Development of Chilean Poverty

- Evidence from 1990–2009

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Abstract

This study examines the development and underlying reasons of poverty in Chile. Chile has often been named a role model for Latin American social and economic development. The results demonstrate that Chilean absolute poverty has declined steadily since the return to a democratic rule in 1990, during a period of uninterrupted positive economic growth, particularly strong in the decade of the 1990s. This development has had different impacts on different income groups in the Chilean society.

The development of Chilean poverty in the 1990s and 2000s shows a twofolded pattern. The absolute poverty has decreased with nearly 50 percentage units to 12–15 per cent in 20 years, while the relative poverty levels and income inequality has increased. The income distribution has become more skewed and the income shares of poor have decreased, showing a relative loss compared to the rest of the income recipients.

The analytical section concludes that economic growth has contributed to decreasing absolute poverty levels, but less direct to relative poverty. The study argues that a growing labour force, increased female participation and raises of the minimum wage have contributed to balance the inequality during the study period 1990–2009. To understand the increase in relative poverty and inequality, the expansion of the informal market and growing wage gaps between the formal and informal sector, offer explanatory aspects.

This study does not find that Chile’s positive economic growth has been pro-poor oriented.

Key words: absolute poverty, relative poverty, inequality, Chile, economic growth, pro-poor growth.
# Table of Contents

1. **INTRODUCTION**  
   1.1. Purpose and Research Question  

2. **BACKGROUND: CHILE BEFORE 1990**  
   2.1. Political Background  
   2.2. Socioeconomic Background  

3. **PREVIOUS RESEARCH**  

4. **CONCEPTUAL FRAMEWORK**  
   4.1. Pro-poor Growth  
   4.2. Absolute Poverty  
   4.3. Relative Poverty and Inequality  

5. **DATA AND VARIABLES**  

   6.1. Absolute Poverty  
   6.2. Relative Poverty and Inequality  
   6.3. Chile in a Regional Perspective  

7. **EXPLANATORY FACTORS FOR CHILEAN DEVELOPMENT**  
   7.1. Economic Growth  
   7.2. Socioeconomic Variables  
      7.2.1. Characteristics of the Labour Market  
      7.2.2. Female Participation in the Labour Force  
      7.2.3. Wages  

8. **CONCLUDING REMARKS AND FUTURE PROSPECTS**  

9. **BIBLIOGRAPHY**  

10. **APPENDIX**
1. Introduction

Chile is often used as an example of Latin American progress regarding economic and social development due to stable GDP per capita growth since the return to democracy after a 17 year period with an authoritarian military government. This study aims to explain what this has implied for national poverty.

This study examines the evolution of absolute poverty in Chile since 1990, the year when a democratic centre-left wing government replaced the authoritarian junta that had ruled the country since the coup d’état in 1973. The case study of Chile is used as an example for a discussion on the interpretations and implications of the definitions of poverty and the impact of economic growth on poverty and inequality.

Poverty is a multidimensional concept where definitions often are coloured by ideology, especially regarding the relationship between poverty and economic growth. This study examines the implications of the definitions of poverty and inequality and the impacts of economic growth on poverty in absolute and relative terms.

The introduction presents a brief overview of Chile’s political and socioeconomic background, followed by a literature review of the research done on poverty, inequality and growth in Chile. Section 4 introduces the reader to the phenomenon of pro-poor growth, and explains the various concepts of poverty and inequality used in this study. The income data is presented in section 5 and the results on the evolution of Chilean poverty and inequality from 1990 to 2009 are presented in section 6. To see whether the development is unique for Chile or part of a regional trend, section 6.3 performs a regional comparison. This will support the robustness of the results observed and patterns for Chilean development. The analytical section 7 explores to what extent economic growth has been of importance to the evolution of poverty in the country. For the robustness of the analysis section 7 also considers how socioeconomic factors such as characteristics of the labour force, impact the development of poverty and inequality.

The results indicate that absolute poverty level in Chile has been steadily declining during the studied period. When extending the analysis to include the income distribution, it becomes clear that the economic growth has not been pro-poor, as the poorest have seen a relative decrease in total income compared to the rest of the population. Growing income gaps show that Chile experienced increased relative poverty during 1990–2009.
1.1. Purpose and Research Question

The purpose of this thesis is to study the development of Chilean poverty from 1990–2009 and discuss some underlying factors that might explain the empirical results.

The research question for this study is twofold and explores how Chilean poverty has developed over time, and if the economic growth can be considered a case of pro-poor growth?

2. Background: Chile before 1990

In political terms, Chile’s modern history shows both a socialist and a neoliberal experiment of changing the country’s social and economic situation. Together these aspects tell of a Chile in transformation, a Chile that since the referendum in 1988 actively has been promoting the creation of a modern, open and more equal state as the elections gave rise to a 20-year period with a centre-left wing government. To understand the particular history of Chile, this section presents an overview of the political and socioeconomic situation the study period.

2.1. Political Background

In 1990 Chile returned to democracy after 17 years with an authoritarian, military government that took power after a coup d’état in September 1973. The authoritarian government under general Pinochet restricted free press, freedom of speech and political opposition, and approximately 200,000 Chileans went into political exile during the almost 20 years that the military junta were in power.¹

Despite the migration flows, the Chilean population growth remained positive but slowed down during the period 1970–1980, due to the migration as well as decreasing fertility rates,² which caused the marginal productivity of labour to rise as a result of increased scarcity of workers.

In 1990 democratic rule was re-installed after a referendum in 1988. The centre-left government that came to power increased the public spending and increased taxation with the aim of promoting ‘growth with equity’. The restructuring of the economy also included promotion of international trade and strict fiscal policy to reduce public debt (Foxley. 2004. p. 1).

¹ Although there is little detailed data available for the total amount of the population that left the country during the military junta, estimates are that “at least 200,000 individuals (approximately two per cent of Chile’s population in 1973), and hundreds of thousands more during the economic crisis of 1973–1977 and 1982–1986” (Wright and Oñate Zúñiga. 2007. p. 31) fled the country.

2.2. Socioeconomic Background

In 1970, Chile was one of the leaders in Latin American social development. Educational levels, the national health system and a growing middle class gave positive prospects for the future (Ffrench-Davis. 2002. p. 187).

The situation deteriorated during the 1970s and 1980s with growing levels of poverty and inequality compared to the 1960s (Ibid., p. 183). Table 2.1 shows how the inequality measure the Gini coefficient, has increased during all decades except one in the period 1950–2000.

Table 2.1. Estimates of the Gini Coefficient in Chile 1950–2000, data on household level.

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<tbody>
<tr>
<td>Gini</td>
<td>0.417</td>
<td>0.482</td>
<td>0.474</td>
<td>0.531</td>
<td>0.547</td>
</tr>
</tbody>
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The economic crisis with hyperinflation in 1973 and recessions in 1975 and 1982 caused the most severe increases in poverty and inequality during the country’s recent history (Ibid., p. 184).

During Pinochet’s military rule, the state decreased social spending, strengthened private property rights, and decreased investment in the public sector. The armed forces installed a military junta with rigid economic policies claiming to put Chile back on its feet after years of escalating inflation rates. The reforms in the financial sectors were mainly characterised by privatisation of public enterprises such as banks, the National Petroleum Enterprise (ENAP), the Copper Corporation (CODELCO) and large parts of the mining industry. Many of the firms that had been nationalised during the presidency of Salvador Allende (1970-1973) were sold back to the private sector (Ibid., p. 33ff.).

The labour market was further deregulated and state controlled only through a minimum wage. The aim of the deregulation was to give incentives for increasing employment and decrease inflation by holding back the development of wages. There was a negative development of real wages, the levels of which stayed below those of 1970.3 Furthermore, the bottom income decile decreased their share of the total income while the share of the top quintile increased from 1970–1989.

In 1982 the country faced an economic crisis triggered by external debt and account deficits, accompanied by rises in world petroleum prices (Ibid., p. 13). Chile recovered in economic terms during the middle of the 1980s and experienced strong economic growth until, and beyond the change of government.

3 The level of the real wage in 1983 was 15 per cent below that of 1970 (Arellano et al. 1987. p. 27).
In summary, the total social expenditure was reduced during the years of the military government. In 1993 the level of social spending returned to the level of 1970 (Ibid., p. 189). When the democratically elected government took over power from the military junta in 1990, Chile had experienced “uninterrupted growth for a five-year period, accompanied by high inflation, a low level of investment and very high levels of inequality” (Palma Aguirre. 2008b. p. 11).

3. Previous Research
The debate surrounding poverty and inequality research does to a large extent include the role of economic growth in poverty reduction. The reasoning behind discussions regarding benefits of economic growth for poverty reduction is related to neoclassical economics concerning the definitions of absolute poverty, where advocates emphasize the importance of economic growth as it increases income per capita that increases welfare. Such a reasoning is linked to the argumentation presented by Dollar and Kraay in Growth Is Good for the Poor (2002). According to Dollar and Kraay, the income share of the poorest quintile of a population rises proportionately with increases in average incomes. The study concludes that social policies aiming at poverty reduction do not manage to target the poor, who in their study are defined as the bottom income quintile. This relates to the so-called “trickle-down” effect, which argues that GDP per capita growth created in certain sectors will generate benefits also in other sectors and eventually influence all levels of society. The study by Dollar and Kraay is based on empirical data from 92 countries during 40 years and the results do not support the existence of a trickle-down theory. Instead, the poor benefit just as much as other income groups from economic growth, and Dollar and Kraay thus find evidence of economic growth being more important than is emphasized by advocates of the trickle-down effect. An average rise in income in their data set does not account for country specific trends. Rodrik (2000) criticizes the robustness of the results presented by Dollar and Kraay claiming that their results are based on selective bias for globalising nations. Wade (2004) further questions the reasoning behind that economic growth is ‘enough’ to reduce poverty as economic inequality is increasing.

For this study, the main criticism towards the research of Dollar and Kraay is specifically that there is no differentiation between absolute and relative poverty. Their evidence relates to diminishing levels of absolute poverty without considering national definitions of poverty. For the purpose of this study, evidence on distributional effects of growth is considered.
The concept of pro-poor growth questions the neoclassical assumptions about the effects of economic growth. The United Nations Development Programme (UNDP) discuss the effects of economic growth and diversify the concept of poverty and Olavarria-Gambi (2003) connects it to the case of Chile by looking at how the poor participate in, and benefit from, strong economic sectors and economic growth. This thesis discusses various definitions of poverty and applies them to the case of Chile in order to relate the theoretical debate to reality.

In order to properly examine and understand the characteristics of poverty in Chile it is necessary to look at the absolute and relative measures of poverty and relate the effects of economic growth to both measures. Palma Aguirre’s dissertation from 2008 is an extensive study on economic inequality in Chile presenting data until 2003. His results indicate a slowdown of inequality growth in the 1990s compared to previous decades. While this study does not consider the decades previous to the 1990s, the results of deteriorating inequality in the end of the 1990s are in line with the results in this thesis.

The briefing paper Social Panorama of Latin America 2010, presented by the Economic Commission for Latin America and the Caribbean (ECLAC), presents trends and tendencies for poverty and social indicators for several Latin American countries and states that both economic growth and redistribution has effects on poverty alleviation in Latin America. The report emphasizes the multidimensionality of poverty as one of the determinants for official poverty trends in the region and presents policy recommendations based on a benefit rather than cost aspect, why some recommendations might not be feasible in reality. The regional trends are decreasing poverty levels, which is why a regional consideration is needed in order to understand the driving forces behind the Chilean poverty situation. According to ECLAC the underlying reasons for absolute poverty reduction in Latin American are related to economic growth and redistribution (Bárcera. 2010. p. 13). ECLAC considers national poverty definitions, but does not question the definitions. A discussion on how to define and measure national poverty is presented in the following section.

Amuedo-Dorantes (2005) furthermore examines features of the Chilean society by considering the gender composition of the labour market that demonstrates low female participation. Her emphasis of the importance of higher female participation for poverty alleviation in Chile is related to the fact that a common source of employment for Chilean women is domestic work, which often occurs without formal contracts. Female participation is not only less in the labour force; women are also more likely to be employed in the
informal sector. This could explain the relatively low female participation rate in the formal labour force that in turn relates to income inequality.

4. Conceptual Framework
Pro-poor growth deviates from general economic growth through its focus on the poor, and the consideration of to what extent the poor participate in the “growth process” (Ehrenpreis. 2007. p. 2). Pro-poor growth emphasizes the speed and size of economic growth, but also distributional effects and patterns. Measurements of poverty in absolute terms, frequently referred to as absolute poverty or income poverty are estimated using indicators such as income and consumption power, which increase with general economic growth. The criteria for deciding who is considered poor and eligible for receiving financial aid and state support in a country influences the overall levels of poverty.

Poverty can also be measured on more inclusive terms by estimating relative poverty. Amartya Sen (in for instance Nussbaum and Sen, 1993) refers to relative poverty by the concept of capability deprivation that includes more factors than monetary income and consumption power to measure poverty. The understanding of deprivation is to some extent subjective and can be related to security and anxiety but also to social status and gender relations (Ehrenpreis. 2006. p. 3f.).

4.1. Pro-poor Growth
Neoclassical economic theory states that economic growth will increase national income, leading to a higher income per capita, which will reduce poverty.4 Advocates for pro-poor growth claim that an emphasis on increasing the incomes of the poor is needed as benefits from general economic growth tend to be concentrated to the top income groups that often are capital- and shareholders, employers et cetera (Grinspun. 2004).

In the case of Chile this topic is of particular interest not only to study the effects of economic growth, but also to evaluate the performance of the government of president Aylwin who came to power after the authoritarian rule and openly expressed a wish to create ‘growth with equity’ (Foxley. 2004. p. 1).

Pro-poor growth is receiving increased attention in the development discourse, but there is no common definition of the concept. This causes difficulties in presenting a coherent alternative to a debate that tends to consider economic growth to be the main criterion for poverty alleviation. Some advocates of pro-poor growth focus on combating absolute poverty,

which is closely related to regular economic growth, while others define poverty in relation to inequality, and require redistributive effects of the growth in order to name it pro-poor. For the purpose of this study, a more nuanced definition of the development of poverty is needed. I consider redistributive aspects and the patterns of growth and use an explanation that defines pro-poor growth as an “increase in the income (or consumption) of the poor proportionately more than the non-poor” (Kakwani, in Grinspun. 2004).

For a more in-depth examination of the relationship between poverty and economic growth one would ideally perform a cross-country and time-series analysis to determine causal relationships and consider country and time specific trends and tendencies. For the purpose of this study, which is to understand the particular case of Chile, the time period is chosen with the aim of examining specific changes in poverty and in the social situation in the post-authoritarian period.

4.2. Absolute Poverty
Chilean absolute poverty is defined according to the national poverty line, which is a measure of income poverty related to consumption possibilities. The Socioeconomic National Survey (CASEN) and the Chilean Ministry of Planning (MIDEPLAN) define poverty according to an estimated basket of minimum necessities, where prices are adjusted annually to reflect consumer prices. The poverty line is thus “the established minimum wage per person in order to satisfy the basic needs and the indigent line is the established minimum per person in order to satisfy the most fundamental alimentary needs” (CASENd). Countries define their own poverty lines and observers argue that the Chilean price assumption of multiplying the consumption basket by two in urban regions underestimates Chilean prices, which would “diminish the measured poverty” (Solimano. 2009, p. 18). The Chilean poverty line is adjusted to price differences between urban and rural settings. Chile acknowledges two levels of poverty, extreme poverty named indigence, and a level of less severe poverty that is implied by the national poverty line.

Other absolute measures stating poverty lines are concepts living below USD 1/2 per day, measured in power purchasing parity (PPP), adjusted to year and inflation. They offer comparisons between international and national measurements for poverty.

Absolute poverty measures give a clear and easily interpreted measure of national poverty, useful for statistical evidence and policy design. The measure, referred to as the headcount

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5 For exact information about the alimentary basket, see CASENd. The alimentary basket was composed in Greater Santiago in 1987–88 by the Chilean National Institute of Statistics (INE), and based on household surveys regarding budget restrictions.
index, permits annual comparisons of the amount of people that live below the poverty line. It allows for comparisons on national and international level, which is of interest for institutions, investors and aid donors.

The most common criticism of the absolute poverty measure is that it simplifies reality and is too strict. At the same time as a direct and straightforward absolute poverty measure is essential for pragmatic reasons, a complementary poverty definition provides for a broader understanding of poverty.

Advantages of measuring poverty based on consumption levels as done in Chile, is that it considers the price changes of necessities, comparing yearly changes in consumption power relative to the fluctuations in prices on goods and services. A difficulty with measuring poverty based on consumption power is that it is dependent on the definition of the basic necessities which often constitutes the ability to afford a consumption basket of food. This implies that a family can be considered not poor since they avoid malnutrition, but poor in the sense of not having access to private education and health systems, nor to savings in cases of emergency. To measure household poverty the total incomes of the working individuals in the household is summarised and divided by the number of people in the household. Given that everyone in the household does not have the same needs it is desirable to introduce a scale of equivalence that weighs needs to the size and composition of the household. The Ministry of Planning defines a household as “an entity consisting of one or a group of person(s). When consisting of two or more persons, these can have or not have children/...sharing the same alimentary budget” (CASENc). Given this definition there is no weighting of the household accounting for the composition of the household members, which is a weakness in estimating the true needs of the household, as a household with for instance four adults will have different alimentary needs than a household with two adults and two children (CASENa).

It is furthermore necessary to consider if the measurement is based on income paid in a monetary wage or if measured in consumption. Measuring consumption can be preferable to individual or household income in developing countries where many live without receiving fixed salaries in monetary values (Campano and Salvatore. 2006. p. 17). Studying consumption instead of monetary income, as well as household rather than individual income, is useful for pragmatic reasons, but requires well defined variables and categories for comparative studies. With adequate categorisation, consumption levels can provide a more complete view of the welfare level of a family, household or individual, as a total expenditure bundle of an entity is likely to consist also of some subsidy or economic transfer. This
expands the level of welfare and increases the economic freedom as for instance child support influences the net household income. A study of income poverty, such as this one, would ideally be complemented by a poverty analysis after social cash transfers and redistribution, to consider the effects of economic subsidies and state financial support. For the purpose of this study to investigate whether Chilean growth can be called pro-poor, it is however of interest to first study the development of monetary incomes previous to the redistributive mechanisms.

4.3. Relative Poverty and Inequality
While absolute poverty measures are useful for international comparisons and social policy planners, relative poverty relates to considering the distribution of income and level of welfare for specific groups in a population. While basic needs are universal, wants and relative deprivation can vary across societies and cultures.

For the future prospects of welfare and social development, a relative poverty measure compliments the absolute poverty measure by including aspects of access to and distribution of, resources and opportunities. In economic theory this is often linked to pro-poor growth and concerns the participation by, and consideration of, the poor in the growth process (Ehrenpreis. 2007. p. 1ff.).

One of the most widespread measures in discussions about relative poverty and income distribution is the Gini coefficient, a numerical measurement for income inequality. The coefficient varies between 0 and 1, where 0 is perfect equality, and 1 is perfect inequality. The simplicity to interpret and compare the Gini is its main advantage and partly explains the legitimacy the measure has received. Considering the Chilean Gini over time gives an indication on how the distribution of income is changing over time simultaneously as it allows for an international comparison of the level of Chilean inequality. Access to data estimating Gini coefficients is extensive, and therefore remains an important determinant of the change and development of income inequality over time. The difficulty of using the Gini to represent the level of national inequality is that it gives more weight to changes in the extreme ends of the distribution. Changes in the middle deciles will have a smaller effect on the value of the Gini than changes in the top or bottom decile (Palma Aguirre. 2008b. p. 7).

For a deeper understanding of the Chilean poverty situation it is necessary to look at disaggregated parts of the population to consider wage gaps and income distribution. The result section examines changes for income deciles and quintiles, to consider the development of incomes for specific groups over time. The changes between and within groups is related to
the share of the total income that each decile receives and how the distribution has changed over the study period. Such an analysis indicates if some group has become relatively richer or poorer compared to the rest of the population and to other income groups.

The relative poverty discussion includes a questioning of the national construction of the poverty line. The national poverty line is an absolute measure based on the minimum need to access the estimated consumption basket. There are, however other ways of constructing poverty lines, which relate to the change of national income and provide information about inequality. Since 2003 the European Union measures poverty according to a relative poverty line equal to 60 per cent of the median income, defining everyone that lives below such level of income as poor. The same measure within the Organisation for Economic Cooperation (OECD) is set at 50 per cent. This implies that poverty levels will not change unless redistribution occurs and/or the situation for the poor improves compared to the median income (Perkins et al. 2006. p. 208). Chile joined the OECD in 2009.

5. Data and Variables
For the study, crude data and statistical material have been taken from the Chilean Ministry of Planning and various international institutions. Income and growth of GDP data was obtained from the Chilean socio-economic survey CASEN. The data is collected every second year from 1990–2000, and every third year from 2000 and onwards with 2009 being the most recent data accessible. Most data is compiled per household and household income per capita is the most frequent income variable. The market income, referred to as ‘autonomous income’ in the data, is the income variable with the most complete data set over the period.

In this study, public policy and social spending will be considered as variables that influence the relative poverty levels and income distribution, but in order to have data comparable over the time period, the market income will be the most frequently used definition. Worth mentioning is that data from CASEN typically presents monetary income as the sum of the market income and social transfers. As previously discussed, it would be

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6 Data and statistical material has been obtained from the Chilean Ministry of Planning’s CASEN and the following international databases; the World Bank, the Economic Commission for Latin America and the Caribbean, the International Monetary Fund, the Organisation for Economic Co-operation and Development, Socio-Economic Database for Latin America and the Caribbean, and indicators from the Human Development Index from United Nations Development Programme.

7 For information about the total amount of observations, see appendix A1.

8 MIDEPLAN definition of Autonomous income = Cash wage and salary income, self-employment income, from goods produced by the household, bonuses, rewards, rents, pensions, remedies, economic transfers from family members (CASENa). Market income = Cash wage and salary income, self-employment income, cash property income, occupational pension (LISa, Definition of Summary Income Variables).
preferable to extend the analysis to household consumption as this gives a wider understanding of household welfare and socioeconomic situation and distinguishes between the wages of the individuals in the household. The lack of such data explains the use of household income in this study.

In a regional comparison the access to and quality of, Chilean social and economic data is of varying quality. A main weakness is inconsistency over the years with changes in the income measures and survey designs over time. How income is measured is constant over the study period but the format in which it is presented changes. This does not alter the results for the study, as the methodology is consistent. When a survey respondent did not know or declare their income, the observation was reported as zero and excluded from the presentation. Due to the extensive amount of observations for each year, the results can be seen as representative (see appendix A2).

6. The Development of Poverty and Inequality in Chile, 1990–2009
This section explores the development of both absolute and relative Chilean poverty. The results demonstrate that the country demonstrates a clear trend of decreased absolute poverty since 1990, but the results are more complex for relative poverty. While the Gini coefficient has decreased over the study period, the results from disaggregated income data show that the lowest income recipients have decreased their share of the total national income over the past 20 years. The forces behind this development are considered in section 7.

6.1. Absolute Poverty
In November 2009 the official urban poverty line was 64,134 Chilean pesos (CLP) and line of indigence 32,067 pesos. The equivalent for the rural areas was CLP 43,242 and CLP 24,710.\(^9\) Living costs in the urban areas exceed those of the rural areas, why the urban poverty line is the alimentary basket multiplied by two, and the rural poverty line is the basket multiplied by 1.75 (CASENa). The urban poverty line approximates 95 euros per month, and the line of indigence which is the price of the alimentary basket equals EUR 48.\(^10\)

\(^10\) For an understanding of Chilean prices, the tariff for a one-way ride with the local transportation in Santiago was CLP 380 in 2009 (Transantiago. 2009), and the average monthly rent for accommodation in 2006 on a national basis was CLP 99,900, and CLP 120,000 in the metropolitan region of Santiago (Observatorio Habitacional Minvu. 2008). For a worker travelling with public transportation twice a day six days a week, the cost for public transportation is CLP 380 \times 48 = 18,240, which is almost 30 per cent of income for a worker earning exactly the amount of the urban poverty line.
Graph 6.1 shows the evolution of absolute poverty according to the national poverty line, and illustrates the division of the poor in the sub-categories indigent and poor but not indigent. The people classified as indigent are the ones facing the most severe poverty with an income equal to or less than one alimentary basket. The headcount index summarises the two subcategories, indigent and poor not indigent, to illustrate the headcount index. According to the national poverty line the headcount index decreased by 20 percentage units from 33 per cent in 1990 to 13 per cent in 2009.


<table>
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<tr>
<th>Year</th>
<th>Total poor</th>
<th>Indigent</th>
<th>Poor not indigent</th>
<th>&lt; USD 1/day</th>
<th>&lt; USD 2/day</th>
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<tr>
<td>1990</td>
<td>33%</td>
<td>15%</td>
<td>18%</td>
<td>10%</td>
<td>5%</td>
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<tr>
<td>1992</td>
<td>27%</td>
<td>9%</td>
<td>18%</td>
<td>7%</td>
<td>4%</td>
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<tr>
<td>1994</td>
<td>22%</td>
<td>5%</td>
<td>17%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>1996</td>
<td>19%</td>
<td>4%</td>
<td>16%</td>
<td>4%</td>
<td>2%</td>
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<tr>
<td>1998</td>
<td>16%</td>
<td>3%</td>
<td>15%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>2000</td>
<td>14%</td>
<td>2%</td>
<td>14%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>2003</td>
<td>13%</td>
<td>2%</td>
<td>13%</td>
<td>3%</td>
<td>1%</td>
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<tr>
<td>2006</td>
<td>12%</td>
<td>2%</td>
<td>12%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>2009</td>
<td>11%</td>
<td>2%</td>
<td>11%</td>
<td>2%</td>
<td>1%</td>
</tr>
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Source: For total poor, poor and indigent; data from CASENd based on national poverty lines on household level, author’s calculations. For USD measures; ECLAC, expressed as percentage of the total population.

The largest group of people escaping poverty are the poor but non-indigent managing to cross the poverty line into low income recipients above the poverty line. Worth noting in such a case is the high probability that these people still live in vulnerable situations and remain in need of social transfers, as their increase in total income could be just enough to cross the poverty line.

Both USD measures have decreased since 1990, which supports the accuracy of the national measurements. The decrease in the share of people that live below USD 2 per day from 1990 to 2006 is an indication of an absolute improvement for the socioeconomically weakest in the Chilean society. The individual based data confirms the trends observed on household level. Considering data on individual level the absolute poverty decreased from nearly 39 per cent in 1990 to 15 per cent in 2009 (CASENb and d, author’s calculations). The higher level observed on individual level can be a cause of low labour force participation, implying that households depend on one or few income recipients. Despite the improvements,
absolute poverty levels on individual basis show that 2.5 million Chileans are living in poverty in 2009.11

Concluding, absolute poverty has decreased in Chile over the studied period, considering both national measures and international indicators.

6.2. Relative Poverty and Inequality
In order to expand the analysis on Chilean poverty the study will explore the changes in the income distribution of the studied period and consider the impact on specific groups in the Chilean society.

The relative poverty measure presents a more diverse picture of Chilean poverty over time, and acknowledges the income distribution. The Gini coefficient does not measure relative poverty per se but presents the distribution of income, which is a compliment to studies on relative poverty. The change in the Gini over time is presented in table 6.1 below and shows three estimates of the coefficient over the study period. Gini 1 is based on individual per capita income excluding the observations that state zero income and Gini 2 is based on total household income. The third row presents the Gini when excluding the top ten per cent of the income distribution. The Gini for per capita income demonstrates a decrease of 0.032 from 1990 to 2009 with the smallest coefficient observed in 2006. The inequality of household income show similar numbers with a decrease of 0.022 from 1990 to 2009. The Economic Commission for Latin America and the Caribbean categorises national levels over 0.511 on the coefficient scale as “high”. Chile did not demonstrate a Gini below 0.511 at any point during the two decades studied (Medina and Galván. 2008. p. 28).

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<td>0.547</td>
<td>0.549</td>
<td>0.548</td>
<td>0.555</td>
<td>0.552</td>
<td>0.546</td>
<td>0.518</td>
<td>0.519</td>
</tr>
<tr>
<td>Gini2</td>
<td>0.543</td>
<td>0.539</td>
<td>0.541</td>
<td>0.539</td>
<td>0.539</td>
<td>0.530</td>
<td>0.533</td>
<td>0.514</td>
<td>0.521</td>
</tr>
<tr>
<td>Gini excl. D10</td>
<td>0.364</td>
<td>0.360</td>
<td>0.370</td>
<td>0.396</td>
<td>0.396</td>
<td>0.383</td>
<td>0.375</td>
<td>0.381</td>
<td>N.A.</td>
</tr>
</tbody>
</table>

Source: Gini 1 and 2, SEDLACb (CEDLAS and the World Bank). Gini excluding the top decile; CASEN in Solimano (2007. p. 33), data on individual level.

There is a downward sloping trend with decreasing inequality when looking at the Gini coefficient for the entire population, however the decrease is marginal and economic inequality appears to be a persistent characteristic of the Chilean economy. The Chilean Gini is however concentrated to the large income share belonging to the top decile. As seen in the

11 Chilean population in 2009 = 16,607,007 (CASENc).
third column, the Gini decreases noticeably when excluding the top decile. A further discussion on the concentration of wealth follows below.

To relate the relative poverty to the distribution of income, the EU and OECD measures of poverty lines composed in relation to the median income can be of interest. The EU relative poverty measure, which is 60 per cent below the median income, gives a Chilean poverty line that is CLP 54,400\(^{12}\) above the national urban poverty line for the same year (Perkins et al. 2006, p. 208). With such a measurement, the share of the population categorised as poor increases. The OECD measure is 50 per cent of the median income. The headcount indexes for the respective years with the national, EU and OECD poverty measures on household levels are presented in graph 6.2. Note that the change to consider is the trend within each measure, rather than the annual difference between the measures. Since the OECD and EU measurements are linked to the median income, the trends indicate that the relation between the median income and bottom income recipients has been relatively constant over the study period.


Sources: CASEN\(d\), Author’s calculations. Chilean national poverty line according to household data.

The increase in poverty in the 2000s according to the relative measures implies that the difference between the median income and bottom income recipients has increased over the period and that the income distribution has become more skewed towards the upper income groups.

The relative poverty is higher when measuring individuals rather than households. The OECD and EU measures differ in the results observed regarding poverty on household level. Firstly, the rates in 1990 are lower using measures on individual instead of household level

\(^{12}\) CLP 118,537–64,134=54,403, rounded off to even hundreds. Author’s calculations based on annual data from CASEN\(d\).
and secondly, the measure on individual level show increased poverty rates of approximately five per cent from 1990 to 2009. The potential explanatory factors will be further developed in section 7, but a possible explanation for the relatively low levels of poverty presented with the relative measures could be that the income distribution was less scattered in 1990 considering for instance the Gini coefficient. The levels present interesting results for comparative reasons, and question the pertinence of the national poverty line. An important factor that influences the level of the relative poverty measure is that it does not consider regional variation of urban and rural price differences, unlike the national absolute measure. This is an explanatory factor to the higher relative poverty rates compared to the national poverty line.

For a more in depth understanding of relative poverty it is relevant to include the distribution of income in a population, to relate the economic growth and evolution of poverty to changes in the structure of the distribution. The decreasing levels of absolute poverty derive from increases in aggregated national income and income per capita. Table 6.2 illustrates income changes for specific income groups, and demonstrates that the changes for the bottom and top quintiles show that the poorest income group has lost almost 18 per cent of the share of total income from 1990 to 2009, while the top quintile has increased their share. The income shares of the middle deciles are relatively steady over the study period, indicating that the distributional changes are mainly caused by changes in the extreme ends of the distribution. The contrasting development of the incomes between the bottom and second-bottom decile could indicate that the second-bottom decile has gained from the general improved situation for most households as the mean and median incomes have increased over the period (CASENb), while the bottom income group has been excluded from such improvement. Excluding the two bottom deciles and the top deciles the changes in relative incomes have been moderate over the time period and between the deciles, and not fluctuated above two per cent.

13 $\Delta \text{CLP} = 23,048 = \text{SEK 308.21}$. Currency exchange rates on April 7, 2011: $100 \text{SEK} = 7478 \text{CLP}$ (The World’s Favorite Currency Site).
Table 6.2. Income Changes on a Disaggregated Level, Chile 1990–2009.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Δ %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Quintile</td>
<td>3.09</td>
</tr>
<tr>
<td>Bottom Quintile</td>
<td>-17.55</td>
</tr>
<tr>
<td>Decile 10</td>
<td>4.17</td>
</tr>
<tr>
<td>Decile 9</td>
<td>0.49</td>
</tr>
<tr>
<td>Decile 8</td>
<td>0.69</td>
</tr>
<tr>
<td>Decile 7</td>
<td>1.44</td>
</tr>
<tr>
<td>Decile 6</td>
<td>1.40</td>
</tr>
<tr>
<td>Decile 5</td>
<td>0.23</td>
</tr>
<tr>
<td>Decile 4</td>
<td>1.88</td>
</tr>
<tr>
<td>Decile 3</td>
<td>-0.61</td>
</tr>
<tr>
<td>Decile 2</td>
<td>4.88</td>
</tr>
<tr>
<td>Decile 1</td>
<td>-20.87</td>
</tr>
</tbody>
</table>

Source: Annual data from CASENb, Author’s calculations. Measures based on market income per household.

Despite stated efforts by the government to promote a more equal society, income does not seem to have become more evenly distributed. However, the study does not target income mobility and the effects of governmental outreach programmes, hence the study considers income shares of the bottom decile and not the particular composition within the decile. As income mobility is not the purpose of the study, the results do not determine if the households categorised as poor are the same ones over the study period, or if there has been a movement of people escaping poverty while others have fallen below the poverty line.

The composition of the distribution does not demonstrate large changes over the study period except for in the bottom decile. In 1990 the average household of the richest 10 per cent in the Chilean society earned 43 times more than the average household in the poorest 10 per cent. In 2009 their income share had increased to 129 times that of the average household in the poorest decile and hence, income inequality increased. Considering relative poverty requires a focus on the bottom decile, and in a comparison to the average Chilean household, the bottom income has lost in relative terms also towards the mean and median household. In 1990 the average household in the bottom decile had an income equal to 42 per cent of the median household in Chile. In 2009 this share had decreased to three per cent, indicating that the bottom decile is falling further behind in accessing the benefits from the national income growth. In a comparison with the mean household income, the bottom decile had an income equivalent to 23 per cent in 1990, which decreased to two per cent in 2009 (CASENd and appendix A3).

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14 Annual data from CASENb, author’s calculations. Measures based on market income per household.
The skewed income distribution in Chile can be related to the concentration of wealth in both the top income decile and the marginalisation of the bottom income group. Evidence from the data presented in table 6.1 shows that the Gini coefficient decreased with almost 0.2 on the scale from 0–1 when the richest 10 per cent of the Chilean income distribution were excluded. While the national Gini of 0.52–0.55 is comparable to income distributions such as those of Mexico, Ecuador or several other Latin American countries, a Gini of 0.36–0.39 implies a distribution closer to that of Spain, which was 0.35 in 2000, and a more equal distribution than that of the United States that reached 0.41 in 2000 (UNDP). Note that the comparative values consider entire populations. Looking more specifically at Chile it is clear that the bottom income decile is the one who has lost the most in relative terms over the study period.

Intuitively the larger increase in the median than the mean income should imply less income inequality, but in the Chilean case the growth of the income gap between the bottom decile and the mean and median incomes tell of further marginalisation of the bottom income group, while the middle income recipients are increasing their incomes.

In summary, Chilean relative poverty has not decreased over the study period as the bottom income decile has relatively lost towards both the top and middle income groups. Simultaneously, the top income decile has increased their share of the total income relatively more than the middle income deciles.

6.3. Chile in a Regional Perspective

Table 6.3 below shows the changes in absolute poverty rates in a regional context from 1990 to 2009.

<table>
<thead>
<tr>
<th>Income Group</th>
<th>1990</th>
<th>2009</th>
<th>Δ%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigent Chile</td>
<td>11 %</td>
<td>3 %</td>
<td>−73</td>
</tr>
<tr>
<td>Indigent Latin America</td>
<td>23 %</td>
<td>13 %</td>
<td>−43</td>
</tr>
<tr>
<td>Poor not indigent Chile</td>
<td>23 %</td>
<td>9 %</td>
<td>−61</td>
</tr>
<tr>
<td>Poor not indigent Latin America</td>
<td>25 %</td>
<td>20 %</td>
<td>−20</td>
</tr>
<tr>
<td>Total poor Chile</td>
<td>33 %</td>
<td>13 %</td>
<td>−61</td>
</tr>
<tr>
<td>Total poor Latin America</td>
<td>48 %</td>
<td>33 %</td>
<td>−31</td>
</tr>
</tbody>
</table>

Source: For Chile; MIDEPLAN, annual data from CASEN. Based on household level. For Latin America; Bárcera. 2010. p. 11. Data from household surveys in 18 Latin American countries, including Chile, based on national poverty lines.
When comparing the poverty levels given the available data, Chilean trends of decreasing absolute poverty and indigence levels are coherent with a regional trend. Chile has overall reached further in absolute poverty eradication than the rest of Latin America.

The decreasing levels during the 1990s should considered acknowledging that several Latin American countries experienced increased poverty levels during the 1980s. The decrease in the 1990s can to some extent be seen as a return to the levels of the early 1980s (Behar. 2000. p. 12f.).

In a comparison of absolute poverty levels and economic growth, Chile has a strong economy with particularly high GDP per capita levels and low absolute poverty levels. Chile experienced the most stable economic growth in the region over the past decades. While Argentina is persistent as the largest economy in the region of Chile and neighbours, Chile is experiencing higher relative growth and is approaching Argentina, with an accelerated catch-up effect specifically noticeable since 1990 and for the remains of the study period. The catch-up effect is further strengthened due to the severe economic crisis in Argentina between 1999 and 2002 that implied a recession, a large increasing public debt, rising unemployment and devaluation of the Argentinian Peso (World Bank databank, see appendix A4).

Chile’s economic growth accelerated after the economic crisis in 1982–1983 through diversification of the export market (Conway and Warnock. 1997. p. 4f.). This is important to keep in mind for the analysis in this thesis, as trends and effects observed in the early 1990s could derive from the accelerated growth rates during the 1980s.

Fiscal policy such as taxes, subsidies and the size of the public sector are factors affecting the distribution of wealth in a country. In countries such as the Nordic ones, with an extensive welfare system and a large public sector, the level of distribution and redistribution is extensive. On the contrary, Chile and many Latin American countries have had long periods with governments promoting the free market and a minimalist state that has enforced less investment in the public sector and wide-spread privatisation of for example the educational and health systems.

According to ECLAC the Gini for the region fluctuates around 0.55 during the examined period. In a comparison of 18 Latin American countries between 2002 and 2009, all countries but three, Costa Rica, the Dominican Republic and Guatemala, decreased their Gini from 2002 to the sequent year of observation. Chile demonstrates the 8th highest Gini in the later observation, and follows the observed regional trend of marginally decreasing inequality on an aggregated level (Bárcera. 2010. p. 16).
Decreasing absolute poverty and positive economic growth appears to be a regional pattern in the region over the study period. In most countries the Gini coefficients have only decreased marginally, which gives incentives for further studies of inequality measures in order to properly examine the level of economic inequality. There can however be changes in the income distribution within the middle income deciles that will not appear on the Gini measure, as it primarily deviates due to shifts in the extreme ends of the distribution. If the top income groups receive a larger increase than the bottom, the Gini and distributional effects will indicate maintained or increasing levels of relative poverty.

In conclusion, the trends of decreased absolute poverty in Chile are part of a more regional trend. The study of relative poverty in Chile on a disaggregated level shows that the relatively stable development of the Gini in the region has to be complemented by further studies in order to properly understand the relative poverty situation in the Latin American countries.

7. Explanatory factors for the Chilean development

7.1. Economic growth
The decrease in absolute poverty in Chile during the 1990s and 2000s coincided with a period of overall positive economic growth. The hypothesis that decreased poverty levels are positively related to economic growth is in line with neoclassical economics. Such an assumption relies upon that a higher GDP per capita increases the income per capita, which could result in a higher income per capita also for the poorest income recipients. A higher GDP allows for more investments from the private and public sector at the same time as revenues increase through taxes, which could be beneficial to the entire society.

Graph 7.1 presents the relation between absolute poverty and economic growth in Chile over the study period. GDP per capita growth is expressed in percentage units compared to the previous year, and each observation in the graph equals a year of the study period. The absolute poverty levels observed in section 6 are decreasing at a steady rate especially during the first half of the study period, but the decline is slowed down during the 2000s, which is when GDP per capita approaches USD 5000. There is however no clear relationship between high annual growth rates and poverty alleviation. It is likely that the effects of economic growth are delayed to sequent periods, but while the Chilean growth rates have been volatile ranging from ten per cent in 1992 to negative two per cent in 1999 and 2009, both the
headcount index and level of indigence has been steadily decreasing during the study period. This indicates that other aspects than economic growth is necessary to alleviate poverty.

It is not possible to determine the causality between the economic growth and poverty levels from graph 7.1 below, but given the causal assumption that income per capita growth decrease absolute poverty, the correlation supports the idea of economic growth being an effective component for poverty alleviation. Worth considering is also that the higher pace of economic growth and poverty alleviation in the early 1990s could reflect the initially higher level of absolute poverty and lower GDP growth. As absolute poverty falls it becomes more difficult to decrease another percentage unit of absolute poverty.

Graph 7.1. Poverty and annual GDP per capita growth, Chile 1990–2009.

Income changes on an aggregated level, such as presented in section 6, indicate that economic growth has had a positive impact on poverty levels, but such evidence cannot be drawn from the above presented graph. This indicates that other aspects play an important role also when determining absolute poverty levels.

Absolute poverty according to both the national headcount index and the 1 or 2 USD per day are economic measures dependent on costs for consumption that are affected by economic growth. As GDP increases due to higher production prices, consumer prices will likely rise, which will impact the price of the alimentary basket that defines the poverty line. This will in turn have an impact on the amount of people defined as poor according to the absolute measures.

The observed difference in poverty levels when studying individuals and households respectively, show higher values when measuring poverty on individual level, which supports the argument stated by Solimano (2009) that household measures underestimate poverty. Such a scenario is plausible when large parts of the population live in large households, which
traditionally has been the case in Chile. The average size of Chilean households has not grown over the study period, and fertility rates have decreased from an average Chilean woman having three children in the early 1990s, to two in the end of the 2000s. This is the largest observed decrease in an ECLAC investigation of 16 Latin American countries (Bárcena. 2010. p. 18 and Villalón Cárdenas et. al. 2006. p. 10). Smaller household sizes imply a reduced burden on the income recipients in each household, which will have a positive effect on poverty alleviation. This is why economic growth combined with a constant household size explains the declining absolute poverty rates over the study period.

The effects of economic growth on poverty are less clear when disaggregating the data to consider relative poverty and inequality, as the relative poverty measures considers the distribution of incomes. In Chile, the distribution has become more skewed towards the top income group over the study period, and the bottom income group has lost income shares, which in a relative comparison indicates that relative poverty and inequality has increased. The tendencies of concentration of wealth are persistent over the study period which indicates a continued situation of income inequality.

The increase in income per capita and the GDP per capita growth has been mainly concentrated to the upper income deciles and the bottom decile effectively reduced their income expressed in PPP between 1990 and 2009. A positive impact on relative poverty is indicated by the growth in the median income. As it has grown more than the mean income, it is likely that the people that have escaped poverty during the study period have become middle income recipients with greater opportunities to save income in cases of emergency and thus take precautions against falling back below the poverty line. The income growth for the second bottom decile can be seen as an example of such a scenario.

The results show that merely economic growth does not decrease relative poverty in Chile. In order to stimulate growth that will especially benefit the poor, interventions by the state through public policy and fiscal measures might be necessary, as pro-poor growth decreases with increasing inequality. Since growth is pro-poor oriented if it implies an “increase in the income of the poor proportionately more than the non-poor” (Kakwani in Grinspun. 2004) this study does not find evidence of pro-poor growth in Chile as the bottom decile and quintile of the population is receiving a decreasing share of the total income over the study period. The decrease in absolute poverty gives positive prospects for Chilean social development and according to pro-poor growth theory also relative poverty could decrease if the poor would gain more from the growth.
It is furthermore likely that the volatility of GDP per capita growth observed in graph 7.1 has a more direct impact on the extreme income groups. In the case of the bottom decile, a decrease in income, even if seen as ‘small’ will have a large impact on total income, as the proportional difference is greater than in another income decile. In the case of the poor they could lose work opportunities in times of economic crisis, and in the case of the rich they could quickly gain or lose from investments, bonuses et cetera due to economic fluctuations. The middle-income groups can be assumed to have a slower chain of reaction, in situations of positive as well as negative growth, and thus inequality often rises in times of economic crisis (Fallon and Lucas. 2002. p. 35f.).

Considering the middle income recipients in Chile this group seems to have gained substantially over the study period, when considering the growth of 349 per cent of the median income during the study period. It becomes clear that the growth rates of the mean and median incomes are skewed towards the top income groups, given the changes in the income shares that the middle income deciles receive. The middle income groups have benefitted from the economic growth over the past 20 years, but not to the same extent as the top gainers, that in shares are the second bottom and top decile.

Summing up, economic growth seems to have had a positive impact on the reduction of absolute poverty due to the increase in income per capita. Relative poverty has however increased, as the poorest income recipients in Chile have gained the least from the country’s economic growth in the recent decades. In relative terms, the top income decile has increased their share of the total income, while the by far largest change of income shares is recorded in the decrease of the bottom decile. The growth has not had a pro-poor approach.

7.2. Socioeconomic Variables

7.2.1. Characteristics of the Labour market
“Employment is the key link between economic growth and income poverty reduction” (Ehrenpreis. 2007. p. 12). The size of, and differences between the formal and informal labour market will have an impact on the income poverty levels given wage structures and work conditions. The structure of the formal labour force will also impact poverty through labour conditions and its role as a redistributive mechanism.

This section considers the size of the labour force, unemployment and the informal market as labour market characteristics that influence poverty and inequality.
The size of the Chilean labour force increased marginally during the study period,\textsuperscript{15} to reach a maximum rate of 57 per cent in 2006. The amount of senior citizens has increased steadily over the study period, implying that a larger share of the population has to be provided for and increasing the pressure on the economically active. At the same time the share of the total population between the ages of zero and fourteen is decreasing, which indicates that the labour force will not grow due to demographical changes as more people are likely to exit than enter the labour force. The amount of inactive individuals has remained relatively high in an international comparison, and relatively constant, over the study period (CASENe and UN Statistics Division), which could be linked to the traditionally low female participation rates in Chile.

The gender composition of the labour force, with clear male dominance, could partly be explained by the widespread presence of domestic workers that is a female dominated employment sector. The impact of female participation in the labour force on poverty and inequality is further developed in section 7.2.2.

Graph 7.2. Social Indicators Combined; Poverty and Size of the Labour Force.

A growing labour force should intuitively decrease the income inequality as more people receive an income, assuming that they were without a salary previous to the entry. If more people try to enter the labour force at a time of economic crisis and/or at a time of increased hiring costs, this could cause temporary unemployment until the labour market adjusts to the new wage equilibrium and supply and demand for workers.

\textsuperscript{15} The Chilean labour force includes all people above the age of 15 that are either working or looking for a job, and hence includes the unemployed (CASENe).
It is necessary to study the socioeconomic situation of the people that enter the labour force, but one can assume that the largest part is due to needs and not representing ‘entry for pleasure’, for instance previous housewives from top income groups. If the new enters are recent university graduates they are high skilled workers that are likely to enter in the upper half of the income distribution. On the other hand, if the newly entered are low skilled workers who are forced to enter due to a worsened situation in their household, or youth that are forced to exit the educational system to enter the labour force, they are likely to end up in the bottom income groups. The latter alternative is more likely in a developing country like Chile, and offers an explanation to the Chilean development situation with increased inequality and higher skewness to the top income recipients.

The unemployment levels in Chile have fluctuated between five and ten per cent during the study period. Unemployment tends to be concentrated to the poor income groups that are more vulnerable to fluctuations in the economic cycle (Ffrench-Davis. 2002. p. 186). Low income recipients are also the ones likely to fall below the poverty line, should they lose their income, as their economic and social security does not permit substantial savings.

Informal employment, such as self-employed and domestic workers or workers without contracts, and the size of the informal market, will clearly impact the labour market, salaries and have an impact on the income distribution. Table 7.1 presents the share of workers that work without contracts as a share of the economically active population. As the results are based on household surveys, perfectly accurate results on the size of the informal market are intuitively difficult to obtain, which can question the reliability of the results. If workers that are uncertain whether they hold a contract or not are categorised as informal, the level increases with one to three percentage units over the study period (CASENf). Working without a contract often makes personal and household investment difficult, which will have an impact on the possibilities to improve ones’ socioeconomic situation in a sustainable manner. Due to the informal situation, workers are often unprotected and without social security and insurance. Low skilled workers without rights are likely to be the ones caught in a situation of inadequate living standards (Valenzuela and Mora. 2009. p. 32).

Table 7.1. Percentage of Workers without Contracts as a Share of all Occupied Individuals.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of Employed</td>
<td>17</td>
<td>14</td>
<td>20</td>
<td>22</td>
<td>23</td>
<td>23</td>
<td>N.A.</td>
<td>20</td>
<td>18</td>
</tr>
</tbody>
</table>

Source: Annual data from CASENf. Author’s calculations.
ECLAC and ILO present alternative figures estimating that up to 39 per cent of the urban employment is informal (Cimoli, Primi and Pugni. 2006. p. 93). Particularly high levels in urban areas are most likely related to the widespread presence of domestic workers.

The effects of formal and informal work on poverty alleviation and income distribution depend on the situation of the workers previous to their entry on the labour market. If the worker was without an income previous to the job, an employment, whether formal or informal, intuitively raises the income and consumption possibilities of the individual and will contribute to alleviate poverty. If the individual was forced into the informal labour market due to being let off from a previous work contract, this is likely to reduce the income of the individual and decrease its welfare. The largest amount of workers without a contract is observed in 1998–2000, during the latest Chilean economic crisis. This coincides with the highest unemployment levels during the study period, which gives premonitions that the growing informal sector is a result from a decreased demand in the formal sector. Such development could support evidence on a growing gap between the formal and informal sector, which should increase relative poverty as employees in the informal sector are further marginalised.

Amuedo-Dorantes (2005) suggests that persistent Chilean inequality is related to the growth of the informal sector with low-paid jobs which increased during the 1990s. An increased demand for skilled workers due to technological development and innovations could have increased the salaries of high skilled workers and those with proper contracts in the formal labour force, which decreases inequality in the formal sectors. This could possibly describe the income growth of the middle deciles and explain the further marginalisation of the bottom income decile. Growth of the informal sector derived from increased costs of hiring seems to have outweighed the effects of an increased demand for skilled labour in the formal sector, as income inequality increased between the poorest decile and the rest of the income distribution.

Inequality is also linked to differences between, and within professions. The kind of occupation a person decides to take also has an impact on the wage and income of that individual, whether formal or informal. Working in the public or private sector, and whether working in a high or low risk labour situation, will help determine the income category in which the individual will belong.

Important to emphasize is that the option of where, and under which conditions to work, may not be of a free choice for the unemployed when looking for jobs. Surrounding circumstances, such as the household income and number of incomes in a household, will
influence how much time a person is permitted or can afford to look for employment with decent conditions. In relation to the above discussed differences between the formal and informal market, Palma Aguirre (2008c) shows that the informal sector demonstrated growing inequality within occupations and a lower earnings growth than the formal sectors (Ibid., p. 19) during the 1990s. In the same paper he also demonstrates that large parts of the income inequality within occupational groups can be traced to the wage gap between the formal and informal sector (Ibid., p. 27). According to his estimates, 1992–2000 was a period of expansion of the informal market, which would be a contributing explanatory factor to the persistent income inequality in the latter part of the 2000s.

To summarise, the growth of the formal labour force has most likely contributed to decreasing absolute poverty as more people receive an income and to decreasing relative poverty for all employed in the formal sector. Unemployment has a negative impact on absolute poverty but has been relatively steady over the study period and should thus not have had a large impact on the poverty levels from 1990–2009. The growing wage gap between the formal and informal sector combined with expansion of the informal market, are underlying factors explaining the increase of Chilean relative poverty and inequality.

**7.2.2. Female Participation in the Labour Force**

Traditionally relatively few women in Chile participated in the labour force. According to customs and traditions, women were in charge of the domestic work, nursing children and elderly within the household.

The views on women participating in the labour force are altered by increased educational levels, changes in costs of living et cetera. As female participation increases, the share of the household that receives a salary increases and the household consumption possibilities change. On an individual basis, women that enter the labour force increase their possibilities of independence and welfare. The upper curve in graph 7.3 shows that women as a share of the total labour force has been growing steadily during the study period, with 2009 being the year with the highest rate of female participation. This increase occurs simultaneously as absolute poverty rates are falling. The relation indicates a positive correlation between female participation and decreasing poverty as a larger share of the population receive an income, given that the income of the women entering the labour force was lower than the minimum wage or equal to zero previous to the entry. The link is intuitive as the amount of income recipients increase and the national poverty line is based on household level data.
Traditionally, a large share of the adult females are occupied in the domestic sector, whether in their own household and/or as a domestic employee. In 2003, six per cent of the total labour force was employed as domestic workers. For the female labour force the level was 16 per cent. (Valenzuela and Mora. 2009. p. 28). Few of the women that work as domestic workers receive contracts; rather the employment is, and has been, based on “mutual trust” (Ibid., p. 25).

Graph 7.3. Social Indicators combined; Poverty of Total Population and Female Participation as a share of the Labour Force.

In Chile, the increase of the minimum wage aims to raise the monetary wage of often excluded sectors. Chilean law states that a domestic worker “cannot receive a monetary wage which is less than 75 per cent of the minimum wage” (Valenzuela and Mora. 2009. p. 38). In 2003, the average wage for the domestic workers that were part of the formal labour force was 2.4 times that of the poverty line (Ibid., p. 40). Given that women often work in low-income sectors (Ibid., p. 199) this reasoning would imply that as more women join the labour force they enter the low-income deciles of the income distribution and contribute to a more scattered income distribution. Overall, increased participation should decrease income inequality as the average household will receive more incomes and expand the formal labour force. If the females that enter the labour force on the other hand belong to high income households, the household income will increase and is likely to further concentrate the high incomes in the top deciles of the income distribution. Such reasoning is coherent with the Chilean household and individual absolute poverty levels, presented in section 6. Flexibility in working hours and rules for maternity leave furthermore has a strong impact on the
incentives for female participation in the work force, which in turn can be assumed to
influence the income distribution.

When interpreting the data it is important to emphasize that the household income
measures does not distinguish incomes for men and women. This is why obtaining individual
data is necessary if the specific purpose is to study female poverty.

In conclusion, increased female participation is positively linked to the decreased levels of
absolute poverty, as a larger share of the population receives an income. The effect on relative
poverty can have ranging outcomes. If women that enter the labour force had zero earnings
previous to the entry, income inequality will decrease by increased participation. But as
women often receive lower salaries than men and, in the Chilean case often work as domestic
workers, income inequality might persist or even increase if the effect of females entering the
labour force causes males to work more hours. An upper income family that for instance
employs a domestic worker will face more hours available for labour work, as the domestic
worker will relieve the work load needed by the adults in the household. Such a scenario will
increase the dispersion of incomes and increase relative poverty.

7.2.3. Wages
The declining levels of Chilean wages in the 1980s influenced the rapid positive development
of wages in the 1990s. This section studies the evolution of wages focusing on the minimum
wage, and the wage gap between the formal and informal sector.

The evolution of wages and absolute poverty is illustrated in graph 7.4. There are positive
correlations between higher minimum and average wages and decreasing absolute poverty.
Minimum wages tend to have a positive impact on the lower income deciles, given that a
rising minimum wage does not exclude workers from the labour market. According to the
observed development, the increase in the minimum wage in Chile during the 1990s has had a
positive impact on decreasing absolute poverty and also contributing to decreasing inequality
of the formalised labour force. The costs of hiring workers increase with the rise of the
minimum wage, which might increase unemployment among the workers with low
productivity if employers are forced to hire fewer workers. The increase of the minimum
wage can potentially be an explanatory factor to the improved economic situation of the
second bottom decile that increased their share by almost five per cent over the study period.
As the minimum wage only applies and impacts the formal sector, an increase might not reach
the poorest decile, if these workers are occupied in the informal sector.

In real values the minimum monthly wage for 2009 was CLP 165,000. 11 per cent of the labour force, approximately 720,000 Chileans, earned maximum or the equivalent of the minimum wage (Central Autónoma de Trabajadores, CASENf), that equals 2.5 times the poverty line. As the minimum wage is set well above the urban poverty line, it is likely that the increase has decreased absolute poverty in the formal labour force.

The income share of the middle income deciles is relatively steady over the study period. Combined with the increase in the total incomes, and the relative decrease of the bottom decile, it is likely that their socioeconomic situation is improving. Middle income recipients are less likely to become excluded from the formal labour market than the bottom income groups. Hence, an improved situation of the middle income deciles could partly be related to the increase of the minimum wage. A higher minimum wage can mean that small employers have to dismiss certain low skilled employees but it can also imply a raised income for those who manage to keep their employment. Results acquired by Palma Aguirre (2008) supports the latter hypothesis. The minimum wage will increase the income for the employed that are included in the formal labour force, but there is a risk of an increased wage gap between the formal and informal sector. There is also a possibility that the informal market will expand and increase the wage gap between the formal and informal market, as an increased minimum wage raises the employment costs for employers. Estimates by ECLAC indicate that wages in the informal sector have decreased over the study period, compared to the formal wages for technicians and lower income recipients in the formal sector (Cimolo, Primi, Pugni. 2006. p. 100).

Overall, the implementation of the minimum wage is positively related to the decreasing levels of absolute poverty, as low skilled workers receive higher incomes. For relative poverty...
and inequality, the minimum wage has had somewhat of a counterproductive effect. A rise in income decreases inequality for those who manage to keep their job despite the higher costs for employers, but increases relative poverty and inequality for those who become unemployed as an effect of changed employment costs. This reasoning can help understand the Chilean case. The development of incomes for the two bottom deciles over the study period indicate that the bottom decile, which has lost income shares, were marginalised as an effect of increased costs for employment. The gains observed in the shares obtained by the second bottom decile could be the outcome of the increased minimum wage.

8. Concluding Remarks and Future Prospects
The absolute poverty level according to the headcount index has decreased steadily over the studied period, and people living in extreme poverty, so called indigence, has nearly been eradicated. The headcount index fell from 33 per cent in 1990 to 13 per cent in 2009.

Evidence from the development for different income groups shows that the difference between the richest and poorest parts of the population has increased over the study period and in this aspect relative poverty has increased. The bottom income decile is also the group that has gained the least from the recent years’ economic growth in a comparison to the rest of the population. The top income recipients are annually receiving a larger share of the total income, and while all income recipients are experiencing improved conditions in absolute terms, the rich seem to get richer at a more rapid rate than the poor.

The economic growth has benefitted the entire population, and is likely to have had a positive impact on absolute poverty as the decrease has occurred at a time of an increased national income and income per capita. However, income inequality did rise over the study period, as the upper income recipients have gained relatively more than the rest of the distribution and the wage gap further increased between the top and bottom income groups. This study therefore concludes that relative poverty has increased in Chile from 1990–2009. Economic growth has caused absolute poverty to decrease, but as the poorest groups have gained relatively less than the upper income groups from the two decades’ economic growth, it has not been pro-poor. Considering the definition used in this study to define pro-poor growth, the centre-left coalitions that formed government in Chile from 1990 to 2010 have in this aspect not been entirely successful in their attempts to create ‘growth with equity’.

Among the socioeconomic factors considered, the growth of the labour force and higher female participation, especially in the formal sectors, seem to have contributed in a positive manner to decrease inequality. The implementation and increase of the minimum wage can
have twofolded effects, but contributes positively to decrease inequality and relative poverty in the formal labour force. The relative income loss for the bottom decile can most likely be explained by the growing gap between the formal and informal sectors, considering both economic growth and wages.

Economic growth does not seem to have been enough to decrease inequality in a society with growing income gaps, although female participation and size of the labour force are socioeconomic factors that have increased over the study period and have positive impacts on inequality and relative poverty. To continue combating both absolute and relative poverty in Chile, capability enhancing measures such as emphasized by Amartya Sen and others, could increase the possibilities of increasing human capital. For the socioeconomic variables considered in this study, increasing human capabilities could counteract the growth of the informal markets, as measures that stimulate human capital and capabilities increase the possibilities for individuals to make informed decisions about their employment and labour conditions. Decreasing wage gaps between and within employment sectors would decrease relative poverty for the bottom income recipients and contribute to reduce Chilean income segregation.

This study on the development of absolute and relative poverty in Chile can serve as a platform for further studies on poverty and inequality and has raised the issue of the often narrow definitions of poverty. For further studies and future prospects of Chilean development, social spending and redistributive mechanisms that besides economic growth and the above presented factors, influences social welfare, are in need of further investigation.
9. Bibliography


Organisation for Economic Co-operation and Development (OECD), “Country Statistical Profile Chile”, www.oecd.org/country/0,3731,en_33873108_39418658_1_1_1_1_1,00.html (Accessed 07-06-2011).


10. Appendix


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<tr>
<td>Individuals</td>
<td>105,189</td>
<td>143,459</td>
<td>178,057</td>
<td>134,262</td>
<td>188,360</td>
<td>20000</td>
<td>2003</td>
<td>2006</td>
<td>2009</td>
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<td>Households</td>
<td>25,793</td>
<td>35,948</td>
<td>45,379</td>
<td>33,636</td>
<td>48,107</td>
<td>78,907</td>
<td>80,156</td>
<td>80,250</td>
<td>80,350</td>
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<td>% of tot. pop.</td>
<td>0.81</td>
<td>1.07</td>
<td>1.28</td>
<td>0.93</td>
<td>1.28</td>
<td>1.67</td>
<td>1.66</td>
<td>1.49</td>
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Source: Annual data from CASEN.


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<tr>
<td>National PL (urban)</td>
<td>18,594</td>
<td>25,750</td>
<td>30,100</td>
<td>34,272</td>
<td>37,889</td>
<td>40,562</td>
<td>43,712</td>
<td>47,099</td>
<td>64,134</td>
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<td>National PL (rural)</td>
<td>12,538</td>
<td>17,362</td>
<td>20,295</td>
<td>23,108</td>
<td>25,546</td>
<td>27,328</td>
<td>29,473</td>
<td>31,756</td>
<td>43,242</td>
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<td>OECD (1)</td>
<td>42,280</td>
<td>61,161</td>
<td>71,750</td>
<td>100,000</td>
<td>114,624</td>
<td>110,014</td>
<td>123,389</td>
<td>157,475</td>
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<td>EU (1)</td>
<td>50,736</td>
<td>73,393</td>
<td>86,100</td>
<td>120,000</td>
<td>137,549</td>
<td>132,017</td>
<td>148,067</td>
<td>188,969</td>
<td>228,000</td>
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<td>OECD (2)</td>
<td>21,140</td>
<td>31,785</td>
<td>37,485</td>
<td>47,162</td>
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<td>56,520</td>
<td>60,685</td>
<td>75,243</td>
<td>98,781</td>
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<td>EU (2)</td>
<td>25,368</td>
<td>38,141</td>
<td>44,982</td>
<td>56,594</td>
<td>68,425</td>
<td>67,824</td>
<td>72,822</td>
<td>90,292</td>
<td>118,537</td>
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Sources: CASEN, (1) based on income per household, (2) based on income per individual. Author’s calculations.

Table A3. Development of Median and Mean Household Incomes in Relation to the Income of the Bottom Decile.

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<tr>
<td>Median income</td>
<td>84560</td>
<td>122322</td>
<td>143500</td>
<td>200000</td>
<td>229248</td>
<td>220028</td>
<td>246778</td>
<td>314949</td>
<td>380000</td>
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<td>Mean income</td>
<td>152334</td>
<td>221141</td>
<td>254740</td>
<td>339774</td>
<td>398192</td>
<td>365518</td>
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<td>507734</td>
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<td>Mean income D1</td>
<td>35392</td>
<td>38684</td>
<td>37549</td>
<td>32818</td>
<td>27785</td>
<td>27794</td>
<td>24241</td>
<td>20907</td>
<td>12344</td>
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<td>Ratio D1/Median</td>
<td>42%</td>
<td>32%</td>
<td>26%</td>
<td>16%</td>
<td>12%</td>
<td>13%</td>
<td>10%</td>
<td>7%</td>
<td>3%</td>
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<tr>
<td>Ratio D1/Mean</td>
<td>23%</td>
<td>17%</td>
<td>15%</td>
<td>10%</td>
<td>7%</td>
<td>8%</td>
<td>6%</td>
<td>4%</td>
<td>2%</td>
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Sources: CASEN, author’s calculations.

Source: Annual data from World Bank databank. The GDP per capita values are logged using the natural logarithm in order to demonstrate the relative growth rate that is the slopes of the logged time series.