instruments for Chilean's to take up voluntarily, measures could be taken to gradually limit the mandate to save privately to an amount necessary to secure retirement income slightly above a government provided minimum (similar to the current rules in Chile allowing early retirement, but with greater annuitization requirements). This could be complemented with gradually increasing reliance on voluntary investment instruments in the third pillar.

## Chapter 7: “Residual” or Structural Poverty

### THE RISK OF RESIDUAL OR STRUCTURAL POVERTY

This section of the report presents the least straight-forward application of the comprehensive insurance framework, and the most difficult. The difficulty arises primarily because the concept of “residual” poverty remains poorly defined. Here, we have used it conceptually to classify those individuals and households who lie below the poverty line, but whose poverty cannot be linked directly to losses from any of the principal adverse shocks discussed in the previous sections. As such, for conceptual purposes, the group of “residual” poor are *employed, healthy, and able bodied*, but still unable to meet their basic needs.

Considerable effort has been dedicated to identifying what are the determinants of this particular “bad state”. Among the possible determinants could be: sudden costs to the household of caring for unanticipated dependents (primarily children, since dependent elderly or disabled are linked to risks discussed previously); the costs of servicing debt; or employment shocks suffered by previous generations of household members from which younger generations still have not recovered. Further, a substantial number of this group may be individuals with little education and few opportunities for building or renewing their skills, who are simply “stuck” in low-paying jobs (see Box 3).

The analysis presented in Section I provides a statistically robust story of the evolution of incomes, inequality and poverty in Chile over the period 1987 through to 2000. In particular the low growth of mean incomes and stable income distribution has been accompanied by a small increase in indigence poverty. This section reports the results of regression analysis on the determinants of poverty in order to empirically isolate the econometric “residual” from the poverty attributable to shocks discussed in earlier sections. The quantitative analysis is followed by the findings of qualitative interviews with focus groups that provide further insight on how poorer households perceive risks and manage shocks to their income compared with the non-poor.

After accounting for unemployment, health shocks and old age, we find that the indigent poor - i.e. those individuals in households below the lowest poverty line in Chile - have much lower levels of education (45% have not even completed primary education); are more likely to be employed in agriculture (almost half are employed in agriculture compared to about a seventh of the non-indigent poor);<sup>46</sup> and are also more likely to live in rural areas (just over a third live in rural areas compared to a sixth of the non-indigent) and outside of Santiago, in particular regions VIII, IX and X (Litchfield, 2002). This simple analysis suggests that there is a small minority of households that are being left behind by the growth of the Chilean economy, modest as that has been in recent years, and for whom a more sustained, direct intervention may be needed.

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<sup>46</sup> These figures are based on simple univariate analysis of characteristics of heads of indigent households, rather than of all individuals.

### **Box 3. Fitting Poverty within the Comprehensive Insurance Framework**

The analysis in this report has focused primarily on the things households do to mitigate possible losses to their income (insure against losses or take steps to lower the likelihood of a loss), and the public and privately provided instruments at their disposal to manage risks. For this reason much of the analytical work summarized in the previous sections looks at the behavior of representative households faced with the possibility of falling into poverty in the wake of a shock. But what about those individuals and households who are already poor? Is the comprehensive insurance framework purely an ex-ante conceptual tool for examining risk-mitigation?

One can fit poverty into the comprehensive insurance framework in two ways. First, one can treat poverty as the outcome of inadequate insurance and prevention behavior – that is, a risk mitigation strategy that failed - and back-track in an attempt to find the adverse event responsible for the condition of the current poor. Alternatively, and perhaps more usefully to policy makers eager to do something about the poor, the condition of poverty can be treated as a shock itself.

Following the *basic needs* approach to poverty measurement, an individual is considered poor if they do not have the income necessary to purchase some minimum level of consumption society deems necessary to survive. An extreme interpretation of the basic needs definition of poverty suggests that individuals begin dying the moment they fall below the poverty line. Thus, from the moment an individual falls into poverty, they enter into a state of continuous stress: large losses (tending to catastrophic) that strike continuously (with high frequency) until the individual emerges above the poverty line. Anecdotal accounts of the daily challenges faced by the poor, describe poverty as a continuous series of shocks (World Bank, 2001).

Turning once again to the illustration of the comprehensive insurance framework in Figure 6, poverty as a shock would be mapped to the lower, right-hand corner of the grid as a frequently-occurring, catastrophic loss. As explained in Section III, there is little an individual can do on their own to mitigate large, frequently occurring losses, and a clear role for outside assistance that effectively broadens the risk pool. At the aggregate level, countries with relatively low poverty rates (catastrophic losses, frequently occurring but only to a minority of the population) can pool this risk using direct transfers financed through broad-based taxation such as VAT to lift the poor out of poverty. Countries where the rate of poverty is high (due to persistent draught and famine, or in the wake of a financial crisis), are more likely to depend on international assistance – again, turning to a risk pooling device with a larger risk pool.

Are there any insights to be gained from this logic? Tax-financed, non-contributory transfers should always be in place, ready to be deployed to lower the losses of the poor. However, these should be considered and put in place not as state-financed charity, but as yet one more risk pooling instrument (with the largest possible risk pool) at the disposal of individuals and households should they suffer the misfortune to need them.

### **QUANTITATIVE ANALYSIS TO IDENTIFY THE “RESIDUAL” POOR**

Table 13 presents simple single-variable cross tabulations to help identify the “residual” or structural poor, using household data from the CASEN 2000 and applying the same three poverty lines used in Section I. Clearly, while many households can be pushed into poverty from job loss, most of the indigent and poor in Chile are working. Almost half (49%) of the indigent (those under the lowest poverty line) live in households where the household head is employed. This proportion rises to 65% under Chile’s second lowest poverty line, and to 68% under the highest poverty line. Over a third (32%) of the indigent live in households where the spouse of the household head also works. This share remains constant when the two higher poverty lines are applied, but remains low relative to non-poor households.

**Table 13. Identifying Chile’s “Residual” Poor – Share of Households in Poverty That Have not Suffered from Principal Shocks to Income**

<b>Poverty Lines</b>	<b>Employed Head</b>	<b>Employed Spouse</b>	<b>Healthy Head</b>	<b>Healthy Spouse</b>	<b>Elderly Male Head</b>	<b>Elderly Female Head</b>	<b>Resident Elderly</b>
<b>Indigence</b> (\$20,281) 4.2% of population	48.7%	32.1%	85.2%	88.1%	2.1%	3.8%	6.9%
<b>Poverty Line L</b> (\$40,562) 15.7% of population	65.2%	32.7%	85.3%	85.9%	3.1%	4.9%	10.0%
<b>Poverty Line H</b> (\$46,038) 19.9% of population	68.0%	32.8%	85.3%	86.2%	3.3%	5.2%	10.8%
<b>Non Poor</b> (for comparison)	80.3%	51.9%	12.3%	12.3%	7.6%	11.1%	20.7%

Source: Litchfield (2002), using data from CASEN 2000

Notes:

Poverty lines are monthly per capita poverty lines, expressed in Santiago 2000 pesos

Although respondents in poor households (all three poverty lines) are slightly more likely (14% to 15%) to report sicknesses than the non-poor (12% to 13%), the majority of indigent and poor (over 85%) did not report an adverse health event in the month prior to the CASEN survey. The share of indigent and poor households where the spouse of the household head reported suffering an illness is even lower.

Households headed by an elderly man (aged 65 and over) or woman (aged 60 and over), are less likely to be in poverty (all three poverty lines). Only 2% of indigent households and roughly 3% of households under the two higher poverty lines are headed by men over 65. However, a slightly higher share of indigent households (3.8%), and households under the two higher poverty lines (4.9% and 5.2% respectively), are headed by elderly women. Although still a minority of indigent and poor households, the share of poor with an elderly household member is slightly higher: 6.9% of the indigent; 10% of the population under the second lowest poverty line; and 11% of the poor. These shares are still low relative to the share of non-poor with resident elderly. Most indigent and poor households in Chile are headed by men and women of working age, and do not have an elderly member of the household to support.

The results of this simple cross-tab analysis, particularly with respect to old age, illustrate the difficulty of identifying the true share of poverty that is not linked to the principal shocks discussed in earlier sections. A plausible explanation of the low share of poor households headed by an elderly man or woman or who have an elderly household member, is that

pensions received by the elderly are relatively generous compared to their cost of living.<sup>47</sup> This demonstrates the difficulty of correctly identifying the true “residual” poor without a counterfactual: that is, how many more poor would there be if the elderly in Chile were not receiving pensions; if a greater share of individuals and their families were not covered by the health system; or more individuals who could not find a job failed to benefit from public employment programs and did not receive the non-contributory unemployment benefit. Despite the weaknesses identified in previous sections, without the relatively well-functioning social protection system Chile has in place, the number of poor and indigent in 2000 is likely to have been much greater than 15.7% and 4.2%, respectively.

So, after controlling for the principal shocks identified earlier in this report, what are the determinants of poverty in Chile? Wodon *et al* (1999 and 2001) find that, for Chile and several other Latin American countries, a number of demographic and labor market characteristics play an important role in determining both levels of income and the probability of being poor. These characteristics include the size and composition of households (number of infants, children, adults, the presence of a spouse and the gender of the household head), the education of both head and spouse, and a range of employment related characteristics such as sector, position in employment, size of firm and hours worked.

Wodon (1999) and Wodon *et al* (2001) find that household demographics in Chile are an important determinant of income: larger households and those containing more infants, children and adults have lower income levels in both urban and rural areas. Households headed by women have lower incomes than households headed by men, in both urban and rural areas. Not surprisingly, human capital is important: heads and spouses with higher levels of education receive substantially higher incomes. University-educated heads in urban areas have incomes almost double that of heads with no education, with slightly lower returns in rural areas. Even receiving some primary education raises incomes by 40% in urban areas and 26% in rural areas. Being unemployed or underemployed is associated with lower incomes. However, the big differences are between the sectors. Both heads and spouses in urban and rural areas employed in agriculture have the lowest monetary incomes of all.

Quantitative analysis conducted for this report builds on the model developed by Wodon, *et al* (2001), and compares differences in the determinants of poverty in Chile in 1990 and 2000.<sup>48</sup>

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<sup>47</sup> Other possible explanations are that: members of poor and indigent households are less likely to reach old age due to relatively higher rates of mortality among the poor; economies of scale are important; or that elderly relatives are supported by richer members of family.

<sup>48</sup> Some important differences in methodology between the analysis conducted for this report in Litchfield (2002) and that in Wodon *et al* (2001) should be noted. Incomes are not normalized by the poverty line, primarily because the poverty line is constant across urban and rural areas and constant in real terms over time, but also because we are not seeking to make comparisons across different Latin American countries where poverty lines differ. Otherwise, the reports seeks to replicate as closely as possible the CASEN 1998 analysis in Wodon *et al* (2001) in terms of explanatory variables used. Wodon’s results however are based on per capita income and as he states “(not) considering differences in needs leads to an overestimation of the impact of the number of babies and children on poverty” (Wodon (2001: 140). In the analysis that follows here, equivalized income, that does adjust for differences in needs, is used. This report also incorporates some data on health events, using a question that asks whether the respondent has been sick in the month preceding the survey. Finally comparisons are made between 1990 and 2000.



The regression analysis identifies the determinants of poverty once the principal shocks - job loss, health shocks and old age- have been accounted for.

Turning first to household demographics, having children, particularly young children, reduces incomes significantly, and the effect appears stronger in rural areas, where incomes are generally lower anyway but also where it is likely that job opportunities are fewer, particularly those that can be combined with child-care. Households with larger numbers of adults tend to have lower incomes, even after controlling for economies of scale (although the effect is only significant in 2000).<sup>49</sup> Households headed by women are worse off than those headed by men. Not having a spouse (i.e. not being married or co-habiting) also implies a lower income. Older heads of household tend to be better off than younger heads, although again the effect is diminishing at the margin (i.e. for very old heads) and not always significant for households in rural areas.

With respect to accumulation of human capital, schooling plays an important role in determining incomes. Incomes increase significantly with education level achieved, with substantial differences between those with no formal education and those with university level education. Even a small amount of primary education provides income gains. The education of the spouse is important too but is only statistically significant beyond primary schooling.

Sector of employment is a strong determinant of poverty. Compared to agriculture almost every other sector receives higher incomes, in both urban and rural areas (for heads and spouses and in both 1990 and 2000). Further, while employers are better off than salaried employees in both years and in both urban and rural sectors, the self-employed have seen a change in fortunes. In 1990, when growth was strong, self-employment was a relatively well-paid option. However, as growth stagnated in the late 1990s and 2000, the self-employed have become worse off than employees.

Despite our efforts to identify the determinants of poverty through econometric techniques, there remains a large proportion poverty that is unexplained by the usual set of household demographic and employment characteristics. The “residual” may not be a residual at all. A separate regression exercise using the same explanatory factors to model the probability of being poor revealed that around a third of the rural poor and half of the urban poor in 1990 and 2000 were predicted as being non-poor. While measurement error may explain some of this discrepancy, it is unlikely that it is solely responsible. Residual poverty, i.e. the unexplained poverty, needs to be better understood if successful anti-poverty programs are to be designed and put in place. Qualitative assessments of poverty, the shocks suffered by the poor and how they manage these shocks may provide further clues.

#### **RESIDUAL POVERTY, AND HOUSEHOLD RISK MANAGEMENT AMONG THE POOR**

In order to better understand the concept of “residual” poverty, substantial effort and resources have been dedicated to a qualitative investigation to complement the quantitative analysis completed for this section and other risk-areas covered by the report. The objective of the qualitative study is to identify which risks to income households perceive as the most

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<sup>49</sup> The fact that the effect of more adults is stronger in 2000 than in 1990 may indicate that economies of scale have become more important over the decade, perhaps in housing costs.

immediate; what households do to mitigate or cope with these losses; and how they perceive government provided mitigation and coping instruments, if indeed they perceive them at all.

As mentioned briefly in Section I, in a report on the findings of interviews with 30 focus groups, Raczynski, *et al* (2002) find that across income groups, genders and urban and rural respondents, unemployment was seen as the principal risk to income, followed by the cost of treating sicknesses. Among the poorest who frequently loose employment, and for whom job loss is almost a constant reality, the cost of adverse health events dominated discussion.

Although there were remarkably similar accounts of shocks and risk management strategies across the different focus groups, the account of participants from rural areas was particularly noteworthy, given the results of the quantitative analysis reported earlier. Participants reported that the rural, agricultural economy was “in ruins”; that it was increasingly difficult to earn sufficient incomes from small scale farming; and that there was little knowledge or contact with the social protection (social assistance) programs (SUF, PASIS, etc.) Chile has in place. Accounts of participants having to incur the expense of travel to urban areas (Santiago) to receive the most basic health attention, are particularly worrying. This, notwithstanding, Raczynski, *et al* (2002) note much higher expectations of government assistance among rural participants in all income, gender and age groups, than among corresponding groups of urban participants. No significant differences between rural participants and the participants in two indigenous focus groups were noted.

Raczynski, *et al* (2002) draw a set of conclusions from their findings that shed further light on the nature of residual poverty. First, that the principal shocks identified and discussed in earlier sections – job loss, adverse health events and loss of earnings ability with old age – do not occur in isolation, may in fact be highly correlated, and rarely do participants report having recovered from a shock. When one of these principal shocks occurs, even minor subsequent shocks can prevent individuals and households from fully recovering from the original loss and thus from taking up the necessary instruments – risk pooling, individual saving and prevention –to mitigate probable future losses. Having to incur health expenses in the wake of job loss can be particularly devastating and was the most commonly reported concern. Raczynski, *et al* report that participants found it very difficult to separate among coinciding events that caused significant losses of income. Second, particularly among the poor and women, the authors conclude that while individuals are able to save for small, frequently occurring losses, most engage in informal coping – adjusting to larger losses – rather than ex-ante risk pooling, saving or prevention, primarily because appropriate instruments to poor, save and prevent lie (or are perceived to lie) beyond their reach.

This said, the authors report that among informants of all income levels, rarely is expenditure on children’s education cut back in the wake of an adverse shock to income. This finding supports similar evidence of “good coping” at the household level reported in De Ferranti, *et al* (2000).

From the quantitative and qualitative analysis summarized in the paragraphs above, controlling for unemployment, health shocks and old age, the “residual” or structural poor come from larger households with a greater number of younger children; tend to live in rural areas; tend to be employed (and self employed) in agriculture; and tend to have fewer years of formal education. Greater efforts to increase education, access to health and rural

development are obvious interventions to tackle the problem of structural poverty (and lie beyond the scope of this report). However, social protection instruments – particularly cash transfers like the SUF, PASIS and other subsidies – can also have an important impact. Chile has several such instruments in place, so what is the problem? The concentration of structural poverty in rural areas come as little surprise given the rapid changes in the rural economy in Chile, and points to an isolation and even exclusion from a variety of networks that provide access to public an privately supplied risk mitigation instruments. The Government sees this exclusion as the primary determinant of structural poverty.

#### **Box 4. Confronting “Residual”, Structural Poverty: Chile Solidario\***

In its last poverty report for Chile the Bank argued that given persistent rates of indigence despite years of economic growth, the Government should take a more proactive stance in its poverty reduction and social protection policies. Relatively lower rates of poverty and indigence make a proactive approach more viable in Chile than in other developing countries. Analysis in this report indicates that despite the remarkable gains in eradicating poverty in the past decade, a new set of policies and intervention may be required to reach Chile’s poorest groups.

In May 2002 the Lagos Administration announced the *Chile Solidario* initiative, a package of legislative reforms to Chile’s poverty reduction and social protection policies and institutions. The package of reforms represent a concerted effort to bring the 225 thousand poorest households in Chile out of indigence poverty. The Chile Solidario package includes both new legislation and changes in current laws that will dramatically alter the Government’s approach to confronting indigence and extending social protection. The changes to the social protection system (particularly with respect to social assistance) implied by this policy shift are as significant as the reform of welfare in the United States in the mid 1990s.

The Chile Solidario policy initiative has several distinguishing features. The starting premise of the intervention is that the principal asset (and perhaps the only capital) held by indigent households, is their desire to live as a family and the complex web of intra-household mutual support that this entails. Thus, the preferential access to Chile’s social protection system created with the Chile Solidario reform package targets the neediest 225 thousand households/families rather than the 850 thousand individuals currently classified as indigent. Further, rather than making assistance and protection available only to those who demand it, Chile Solidario seeks to overcome the isolation and the exclusion of the indigent by actively *supplying* assistance and protection. Armed with the data identifying Chile’s poorest, social workers go door to door, and invite indigent families to participate in a two-year program of social support. This proactive supply of social services is much more characteristic of policies and interventions deployed to address indigence poverty in OECD countries. This sort of initiative may be more appropriate given Chile’s low levels of poverty and indigence, and greater administrative capacity relative to other countries in the region.

The Chile Solidario initiative builds on the Puente (“Bridge”) program created piloted by FOSIS early in 2002, and to date has expanded the pilot from 14 thousand to over 85 thousand households. Puente acts as the entry point to the social protection system for the 225 thousand households targeted by the Chile Solidario initiative, as well as the foundation on which the various social transfers and interventions bundled together by the policy reforms will rest.

Indigent households identified through a proxy means test are approached by Puente case workers and invited to participate in the program. Potentially eligible households that have been missed by Chile’s means test (frequently identified by local government and community organizations) are also approached, the test is applied and if they are eligible, these formerly excluded groups are also invited to participate.

Potential participants are informed of the Chile Solidario initiative, and that by participating in the Puente program, they will gain preferential access to Chile’s principal social transfers and programs. This is to say that in the area of health, the households targeted by the Chile Solidario initiative are given priority access to primary health care under FONASA. In the area of employment heads of households will be the priority beneficiaries of active employment programs. In the area of education, schools attended by members of targeted households will receive special school retention vouchers recently introduced by the Ministry of Education.

MIDEPLAN has been charged with overseeing and coordinating the Chile Solidario initiative. In addition to identifying the first wave of households that will be invited to take part in FOSIS’s Puente program, the ministry is coordinating efforts with the other line ministries (Labor, Health, Education, Housing, etc.) involved in delivering the payments and services guaranteed to targeted households.

While generally considered an improvement on the current policies (guaranteed access to cash transfers that have been historically rationed; greater integration between programs; a focus on results; more required cooperation between line ministries), it will take an enormous commitment and effort on the part of the government to implement the Chile Solidario reforms effectively, and to prevent the initiative from becoming just another social assistance program.

\*We are grateful to Veronica Silva at FOSIS and Jaime Crispi at DIPRES for extensive explanations of Puente and of the Chile Solidario initiative.

# Chapter 8: Increasing the Effectiveness of Chile's Social Protection System

## INSTITUTIONAL AND INFORMATION CONCERNS RAISED IN THE COMPREHENSIVE INSURANCE FRAMEWORK

Among a country's "insurance fundamentals", but often overlooked, is its administrative capacity. In a social protection system, providing efficient and effective social insurance and social assistance requires a sophisticated institutional and information infrastructure to act as a foundation. As discussed in Section II, a government's administrative and institutional capacity, and the information it has at its disposal, will directly determine the kind of instruments it can put in place to help household mitigate risks to income. A government with greater capacity can manage and sustain complex risk-pooling arrangements, while such systems often fall victim to adverse selection, moral hazard and fraud in countries where governments have little capacity or access to data.

As part of the report on household risk management and social protection, the team carried out an institutional and information audit of the agencies who regulate or directly implement social insurance and social assistance programs in Chile. This audit provides recommendations for how a more effective institutional structure can be put in place, and buttressed by adequate information resources. Given the direction that the government has chosen for its social protection policies - to mitigate losses from unemployment, adverse health events, old age, and even new government initiatives to confront structural poverty - greater coordination, integration and effective use of information will become essential.

Based on the experience of OECD countries, the institutional and information assessment in this section reveals a need for greater *virtual* integration between the social protection system, tax collection authorities and the civil registry in Chile, overseen by a central coordinating body. The objective of this section of the report is to identify the optimal institutional and informational infrastructure Chile will need to put in place, to offer both program administrators and actual and potential beneficiaries of the system a "*ventanilla unica*" on the various branches social protection.

### CHILE'S CURRENT INSTITUTIONAL AND INFORMATION INFRASTRUCTURE

When considering different policy interventions to help individuals and households manage risks to their income, policy makers and the technocrats who advise them often take for granted the critical information infrastructure necessary to operate social protection programs effectively. In middle income countries such as Chile, while much of the necessary information is available, it is often used inefficiently. A comprehensive, integrated information system is critical in order to ensure that social programs reach those who need them the most, and to protect a social protection system – especially social insurance - from falling prey to abuse.

This section presents a critical evaluation of current information and data systems in Chile, identifying problems with the existing data available to the government; any missing

information; and how this missing information may hurt efficiency and efficacy of social protection. Chile has more information and better data on social protection programs at its disposal than most other countries in the region. Individually, the different government agencies that regulate or administer the various branches of the social protection system hold rich data-bases tracking beneficiaries of social programs, most of which can be accessed on the internet. However, there is considerable room for improvement in data management that could lead to increased efficiency in targeting, less redundancies and over-lap of benefits, and reductions in leakages to the non-poor.

Pessino (2002) finds that what is missing in Chile are the critical links between data bases on receipt of social programs; employment and earnings; taxation and compliance; and the civil registry. Such links allow governments in OECD countries to accurately identify the poor, weed out tax evasion, and monitor the impact of their policies. Pessino (2002) finds that the current information system in Chile fails to identify individuals and households at risk largely through failure to coordinate an enormous amount of data that is already being collected publicly and privately. Having verified that the basic building blocks of an efficient information system exist, the author recommends that Chile establish single “National Tax and Social Identification System” similar to the SINTyS system that was proposed and partially implemented in Argentina.

The *minimum* data components necessary to build an efficient information system for social protection that (i) ensures the system will respond to households’ needs; (ii) targets social programs to the households that need them when they are needed; and (iii) minimize errors of inclusion (giving assistance to the non-poor) and errors of exclusion (failing to give assistance to the poor), are:

- Basic personal identification data such as the social security number (SSN) in the US
- Data identifying beneficiaries of social programs
- Data identifying the poor
- Data on employment, earnings and pensions
- Data on household and family composition, including marital status, date of birth, and death of any household/family members
- Data on ownership of housing and other property, automobiles, financial assets, other assets and
- Data on compliance with taxation

These are the basic building blocks of the information infrastructure that underpins an effective social protection system. Each separate data component should have a common identifier, such as the SSN in the US, the CUIT/CUIL in Argentina, and the RUT/RUN in Chile. The common identifier is necessary not only to characterize individuals and households, but also to join the different data bases into a single source of information.<sup>50</sup> Any

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<sup>50</sup> Since this sort of integrated use of separate data sets demands that all individuals, including the poor, have a RUT or RUN, obtaining this number should be free or subsidized for the poor. Chile’s common identification number – the RUT – theoretically covers the whole population. However, Pessino (2002) recommends that the current data set be cross checked against recent data from the census to uncover missing individuals. The poor are more likely not to have an identification number, and thus likely to be left out of the social protection system.

individual applying for or receiving a social transfer or benefit should be required to provide this identification number. The data of the applicants should then be crossed with information on their status in the labor market (whether they are employed, unemployed or out of the labor force). If the individual is receiving wages or pensions, it would be ideal to know the amount and duration of those payments. Furthermore, since current labor force status and earnings do not completely characterize “poverty” of the individual or the household, asset data is needed to verify their status. These data should include information on housing characteristics, possession of cars, bank accounts, tax returns and any other asset or large expenditure that reveals the net worth of the individual or household. Last, but not least, these different data components should ideally be interconnected so agencies that pay transfers or administer social programs can consult the data and have the information they need in real time.

While Chile does a better job of identifying the poor and compiling data on beneficiaries of its social programs than most of its neighbors, there is still considerable room for improvement, primarily in targeting benefits and following up on the status of individuals and households receiving transfers. Only some of Chile’s social programs are targeted. However, even these targeted programs suffer from the deficiencies of the most widely used targeting device, Chile’s *Ficha CAS*, which lead not only to errors of inclusion, but more importantly to errors of exclusion.

The *Ficha CAS* assigns a rating to households based on certain indicator variables. This rating is then used by government agencies to determine whether an individual or household is eligible to receive benefits. However, the information collected with the *Ficha CAS* is not checked or crossed with data on past and current employment and wages, receipt of pensions or other benefits, and property holdings. Recent studies have shown that the *Ficha CAS* may systematically benefit non-poor groups. Clert and Wodon (2001) find that the supposedly targeted social programs in Chile cover a relatively small percentage of the population in poverty. The most extensive program, SUF or family allowances, only reaches about 32 percent of the poor (defined as the poorest 20% of households). They also find that there are substantial leakages from targeted programs. For example, of the beneficiaries of SUF, about 56 percent are poor, and about 36 percent of the beneficiaries of PASIS are in the lowest quintile. On average, the targeted programs have a targeting efficiency of only about 38 percent. That is, about 62 percent of the beneficiaries of targeted programs are not poor. Clert and Wodon (2001) conclude that these discrepancies in targeting arise because the *Ficha CAS* does not focus on income poverty, but uses proxies which are heavily weighted by housing and education measures. Pessino (2002) further points out that the *Ficha CAS* does not “sweep” the entire population, does not update the information continuously, and fails to cross the targeting data with other data necessary for verification. In an evaluation of the targeting instrument, MIDEPLAN (2002) finds that it fails to capture incomes of household members other than the household head and their spouse.

Although the instrument has been successful in identifying many of the poor, this is mainly done at the moment that an individual applies to receive a particular program targeted with the *Ficha CAS*. The poor that do not apply for social programs are never registered in the targeting system. Nor is it a dynamic tool that can be used on a continuous basis. The *Ficha* does not capture changes in household income and composition, say from shocks such as unemployment or the arrival of new household members. Since the *Ficha CAS* is not designed to “follow” individuals and households, program administrators do not have the data

to determine whether and where poverty has increased in the wake of a macroeconomic shock or some other adverse event (Clert and Wodon, 2001, MIDEPLAN, 2002).<sup>51</sup> MIDEPLAN is currently undertaking a thorough evaluation of the *Ficha CAS* and piloting new alternative targeting instruments in order to correct some of these problems.

#### **Box 5. Balancing Government's Information Requirements, and Protection of Individual Privacy**

A country wishing to implement an effective, integrated and coordinated system of social protection needs laws that enable the coordination of social programs by one agency or among several agencies; and norms regulating the privacy of individual data (what is usually called "*Habeas Data*"). Chile does not yet have a body of legal norms concerning the coordination of social policy and programs other than those regulating each social program, and what appears in the Government's budget legislation that assigns the funds needed to finance these programs.

Privacy laws exist in the majority of developed countries and are recently being sanctioned in developing countries. It is often argued that privacy laws interfere with the design of an integrated data system of social protection. However, this interference is usually exaggerated by government agencies that do not want to share information. In the United States there were several legal disputes challenging the Social Security Administration on the grounds that the agency violated privacy. In practice, none of these disputes was able to stop the agency from increasing the required use of the social security number, from gathering information on wages, social programs, pensions, and crossing this information with data held by the tax collection authorities.

Chile sanctioned the Privacy Act, (Law Number 19628) in August 1999. This law regulates the treatment of personal data in the possession of both the public or the private sector. It is similar to corresponding laws in Argentina, Canada and the U.S. in the following aspects: (i) it states that "sensitive" data such as personal habits, ideology, religion, and sexual orientation cannot be held in data bases; (ii) it obliges administrators of data bases to maintain secrecy on their content; (iii) it restricts use of the data to the purpose for which it was collected unless they are already publicly available; (iv) it requires that any information held on any individual be made freely available to that individual for them to correct if necessary; (v) it restricts use of the data by a particular agency to the functions of that agency ; (vi) it appoints the Civil and Identification Registry<sup>52</sup> (*Servicio de Registro Civil e Identificación*) responsible of holding a registry of personal data owned by public organizations.

In short, the Privacy Act in Chile does not preclude the government from holding and crossing data on social and fiscal compliance of individuals and households, as long as public agencies follow these norms<sup>53</sup>. However, as the above points suggest, the agencies must strictly adhere to the requirements of the law, and these should be taken into account from the start in the design of the information system for social protection.

Source: Pessino (2002)

The data collected with the *Ficha CAS*, although valuable, is but a small piece of what is required to administer an effective social protection system. Personal data on earnings and pensions are critical to verifying eligibility (prior, during and ex-post) for social programs and transfers. These data would be typically held by the social security or tax authorities (such as

<sup>51</sup> Although people are required to update their data in the CAS database every two years.

<sup>52</sup> In fact, the Civil and Identification Registry holds currently these "bank" of data banks. It only lists the fields' names, and other characteristics of the data, but it does not contain the actual registers.

<sup>53</sup> Several agencies in Chile cited this law and also the AFP law (with regards to data on wages and payroll contributions) of 1982 when claiming that they cannot hold share or use the personal information to fulfill the mission of the agency.



the SSA in the United States and ANSES/DGI in Argentina). However, in Chile, there is no agency that has, or reports to have a complete registry of formal sector wage earners and pensioners. The two agencies in Chile where this critical information on earnings and pensions would normally be held are the Ministry of Labor (that pays remaining public pensions through INP, and supervises the private pension system through SAFP), and the Internal Tax Service (*Servicio de Impuestos Internos*, SII). The Ministry of Labor has not maintained a registry of either wage earners or pensioners since the pension system was mostly privatized in 1981, and claims there is a confidentiality problem in using this data that is currently held by the AFPs. The authorities cite Chile's Privacy Act (see Box 5) and the reform law that created the AFP system as the main barriers keeping them from collecting and administering this data.

Finally, Pessino (2002) finds an example of the sort of information integration and cross checking that she recommends be implemented on a greater scale. FONASA, the public branch of Chile's mixed health insurance system, currently checks applicants for its subsidized levels of health coverage for eligibility and hence, gathers most of the required data on wage earners and pensioners. FONASA also uses the *Ficha CAS* data together with wages and pensions to determine whether individuals are eligible for subsidized health coverage on a continuous basis. FONASA's example demonstrates that the data do exist and can be crossed with the agency's own information to increase the efficiency with which health subsidies are targeted. FONASA's example, although close to the ideal integrated management discussed above, incur large transactions costs. These could be lowered if the information integration efforts were conducted on a larger scale between all public agencies, and coordinated by a single government body.

#### INFORMATION SYSTEMS FOR EFFECTIVE SOCIAL PROTECTION

An adequate interface between data on social programs and other data-bases (such as those of the tax-collecting authority, property registry and of the civil registry) is currently lacking in Chile. Furthermore, there is no single government agency that coordinates and supervises data collection; sets standards; determines eligibility; or evaluates social programs. Nor is there a single body that broadly coordinates social policy other than perhaps the Ministry of Finance by default through its power to appropriate budgets. This said, several government agencies manage their own data-bases, and link these to the data held by other agencies. However, this particular form of data sharing is ad-hoc, costly, and inefficient, requiring negotiation and the signing of "convenios" between agencies.

As in other countries, in Chile there are identifiable barriers to efficient sharing of data. These barriers usually take five (not necessarily exclusive) forms:

- a) *Concerns for confidentiality*: Public agencies believe they cannot use some piece of critical data because of legal restrictions, such as a "privacy act". The legal barriers that currently protect data on earnings and the affiliates' contribution history to the pension system held by the AFPs, are a prime example of this restriction, and have been cited as a major obstacle to more effective administration of both contributory and non-contributory programs.

- b) *Bureaucratic risk aversion*: Even if there are no apparent legal restrictions on sharing their data, most public agencies are concerned that they might violate a confidentiality law by sharing information. Thus there is a natural, bureaucratic opposition to sharing data with other agencies, “*just in case*”.
- c) *Information is power*: There is always a power issue - unshared information gives power to public agencies.
- d) *Externalities*: It is not in the interest of a particular public agency to spend limited budgetary resources to improve aspects of its data-base (collect additional data) that do not contribute directly to the function/mandate of that agency, no matter how important that data may be to another agency.
- e) *Decentralized management of social programs*: Moreover, there is no public institution that coordinates all social programs or that sets standards for eligibility, controls targeting, tracks how many households receive benefits, and how many poor household fail to receive benefits.

#### **RECOMMENDATIONS FOR GREATER INSTITUTIONAL COORDINATION AND EFFICIENT USE OF DATA**

Chile needs an institution to coordinate social protection policy, set standards, propose norms, manage agreements between public institutions, and conduct regular reviews of eligibility of beneficiaries, as well as detect over-lap in its social protection programs. This institution would be the agent ideally suited to coordinate the integration of existing databases into a single, unified information resource. To fill this role, the institution should be placed high in the hierarchy of the executive branch, since it will have to coordinate the actions of several ministries, and inevitably enter into conflicts of powers between agencies.

Based on international experience and best practice, Pessino (2002) identifies three alternative options. One is to upgrade MIDEPLAN – the ministry which has the coordination of social programs as one of its key functions and currently holds much of the data on most social programs in the country - to better carry out this coordinating role. The second, is to explicitly designate the role to the Ministry of Finance (Hacienda), that already has power over the budgets of other ministries. The third is to create a new institution, in the office of the President, similar to coordinating bodies that exist in the United States and in Canada.

There are pros and cons to each of these alternatives. The advantage of upgrading MIDEPLAN would be that the ministry already has the explicit role of coordinating social policy and programs as part of its original mandate. Further, it holds much (although not all) of the existing information on social programs through the *Ficha CAS*. However, since it has until only recently fallen in the hierarchy of ministries, it may be difficult, although not impossible, to restore MIDEPLAN to the required position of authority among ministries.

Giving the coordinating role to the Ministry of Finance might be a simpler alternative since it is already the most powerful ministry. However, while it has the power to fill the role, the ministry already has an extensive mandate, and as the agent that currently increases or cuts budgets, it will not be easy for the Ministry to assume this role, as it will very likely face

resistance in gathering accurate information on current programs from other ministries afraid of losing funds.

Creating a completely new coordinating body directly under the Presidency has the advantage of providing a new institution with clear authority over the line ministries. The danger in pursuing this option is adding a level of bureaucracy to the administration of social protection policy in Chile. Given the amount of institutional overlap and the difficulties with inter-agency coordination that already exist, the risk of adding further complication is not trivial.

Whichever option is pursued, the new or re-structured coordinating institution should have among its functions: (i) the coordination of social protection policy, setting eligibility requirements, and establishing guidelines for implementation of all social protection programs in Chile; (ii) facilitation of legal agreements and activities between agencies that administer social protection and related programs; (iii) setting common standards for gathering and storing data - not only establishing a common database architecture as discussed above, but also enforcing the use of a single identification number, a standard set of fields, and the timing and sequence of observations; (iv) construction and maintenance of a virtual system for managing social programs, that interacts with the data-bases collected by the office of inland revenue, and the civil registry. The coordinating agency would not have to “own” all the data bases needed, but simply be able to interface between data-bases, and assign the different agencies administering social programs levels of access the data.

The announcement of the Chile Solidario policy initiative suggests that the Government may seek to upgrade MIDEPLAN to this coordinating role. If this is the case, MIDEPLAN may require the authority and capacity of the Ministry of Finance to back up its operations until its capacity is strengthened.

## Chapter 9: Conclusions and Recommendations for Reform of Social Protection in Chile

On the whole we find that Chile succeeds in providing households with the instruments that they need to mitigate shocks to income. The institutions Chile has put in place to help households lower losses from these shocks - from the new unemployment insurance system, the retirement security system and the mixed health insurance system - are generally appropriately designed to match the nature of the risk they are intended to cover. This said, while still in a minority, too many Chilean households – even among the non poor - do not have access to the sophisticated, state of the art social protection institutions that are in place.

This lack of coverage is a matter of concern from a public policy perspective. There is evidence that the principal risks to income identified in this report do not occur independently and in fact are highly correlated. This is especially true for poorer groups. Households are made particularly vulnerable to an array of shocks (health, disability, the costs of unexpected additional children or other dependents) if members have lost employment. If they have lost employment without a contract or are among the self employed whose businesses fail in economic downturns, this vulnerability is compounded since they face explicit and implicit institutional barriers to even basic forms of protection. And since a significant number of these uncovered workers are not counted among the poor, the relatively well targeted social safety net that Chile has in place will not catch them soon enough should they suffer a fall.

At this stage few of the current social protection policies and new initiatives –with the exception of *Chile Solidario*, targeted only to the very poorest - directly address the plight of Chile’s unprotected workers (whether this be conditioning access to public employment programs on proof of unemployment and paying beneficiaries the legal minimum wage; phasing out the non-contributory *subsídio por desempleo* to finance the pooled component of the new contributory unemployment insurance system; increasing the complexity of mandated savings in the private pension system without consolidating and lifting the ration on poverty prevention pensions). In fact the recent increases in the minimum wage may have even raised the barriers and created new obstacles to the social protection system (through increased incidence and duration of unemployment; threats to the sustainability of public employment programs; greater risk of school desertion among younger workers leading to lower probability of formal employment; and lower rates of participation in the pension system).

While small, marginal changes can be recommended to increase the efficiency of each area of social protection (for example, providing self targeting instruments for the unemployed from the informal sector; eliminating flat fees in the private pension system; giving a greater weight to voluntary “third pillar” instruments) the single most important challenge ahead is to close the gap in coverage.

As an over-arching principal of social protection policy, Chile could seek to blur the lines between employment in the “formal” and “informal” sector in order to close the coverage gap. In addition to increasing the efficiency of the labor market, as it debates changes to the social protection system, the Government might consider *where* (that is, to which branch of the system) it needs to increase access most – protection against poverty from job loss; the cost of

health events; or poverty from the loss of earnings ability due to old age - and gradually remove the contribution requirement for minimum levels of coverage, financing benefits instead through levies with a wider tax base than pay-roll taxes. To use traditional terms, this would imply changing the current combination of contributory social insurance and non-contributory social assistance, giving greater weight to the later. Recent reforms to the health insurance system and the launch of Chile Solidario are consistent with this over-arching principal.

In fact the conceptual insights drawn in this report show that the largely political distinction between “contributory” and “non-contributory” interventions can be detrimental and an obstacle to reform considerations. On the one hand “contributory” social insurance systems that deny minimum benefit levels to individuals without a history of explicit contributions, but that nevertheless pay benefits that are guaranteed by government transfers, often redistribute income from all current and future tax payers to those who have accumulated rights. Even where the contribution and benefit parameters of a social insurance system are set to be “self financing”, government (society) still pays for short-falls between benefits and contributions during economic downturns and for indexation to protect the real value of benefits during bouts of inflation. Thus all current and future tax payers “contribute” in one way or another to maintain the number and the value of benefits paid to a relatively smaller group of “covered” workers. On the other hand, separate, seemingly non-contributory transfer arrangements to the poor are perceived as charity rather than just another instrument with which households can manage risks to income, and are often only reluctantly considered in budget allocations. Budget allocations to “social assistance” typically count on the support of small, relatively weak political constituencies, and have been historically vulnerable to budget cuts.

In countries where labor is very mobile between sectors and the informal economy is large, structuring the premia for social insurance programs as pay-roll taxes is an increasingly ineffective and unreliable way to finance public risk pooling arrangements and can lead to unnecessary exclusion. A more reliable source of financing for public risk pooling mechanisms would be general revenues. In fact, financing basic, minimum levels of protection through taxes other than pay-roll taxes would erase the distinction between the “covered” and “uncovered” sectors of the labor force. However, this requires that minimum benefit levels and transfers be viewed not as the social assistance charity of the state and society, but as additional instruments available to individuals and households to manage shocks to their income should they suffer the misfortune to need them. Chile’s positive experience with providing minimum social assistance financed out of general revenue, primarily VAT – in effect a country-wide risk pooling device – augurs well for this policy course.

With the exception of the *Chile Solidario* initiative targeted to the very poorest, instead of placing greater reliance on self targeting, non-contributory benefits financed through general taxation, Chile has chosen policies that imply greater participation in its contributory programs, and that will necessitate substantial improvements in monitoring compliance and enforcement capacity. The avenue chosen by the Government will increasingly make social protection policies in Chile similar to those in OECD countries. Given the small size of the informal sector and the low levels of poverty in Chile relative to its neighbors in the region, this policy direction might work. Chile has the information it needs to increase its

administrative capacity to monitor and enforce compliance. However, the critical links needed to put these information resources to their most effective use are still missing. Even if successful, the downside of this policy avenue is that in the time it takes for Chile to extend the reach of contributory programs, uncovered workers could suffer unduly from losses, especially should the country be faced with a macroeconomic crisis.

In any case, either policy direction (reliance on self targeting or increased compliance), will require closer synchronization of social protection policy. This will make more centralized coordination – if not direct management - of the various areas of social protection critical. In its attempt to launch *Chile Solidario*, MIDEPLAN is well positioned to take up this coordinating role (at least initially with regard to social assistance). The Government should focus its efforts on making the new concerted intervention for Chile's 225 thousand poorest families a *first step* in a wider process of integration and coordination of social protection policies – the nucleus of a new social protection system - rather than miss this opportunity and risk the initiative degenerating into just one more social assistance intervention among the many overlapping programs that already exist.

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