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**Informality in Transformation?**  
Factors for Informal Employment  
in the Chilean Labor Market 1994-2011

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## ABBREVIATIONS

AFP	Administradora de Fondos de Pensiones	Private Pension Fund
CASEN	Encuesta de Caracterización Socioeconómica Nacional	National Socio-economic Characterization Survey
CELADE	Centro Latinoamericano de Demografía	Population Division of the Economic Commission of Latin America and the Caribbean
CEPAL/ECLAC	Comisión Económica de América Latina y el Caribe	Economic Commission of Latin America and the Caribbean
CORFO	Corporación de Fomento de la Producción	Chilean public sector organization promoting Entrepreneurship
CPC	Confederación de la Producción y del Comercio	Chilean Entrepreneurs' Organization
CUT	Central Unitaria de Trabajadores de Chile	Workers' Union Federation
ENE	Encuesta Nacional de Empleo	National Employment Survey
FONASA	Fondo Nacional de Salud	Public health insurance
FORLAC	Programa Regional para la Formalización de la Informalidad	Regional Programme for the Promotion of Formalization
ILD	Instituto Libertad y Democracia	Institute for Liberty and Democracy
ILO/OIT	Organización Internacional del Trabajo	International Labour Organization
INE	Instituto Nacional de Estadísticas	Chilean National Institute of Statistics
ISAPRE	Instituciones de Salud Previsional	Private health insurance system
MIDES	Ministerio de Desarrollo Social	Chilean Ministry of Social Development
NENE	Nueva Encuesta Nacional de Empleo	New National Employment Survey
OCDE/OECD	Organización para la Cooperación y el Desarrollo Económico	Organisation for Economic Co-operation and Development
PNUD/UNDP	Programa de las Naciones Unidas para el Desarrollo	United Nations Development Programme
PREALC	Programa Regional de Empleo para América Latina y el Caribe	Regional Programme for Employment in Latin America





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## 1. INTRODUCTION

This thesis develops new insights into the cause and nature of informal employment in Chile. Chile represents a highly interesting case to study that has repeatedly attracted the attention of the international scientific community. In some aspects, the country is rapidly approaching the threshold between “developing” and “developed” status. Indicators for economic growth and poverty reduction show impressive progress throughout the past decades. Unemployment has also decreased considerably. Besides Mexico, Chile is the only Latin American country that has joined the ranks of the “exclusive club” of the OECD countries. However, a broad variety of issues in social development remain unsolved, which crystallizes for example in high income inequality or extremely low public spending on education. The recent student movement that resulted in vehement protests and was supported from many sides is indicative that Chileans are conscious of continuous deficits.

From the outset, research on informality is confronted with the significant problem of the heterogeneity of the phenomenon, as conceptualizations, terms and definitions employed differ considerably. In its beginnings, research was focused on the “informal sector”, a conceptualization that takes into account predominantly microenterprises with low productivity levels and low technological innovation. However, recent years have seen an increased attention for “informal employment”, following the recognition that informality is not necessarily limited to informal sector enterprises. Components such as social security or contractual status have gained importance as aspects of informal employment (Jütting et al. 2008).

Informality was identified as an inherent characteristic of developing labor markets, but has also been recognized as a feature in any society where institutions play a role in the organization of interactions between actors (Portes et al. 1989). From a macroeconomic perspective, many studies have focused on factors that determine the size of the informal sector. On the other hand, decisions of workers to work formally or informally have been of interest for researchers (Loayza 2006; Perry et al. 2007). However, analyses often remain focused on general indicators and developments of these indicators in times of economic crises.

This thesis concentrates on a particular aspect of informality. The focus in this case lies exclusively on wage earners. Informality among wage earners has been pointed out as a highly relevant phenomenon in need of further attention (Carey Jackson 2011). Empirical evidence so far suggests that informal wage earners find themselves in the most disadvantaged labor market position in comparison to formal wage earners and self-employed workers. Thus, this group will be placed in the focus of this work, which constitutes a deliberate contrast to more “traditional” perceptions of informality.

Some empirical evidence already exists on characteristics of informal employees in Latin America. Important recent contributions in this respect constitute the World Bank report “Exit and Exclusion” (Perry et al. 2007) and a report launched by the Konrad Adenauer Foundation (2010). However, a systematic review for the Chilean situation that takes into consideration recent labor market developments remains to be done. Furthermore, the variety of definitions employed complicates the comparison of findings and advancement of knowledge on the subject.

This problem constitutes the starting point for this thesis. On the one hand, varying conceptualizations of the phenomenon will be addressed and defining elements of informal employment relationships will be identified in order to arrive at a definition appropriate for the objectives of this work. Due to the great variety of conceptualizations and definitions employed in the literature, this step is of particular importance. Therefore, matters of definition and conceptualization receive more attention than usually. On the other hand, this work aims to identify determinants of informal employment among Chilean wage earners and how these have developed over the years.

As a consequence, the following research questions were set to guide the research process:

- What are defining elements of informal employment relationships?
- Which are the factors that lead to an informal employment relationship?
- How have these factors developed? Are there factors that have gained/lost importance for informal employment relationships in the past decades?

The research process is divided into various stages. Firstly, an introductory section on the Chilean labor market provides an overview on relevant developments in the past century that have influenced the situation of Chilean workers in various respects. Furthermore, key data referring to the Chilean labor market structure at the beginning of the 21<sup>st</sup> century is presented.

Subsequently, a review of the literature on informal employment with a particular focus on Latin America aims to depict relevant issues of a debate that has evolved roughly since the 1970s. Of primary relevance in this context are documents published by the International Labour Organization, the international organism that has most actively promoted the establishment of international definitions regarding informality. Other contributions that are addressed in more detail are those of Hernando de Soto and Alejandro Portes and colleagues. Despite these efforts of systematization, empirical evidence on the situation of informal workers in Latin America remains dispersed. The second part of the literature review aims to condense these findings and to derive hypotheses for the following empirical analysis.

The third part of the thesis constitutes the analysis of the “National Survey of Socioeconomic Characterization” (CASEN), a household survey implemented by the Chilean Ministry of Social Development since the late 1980s. The chapter is divided into three sections that on the one hand refer to the applied method, on the other hand give insights on the results from the descriptive and multivariate analyses. Particularities of the used database are addressed. Based on the empirical findings, determinants for informal employment are discussed and related to findings from the literature. The development of selected factors over time (1994-2011) is also taken into account.

In August and September 2012, several interviews were conducted during a research visit at the Universidad de Chile. The objective of these interviews was mainly to gain a closer insight in the field and the situation of the affected workers. Material from these interviews is used where appropriate to illustrate particular aspects that are discussed in the literature or that arise from the empirical data. The thesis finalizes with a discussion of the implications of the presented results and an outlook on possible further research in the area.

## **2. AN INTRODUCTION TO THE CHILEAN LABOR MARKET**

The objective of this chapter is to give the reader an idea about what it means to participate in the labor market in Chile. This includes necessarily more general information on Chile's history and society as well as its economy. Several questions are to be answered that are elementary for an appropriate approach towards the Chilean labor market. In a first step, this chapter will give an overview of the most important developments that have influenced the structure of the Chilean labor market today. As many of the far-reaching changes that determine the structure of the labor market today occurred during the military regime of Augusto Pinochet, another emphasis will be placed on this period.

The second part constitutes an overview of the labor market situation in Chile at the beginning of the 21st century, tracking the development of relevant (and available) labor market indicators up to the present. Where characteristics of the Chilean context show particular differences with the rest of Latin America, according comparisons will be included. The study of the Chilean labor market (although this most likely applies for any study concerned with labor market issues) necessarily has to take into account to the economic development, which explains a stronger focus on this element. At the same time, the connection to the organization of society and labor relations is to be paid due attention.

### **2.1. Cornerstones of the Development of the Chilean Labor Market**

Summing up the development of the Chilean labor market throughout a whole century in a single chapter seems quite challenging; however, it is possible to distinguish very clear-cut episodes that differ greatly in the policy makers' approach towards labor market policy and that have left their marks until today. In the introductory chapter to her work on the Chilean labor market, Sehnbruch describes the following phases: labor market development before the military coup in 1973 (including Chile's socialist "experiment" led by Salvador Allende from 1970 to 1973), reforms under the military regime until the transition to democracy in 1990, and subsequent governments of the "Concertación" since 1990. The main features of these phases are illustrated beneath and will be addressed in more detail in the according chapters. In addition, latest developments that occurred during the governments of Michelle Bachelet and her successor of the "Coalición por el Cambio" Sebastián Piñera (first center-right government since the transition to democracy) will be addressed.

**Table 2.1: Phases of development of the Chilean labor market**

<i>Pre 1973</i>	<i>1973-1990</i>	<i>Post 1990</i>
Industrialization: sometimes export-led, but mostly import-substitution industrialization	Crises and structural adjustment	Consolidation of the “new economic model”
Formation of labor legislation and worker entitlements. Progressive unionization	Dismantling of the unions and flexibilization of the labor market by means of a neoliberal reform package	Consolidation of a flexibilized labor market with some attempt at protecting workers’ interests and reviving the unions
Labor policy as a tool of social policy	Labor policy as a tool of economic policy	Combination of economic and social policy

*Source: Sehnbruch (2006: 49)*

### 2.1.1. Chile until 1973

As a consequence of the obtained independence from the Spanish crown at the beginning of the 19<sup>th</sup> century, the Chilean economy experienced an extensive opening to foreign commerce, which left the public budget highly dependent on commodity prices on the global market. At the beginning of the 20<sup>th</sup> century, pressure for an alternative development model became stronger. Repeated fluctuations in the copper price and the diminishing significance of saltpeter, two important export goods that were substantial for fiscal income, made it increasingly difficult to plan and maintain the public budget (Pinto 1973). Furthermore, a growing conscience for social justice, the so-called “social question” appeared on the agenda, activated through emergent processes of industrialization and urbanization. The stark contrasts of living conditions between the urban elite and the rest of the population, derived from feudal structures in colonial times, evoked increasing resentment among the disadvantaged majority that insisted on a more equal distribution of wealth. The first workers’ associations were formed and initiated a growing protest movement that culminated in violent confrontations between workers and the police or military. Prominent historical examples are the confrontations in the southern Arauco Province in 1903 and in Iquique in the far north of the country in 1907 (Grez Toso 1995, 2000).

A result of the workers’ movement was the adoption of the Labor Statute in 1931, which followed from the constitutional and legal framework instituted in 1924. As the oldest of its kind in Latin America, it established the right to public health care, education and some social services. Another reason for Chile to take a leading role in this respect was the assumption of

the model of industrialization by import substitution. Throughout the Great Depression, Latin American governments were faced with increasing loss of tax income from the export of raw materials. The increasingly adopted strategy of import substitution aimed to reduce the importation of foreign goods and promote the local manufacture. In the decades following World War II, the Economic Commission for Latin America and the Caribbean developed a theoretical model that abstracted this course of action already applied by then by various governments (FitzGerald 1998: 1). As this model included a considerable increase of the share of salaried workers in the labor force, the regulation of their situation became more and more important.

The decades following the institution of the Labor Statute were characterized by a successive extension of labor legislation, enlarging the scope of the provided services and the share of the population covered by them. However, the extent of the obtained benefits depended to a high amount on the pressure that different occupational groups were able to impose, which resulted in the maintenance of inequalities of these services and a high stratification between classes. Generally, the welfare state model closest to describe developments in this period would be a reduced version of Bismarck's corporatist model (Larrañaga 2010: 151).

In this period, the state assumed a central role in terms of stimulating development, dedicating a high amount of public expenditure in investment and creating simultaneously an extensive amount of public employees. In 1939, the Corporation for the Promotion of Production (CORFO) was founded, which was designed to implement the envisaged strategy. For this reason, this model is also referred to as developmentalism (Riesco 2009a; Bellisario 2007a). Over the years, the position of labor unions was constantly strengthened, as they gained in membership and in influence on the labor legislation. Unionization rates increased in the 1960s and reached 37% at the end of the decade. However, sectors that were essential to the Chilean industry, such as mining and manufacture, reached up to 85% and 60%, respectively (Sehnbruch 2006).

In the years prior to the military coup, a tendency of political polarization became obvious. Critiques to the model of development swelled as its efficiency was called into question and the unions' power increased further. From a neoclassic perspective, excessive intervention and spending on the part of the state was criticized, along with a general reference to the model's lack of macroeconomic sustainability. Others argued that the "protected" form of industrialization led to rising unemployment (FitzGerald 1998).



Important features of labor legislation in this time were, on the one side, a policy of wage indexation which tied the salary to the inflation rate and prevented wage reductions on the part of the employers. On the other side, the “Immobility Law” established in 1966 increased workers’ job security considerably, as it made dismissals dependent on a justified cause and obliged employers to high severance pay if otherwise. Sehnbruch (2006: 53) describes the situation as follows:

“While on paper economic reasons were considered a ‘just’ cause for dismissal, in practice labor courts were biased in favor of workers and tended to rule otherwise. The position of labor courts made it extremely difficult for firms to dismiss workers under any circumstances so that dismissals became extremely costly for employers. Over time job security had increased to such an extent that it became almost impossible for employers to adjust to external shocks or to changes in relative prices by reducing their labor force, and wage indexation combined with the power of unions prevented adjustments through wage reductions.” Hence, the period leading up to 1973 stands out for labor legislation that promoted exceptional job security. On the other hand, flexibility was extremely low, both in terms of the number of workers and in terms of their wages.

As the peak of the labor movement can be considered the triumph of Salvador Allende’s “Unidad Popular” in the presidential elections of 1970, who intended a gradual transition towards socialism. A far-reaching agrarian reform aimed at regaining control over the country’s national resources. Achievements of the period included improvements in areas such as health, nutrition, education and income distribution. A consequence was the further increment of public social spending without the necessary economic growth, that went down from 1,6% to an average of 1,2% during Allende’s mandate. At the same time, inflation reached up to 606% in 1973 (Larrañaga 2010: 170). The negative economic development was not least attributable to economic sanctions at that time, deployed by the US government who decisively counteracted any possible spread of socialism in the region inspired by the Cuban revolution.

The recession of the import substitution model coincided with a generally agitated social climate. Polarization between work and capital intensified further and was reflected in an extensive participation in the workers’ movement that entailed land seizures and the occupation of factories. Conciliation between the different actors became increasingly impossible, and culminated in the military coup under Augusto Pinochet on September 11<sup>th</sup>, 1973.

### 2.1.2. Military regime under Augusto Pinochet

The coup d'état executed by the military junta resulted in nearly 17 years of dictatorship, the longest in Latin America in that period. During these years, the neoliberal politics of the regime caused profound changes in diverse spheres and deeply shaped Chilean society in its present form. The variety of measures adopted during that period is frequently referred to as the “Washington Consensus”, a model that would achieve decisive influence in the region.

Regarding the labor market situation, a first line of action was the immediate repression of unions and the abolition of collective bargaining. The pro-worker bias of the labor courts was removed along with automatic wage adjustment. While the governments prior to the coup had promoted the unions' bargaining power, the coup and the following years marked a pronounced change in attitude to the benefit of the employers.

The first years of the regime were characterized by the institution of military power, reflected predominantly in the repression of political opponents and in various decrees that defined the regime's posture towards central issues as for example the relation between capital and labor. De facto, most of the labor legislation in favor of the unions was abolished right from the beginning of the dictatorship. However, only in 1979, a policy package baptized as the Labor Plan (*plan laboral*) made the corresponding changes to the official legislation. The reasons for the delay of this reform are seen as twofold: On the one hand, the economic crisis that erupted in 1975 required any available effort to combat booming unemployment and led to a delay of long-term policy planning, as emergency employment programs were the government's first response to the crisis. On the other hand, the regime found itself in the dilemma between aiming at reducing workers' rights to the least possible minimum and at the same time depending on them in order to ensure production. As a consequence, it was necessary to find a compromise between repression and conceding at least apparently to the expression of resentment (Sehnbruch 2006: 56).

The importance of the infamous “Chicago boys” cannot be overestimated in this transformation. It denominates a group of Chilean academics that, in the framework of an agreement with the University of Chicago, undertook their postgraduate studies in economics there and at other prestigious US universities and returned impregnated with ideas of neo-liberal policy reform. Among them, José Piñera assumed a particular position as the minister of labor and social security since 1978. Under his leadership, the mentioned Labor Plan was implemented, that comprised the following main elements:

- The Immobility law, which was the strongest representative of union power, was abolished, and dismissal without an express cause was facilitated
- Unions were allowed to resume their activities, but under extremely modified conditions (e.g. voluntary membership, negotiation on company level, restriction of strike activity to 60 days, possibility of replacement of workers on strike)

As a consequence, employers' liberty to hire and fire at will was greatly increased. Although unions could return to their work, their power was heavily limited and participation was much lower (about 12% of the workforce). It has to be pointed out that a significant limitation of the unions' activities was not only established by their direct repression, but also by the limitation of the aspects of the employment relationship that could be negotiated between employers and unions. This regulation remains a controversial subject in labor legislation up to this day (Espinosa 2005).

In 1982, additional measures were taken in order to liberalize the labor market, as automatic wage adjustment for the private sector was abolished. Thereupon, wages declined significantly, with similar changes happening in the public sector as wages and minimum wages were maintained at the lowest possible level.

One of the most important features of the regime's policy package was undoubtedly the pension reform, designed and implemented by José Piñera. The reform led to the installation of an individual savings account system administered by private agencies, the AFP (*Administradora de Fondos de Pensiones*). It established contribution of 12% of the workers' wages while at the same time reducing non-wage labor costs for employers (the only required contribution of the employer remained 0.3% for a security against accidents at work).

Thus, Chile was the first country to privatize its pension system, along with other policies that were clearly focused on introducing market mechanisms such as competition and selection in social security (in analogy to the pension system reform, the health and educational systems were also privatized in that time). In the 90s, several Latin American countries would follow Chile's example, albeit not to the same extent. It has to be considered that, in the Chilean case, the magnitude of changes was possible due to the authoritarian conditions in which they were implemented (Larrañaga 2010: 186).

In 1982, a second crisis severely affected the labor market situation when unemployment reached up to 30% (Sehnbruch 2006). Similarly to the first crisis in 1975, the government adopted emergency employment measures in order to keep down the unemployment rate; however, these programs were characterized by poor working conditions and the remitted wages were not even close to keeping a family out of poverty (ibid).

In contrast to the corporatist model that arranged distribution according to occupational groups, Pinochet's model of a residual welfare state regarded the state as responsible for providing only the absolute minimum. As a consequence, social policy that was developed aimed only at the very poorest population groups. The CASEN survey originated from this approach as an instrument designed to observe how well the instituted benefits were able to reach this population. The above mentioned reforms are representative for a greater shift of paradigm that took place during these years, "from identification with collective projects of social change towards projects of mobility based on personal effort"<sup>1</sup> (Larrañaga 2010: 192).

Economic development was positive over the total period, which is not surprising regarding the fact that most of the regime's policy making aimed at facilitating entrepreneurial activity and economic growth. Inflation was brought under control and unemployment decreased continuously from 1984 on. However, the two economic crises that occurred during the regime's administration left their mark, with an average growth of GDP much lower than in the following decade. The social situation that was inherited to the succeeding government was characterized through high levels of poverty (around 45%) and inequality and disproportionately low wage levels (Foxley 1993; Huneus 2003; Sehnbruch 2006).

### 2.1.3. Transition to Democracy

In 1988, following increased international pressure, the regime accepted to hold a plebiscite that would either extend Pinochet's regime for 8 more years or lead to democratic elections. The vote resulted in a - for many unexpected - victory of democracy, and in the elections held in 1989, Patricio Aylwin of the "Concertación de Partidos por la Democracia"<sup>2</sup> was designated the first president after return to democracy.

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<sup>1</sup> *"desde una identificación por proyectos colectivos de cambio social hacia proyectos de movilidad basados en el esfuerzo personal."*

<sup>2</sup> An association of center-left parties made up of the Partido Demócrata Cristiano, Partido Socialista, Partido por la Democracia and the Partido Radical Social Demócrata. An important change to the constitution in 1980 (which remains a disputed issue up to this day) was the introduction of a binomial voting system that favors the formation of coalitions between parties.

An important point to consider is that the change in the form of government from the transition to democracy on did not result in a comprehensive reform of the social or economic model; it is rather considered to have taken on a “softer edge” (Riesco 2009b: 284). The governments of the 90s are characterized by their emphasis on consensual politics. Their foundation was laid in the “negotiated” transition to democracy that allowed for the armed forces to maintain a considerable portion of power, and Pinochet himself was designated senator for life.

Based on this determination for consensuality, a tripartite agreement was reached in 1991 between the government, the entrepreneurs’ organization (CPC) and the Central Organization of Chilean Workers (CUT), which primarily stands out for its symbolic value as a declaration of good intentions by the involved parties. It has to be taken into account that the view of the Pinochet regime remains a highly important factor in Chilean politics along which a large part of opinions are aligned. In the period leading up to the agreement, according to Sehnbruch (2006: 60) the predominant attitudes were as follows: “They [the workers’ unions] (...) hoped that a return to democracy would restore their former rights (...) This contrasts with the attitude of business, which generally supported Pinochet and did not really desire a return to democracy.”

As a result, the task of reaching a consensus between the involved parties was highly complicated. The labor reform, which was one of the declared priorities of the democratic government, was finally unable to bring about changes regarding central issues such as the right to sector-wide collective bargaining or strike regulation. Sector-wide collective bargaining was linked to the condition that all parties agree, which practically never happens. The ceiling for severance pay was raised, but at the same time the possibilities for employers to dismiss workers continued for the most part as before.

Repeated attempts of labor reforms were then undertaken by Eduardo Frei<sup>3</sup> and Ricardo Lagos<sup>4</sup>. While reform plans of Eduardo Frei finally failed to obtain approval in the Congress, Ricardo Lagos would only be successful after considerably downsizing the scope of the reform. The final version that ultimately came to pass included the reduction of the working week from 48 to 45 hours and a range of flexibilizing elements. Part-time work was facilitated, and polyfunctionality of workers was introduced, i.e. one employee could be appointed to different duties. In addition, a new form of work, “teletrabajo”, was created that enabled work over distance, connecting employer and employee over internet or telephone.

As will be demonstrated, Lagos’ administration set another important measure which was the extension of compulsory education to secondary schooling level. The discussion on the educational system would gain momentum in later years, of which this measure constituted only a first step. However, it reflects the general development of continuous increase of Chileans who would count with access to secondary and higher education.

Another important feature of Lagos’ mandate constitutes the introduction of unemployment insurance, based on individual savings. As the first of its kind in Latin America, it was often regarded as a model for other countries in the region. However, the program depends highly on the type of contract held before becoming unemployed, leaving out the self-employed and informal workers and disadvantaging fixed-term contracts. Consequently, it was shown to have serious fallacies in terms of protecting vulnerable groups that are most likely to become unemployed (Sehnbruch 2004).

In the tug-of-war for labor market reform, the antagonistic dynamic between employers and unions has remained. On the one side, the business sector maintains close bonds to the political right, campaigns for more flexibility and deregulation and resists any measure to strengthen the position of the unions. On the other side, unions remain skeptical towards the economic model and repeatedly call into question its legitimacy. The situation has led to an impasse that clearly favors the employers’ situation. The unionization and collective bargaining rates reflect this issue. In the past decades since the transition to democracy, unions never managed to regain their strength. Unionization and collective bargaining rates

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<sup>3</sup> President of Chile from 1994 to 2000, Partido Demócrata Cristiano

<sup>4</sup> President of Chile from 2000 to 2006, Partido por la Democracia

recovered slightly after the transition, but they declined continuously until 2000. Since then, they have remained at about 11% (Riesco 2009b; CEPAL 2011). The permanent “crisis” of the Chilean unions (Salinero 2006) is seen as a clear indicator for the persistence of the neoliberal model and the continuing concentration of power on the employers’ side.

However, during the government of Michelle Bachelet<sup>5</sup>, activity on the part of the unions gained a new dynamic. In 2006, a law to protect subcontracted workers was passed, which should prevent companies from stealing away from their responsibilities to subcontracted workers. A particular role in this respect has to be accredited to the subcontracted workers in the forestry and mining sector, as they successfully organized strikes in order to protest against their continuous discrimination in comparison to plant workers. These incidents conferred new strength to the CUT as a whole and also led other actors such as a representative of the Catholic Church to speak up in favor of raising workers’ wages (Sehnbruch 2009: 13).

Another earmark of the Bachelet administration was the introduction of a basic universal pension when faced with the fact that large parts of the population (about half) that had changed to the individual savings account system were not able to reach the necessary minimum of contributions to receive a pension. This measure was seen as “a major correction for a system that was held as the model for the region” (Fraile 2009: 226).

From 2006 on, social mobilization increased significantly, not only among workers, but particularly among secondary and university students, which culminated in massive protests and strikes in 2011. Accordingly, the mandate of Sebastián Piñera<sup>6</sup> to this date has been characterized by a fierce discussion about the educational system and ways to finance a public educational system. This has resulted in a recently approved tax reform which however seems to have caused more resentment than approval among student leaders and parts of the opposition, as it is seen to not go far enough in order to ensure adequate funding for the educational system.

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<sup>5</sup> President of Chile 2006-2010, Partido Socialista; Her father was tortured and died in prison during the Pinochet regime, while she was also imprisoned and spent 4 years in exile. On her return, she engaged actively in diverse movements for democracy. This background is regarded as one of the reasons for her continuing popularity among Chileans. She was recently re-elected as the candidate of the coalition of left-wing parties for the presidential elections in January 2014.

<sup>6</sup> President of Chile 2010 – present, Renovación Nacional (right-wing)

Another important incident that has shaped the government of the Alianza from the beginning was the organization of reconstruction work after the earthquake in February 2010. As a consequence, it seems that labor market issues have not ranked under the priorities of the Piñera government. However, their program concerning labor market policy promised the creation of 1 million jobs and the promotion of women's participation in the labor market.

So far, the development of Chilean labor market policy in its historical context has been described. It remains clear that the country has undergone profound transformations on the political as well as on the economic and social level. Many of the described issues continue to constitute controversial subjects of public debate up to this day, such as the binomial election system, the privatized educational system, or – in direct connection to labor market issues – the unions' position and workers' rights. In the following section, the objective is to shed light on the consequences of implemented policies for the structure and dynamic of the Chilean labor market as of today.

## **2.2. The Chilean Labor Market at the Beginning of the 21<sup>st</sup> Century**

There is a range of indicators that can give an idea of the conditions on the Chilean labor market today. Most of them have only become available since the implementation of the CASEN, that is, from the end of the 1980s. For some indicators, more detailed information on its measurement is required as internationally diverging methods in measurement exist. With the objective to provide an overview of the labor market situation in Chile, in the following the focus will be put on demographic characteristics, some economic indicators and features of the labor market structure<sup>7</sup>.

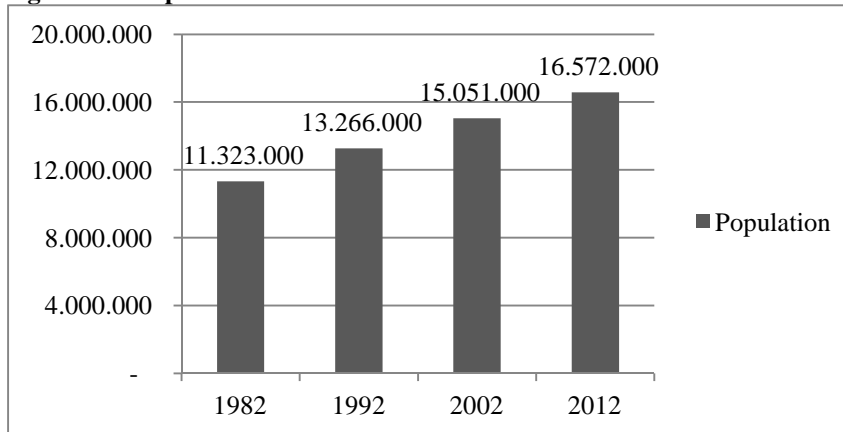
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<sup>7</sup> Inevitably, only a selection of indicators can be discussed. For further information, see either ECLAC (2011, 2012), OIT (2011) or OECD (2009).



### 2.2.1. Demographic Development

**Figure 2.1: Population Growth 1982-2012**



Source: INE (2012)

As can be appreciated in the graph, population growth was stronger in the 1980s and has slowed down continuously since then. This deceleration of population growth is closely linked with a continuous decline in fertility rates. In this regard, Chile follows a common pattern with other Latin American countries, as show CELADE data. However, it is notable that the demographic transition in this period takes place on a lower level than in most of the other Latin American countries. Growth rate as well as fertility are already lower than the region's average and continue to decline over the period in question. This data indicates that demographic transition in Chile took place earlier than in the rest of the region. Not least this chronological offset must be viewed in relation with profound social transformations resulting from measures by the military regime, which came into power in Chile earlier than in other parts of the region.

**Table 2.2: Population Growth in Latin America and Chile**

	1980-1990*	1990-2000*	2000-2010*	2010-2015**
<i>Population growth rate</i>				
Chile	16,5	15,65	10,55	8,9
Latin America	20,1	16,35	12,45	11,5
<i>Fertility rate (births per woman)</i>				
Chile	2,66	2,38	1,97	1,89
Latin America	3,7	2,89	2,39	2,09

Source: CELADE (2009)

\* calculated average

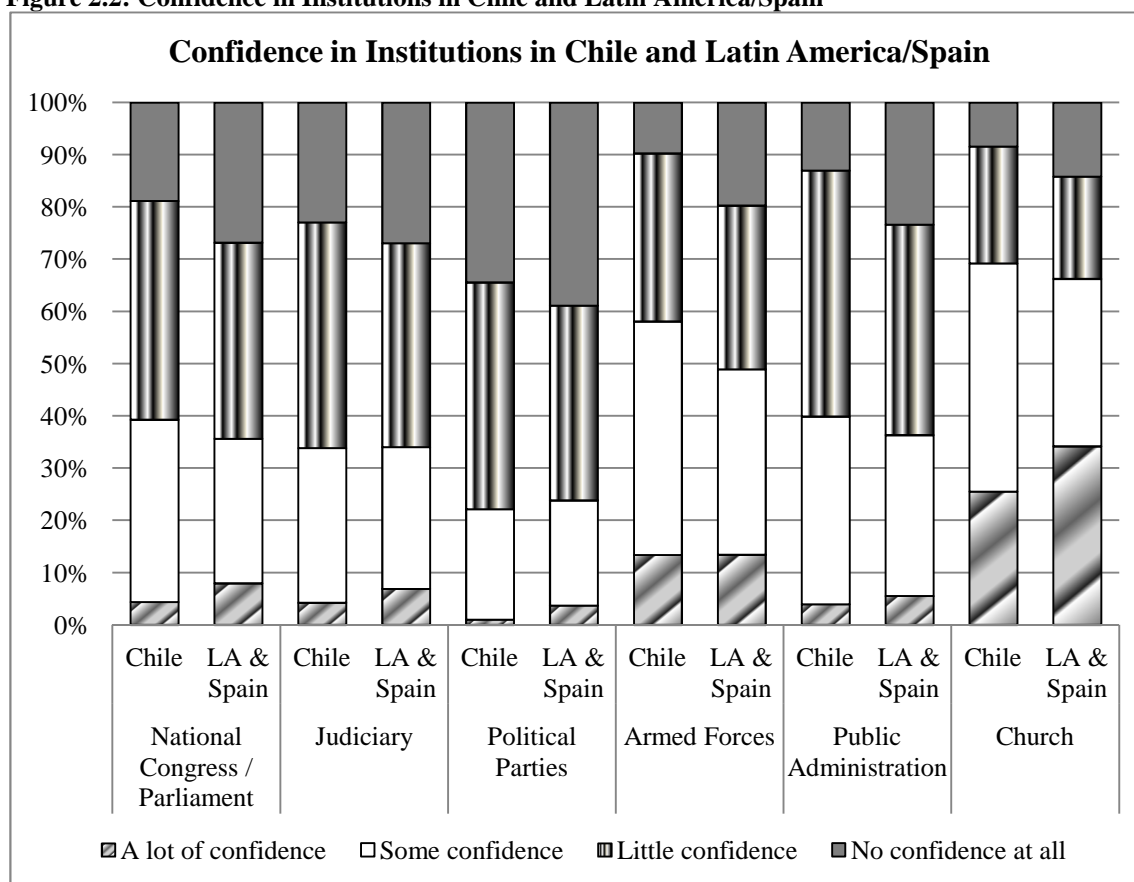
\*\*Projection

Demographic change implicates a variety of issues for Latin American labor markets, ranging from transforming family structures and related issues of care to a shift in the age structure of the workforce. An important point in this context is also the growth of opportunities for women to participate in the labor market, as the share of the dependent population is reduced, simultaneous to an increase in the share of the productive population (ECLAC 2012).

### 2.2.2. Legitimacy of the Chilean State

For the Chilean case, it was shown that the institutional structure experienced profound changes in the last decades. The perception of the state by the population constitutes a particularly relevant aspect when it comes to the extent of informality (Portes/ Haller 2005). The here presented information is focused on the legitimacy of the structures that have developed over the years as described above. While the perception of the state will not be an explicit object in the empirical study, it does constitute an important influence that should be kept in mind when considering other influences on informality.

**Figure 2.2: Confidence in Institutions in Chile and Latin America/Spain**



Source: *Latinobarómetro (2009), author's calculations*

One way to approximate the legitimacy of state institutions is to analyze surveys that focus on issues such as the population's trust in public institutions. For this purpose, the "Latinobarómetro" survey yields useful information. In a region-wide inquiry, data on the barometer of public opinion is obtained in yearly intervals. In spite of its methodological limitations<sup>8</sup>, the survey provides anecdotic evidence of the extremely low levels of trust in public institutions throughout the region (ECLAC 2007). By means of an example, the presented chart illustrates levels of confidence in public institutions throughout Chile and the rest of Latin America in comparison.

In a broad sense, Chilean data is consistent to the region-wide trend of low trust in public institutions, with a slight tendency to more moderate opinions (some/little confidence). Political parties are less trusted of all listed institutions, only slightly more than 20% of the population expressed at least some confidence in them. Remarkably, those institutions that people are most confident about are the military and the church. About 70% of Chileans expressed their confidence in the church, and nearly 60% in the military. That is, those institutions that are less related to a functioning democracy (as illustrated through the military coup) enjoy clearly higher trust among the population than state institutions.

Although the analyzed variable only captures a very general opinion towards public institutions, data on the perception of justice confirms these findings. This includes extremely low confidence in the efficiency of the judicial system and the perception that people are not equal before the law. Remarkably, those low levels of confidence are consistent across age, education level and socio-economic origin (ECLAC 2007).

### **2.2.3. Economic context**

The following economic indicators (see table below) give an idea about the state of economic development in Chile and draw a clear picture of the economic ups and downs that occurred in the region since 1990. The growth in GDP per capita during the 1990s is a sign of the considerable economic expansion that Chile experienced in that period. While the country started off with a GDP per capita slightly beneath the Latin American average, it was wide ahead of most other countries in the region at the end of the decade.

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<sup>8</sup> For a more detailed discussion, see ECLAC (2007) or [www.latinobarometro.org](http://www.latinobarometro.org).

The only year to record a decline was in 2009 as a result of the economic crisis that hit diverse countries across the globe and also Latin America. However, it is likely that between 1999 and 2002 something similar occurred, as the region was also highly affected by the Asian crisis at that time. Over the period of three years, the recession is reflected in a slowdown of average GDP growth to 1%, which still denotes a better performance than the regional economy that experienced an average decline of 0,9%. Regarding the crisis in 2008/09, a detraction of GDP followed suit, leaving Chile with a slightly less dramatic detraction of the economy than other Latin American countries. However, the Latin American economies recovered quickly and returned to the pattern of growth in the following year.

As a consequence from the crisis in 1999 which strained public finances and led the government to resort again to emergency employment programs, the “Fiscal Responsibility” law was proposed in 2001 and passed in 2006 with the aim of avoiding similar situations in the future. Under this name, a policy was established that stipulated fiscal saving and spending in dependence with the international copper price. In this context, it is important to consider that 16% of fiscal income is derived from the copper mining industry and the national company for copper mining, CODELCO. Given the high variability of the copper price, the Fiscal Responsibility Law implies that public finances are not based on the effective balance, but on the expected balance in the medium term. In simple terms, this policy entails “saving during economic highs, when revenues known to be of only a temporary nature are received, and spending the revenues in situations when fiscal income drops” (Rodríguez et al. 2007: 60). The law represents an important step to address the country’s dependence on international raw material prices.

The so-created Social and Economic Stabilization Fund seems to have made an impact in the 2008 crisis. Regarding the unemployment rate, the effects of both crises can be appreciated, as it peaks at the end of the 1990s and the 2000 decade. However, with economic growth soon back on track, unemployment has also declined steadily since then, not least because of stimulating measures by the government including public investment in infrastructure and CODELCO (ILO 2013a: 6).

Similar to labor market analyses in Europe, different forms of measurement of unemployment exist. While ECLAC data suggests an unemployment in 1999 of 10,1%, Sehnbruch (2006) found in her surveys at that time an unemployment rate as high as 15,4%. The official method to determine unemployment in Chile defines the unemployed as those who worked less than one hour in a remunerated activity in the week preceding the interview, have been actively

looking for a job in the last four weeks and are available to start working within the next two weeks. In order to be considered unemployed, and not inactive, it is also required to have worked before for at least a month (INE 2012b).

Particularly those who find themselves living under or close to the poverty line may not be able to afford the “luxury” of unemployment, as they depend on their income in order to make a living. Effectively, one view of the origins of informal work is that it arises in labor markets that do not provide sufficient formal employment (Perry et al. 2007; Tokman 2007). People who are excluded from formal work subsequently turn to informal work while “queuing” for formal jobs. This explains in part why the unemployment rate works as an orientation for the situation in the labor market, but in itself does not constitute an appropriate measure for labor market performance.

The minimum wage, regulated by law and adjusted annually, constitutes the issue of fierce discussions between the involved parties. In 2003, about 20% of the workforce received the minimum wage or less. For 2012, the minimum wage for a full time job (45 hours/week) was fixed at 192.000 Chilean pesos, which corresponds to about 290 Euros at a 2012 exchange rate.

**Table 2.3: Economic indicators in Chile and Latin America**

	1990	1999	2002	2008	2009	2010
<i>GDP per capita (in 2000 dollars)</i>						
Chile	3 927,8	6 051,3	6 443,9	7 980,5	7 769,6	8 095,7
Latin America	3 970,9	4 456,1	4 514,5	5 478,2	5 309,6	5 571,1
<i>Annual average variation, percent</i>						
		1990-1999				
Chile		4,9	1,0	2,6	-2,6	4,2
Latin America		1,3	-0,9	2,8	-3,1	4,8
<i>Unemployment, percent</i>						
Chile	7,8	10,1	9,8	7,8	9,7	8,2
Latin America		11	11,1	7,3	8,1	7,3
<i>Annual average variation of real urban minimum wage</i>						
		1990-1999				
Chile		5,5	2,9	-0,2	5,4	2,4

Source: ECLAC (2011)

A commonly known fact is the high level of inequality of income in Chilean society. The GINI indicator lies for Chile at about 0.51, an extremely high value even in comparison with other Latin American countries and very similar to Colombia (about 0.56) and Brazil (about 0.55) that have the highest scores for the index (Larrañaga 2009; World Bank 2010). If other measures are applied such as the income ratio of the richest decile to the lowest decile, Chile's position is about mid-range in Latin American comparison, at a score of between 25 and 30. In the US, this score lies at around 15, while for example in Austria or Norway the top decile has an income about 6 times as high as the bottom decile (OECD 2010).

#### **2.2.4. Poverty and Indigence**

Its success in the struggle against poverty is one of the reasons why Chile gained the reputation of the model student in the region, as poverty dropped from over 40% in 1988 to 15% in 2006. While the 1980s due to the economic crises are often referred to as the “lost decade” in this respect (as can be appreciated by the regional poverty levels), the following decades brought a significant decrease both in poverty and indigence (around 4% today). During just one decade, the country basically halved poverty and reduced even more drastically its indigence rate. The margin between Chile and the rest of the region has widened considerably for both figures.

Data published by the Ministry of Social Development shows a divergence from the ECLAC data: For 2009, poverty is defined at 15,1% and indigence at 3,7%, with a minimal change in 2011 (14,4% poverty and 2,8% indigence). The national indigence line is established calculating a basic food basket. The poverty line constitutes the indigence line multiplied by 2 for urban and by 1.75 for rural areas (ECLAC 2012: 44). In the Chilean case, the poverty line for 2009 was 64.134Ch\$ for urban areas and 43.242Ch\$ for rural areas, which corresponds to 135USD and 91USD respectively.

The data for the measurement of poverty is provided by the CASEN survey. When the government announced recent data on poverty extracted from the CASEN survey 2011 in September 2012, the often recurring debate on the measurement of poverty was revived. The government's announcements on the decrease of poverty were met with criticism, as the observed change was minimal and the method to calculate the basket of basic goods has not been changed since 1987. Thus, in general it has to be assumed that there has been hardly any

change in the poverty rate since 2009. An argument brought forward in the debate has been the possible introduction of a relative poverty line. If defined as those who have less than 60% of the national average income at their disposal, about a quarter of the population would be counted as poor (Sunkel/ Infante 2009: 134).

**Table 2.4: Poverty and Indigence in Chile and Latin America**

<i>Total of population under the poverty line, percent</i>	1980	1990	1999	2009	2010
Chile		38,6	21,7	11,7	
Latin America	40,5	48,4	43,8	33	31,4
<i>Total of population under the indigence line, percent</i>					
Chile		12,5	5,1	3,5	
Latin America	18,6	22,6	18,6	13,1	12,3

Source: ECLAC (2012)

## 2.2.5. Labor Market Structure

In a first approximation towards the labor market, it is important to take into account that a considerable part of the population will not be included directly in the analysis, as for example those too old or too young to participate in the labor market, or the economically inactive population. However, for the most part, those who do not participate in the labor market, in order to ensure their material wellbeing as well as regarding their social position will depend on another person who does. Under this perspective, the labor market maintains a decisive role for the population beyond the immediate relevance for the workforce (Sehnbruch 2006, Wormald/ Torche 2004).

An increment of the labor force participation rate in Chile during the past decade can be identified. It started off significantly lower than the regional average and gradually approached the 60% line. Data on labor force participation for the region shows that the rate has stayed more or less stable at this point in the past years.

**Table 2.5: Labor force participation rate in Latin America and Chile**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 <sup>9</sup>
<i>Labor force participation rate</i>											
Chile	53,9	53,7	54,4	55,0	55,6	54,8	54,9	56,0	55,9	58,5	59,8
Latin America <sup>10</sup>	58,4	58,6	59,5	59,6	59,2	59,5	59,6	59,7	59,7	60,0	59,9

Source: ILO (2011)

<sup>9</sup> Average January-October

<sup>10</sup> Data for urban areas

It has to be taken into consideration that the rate for female labor force participation remains much lower, according to recent data from the National Institute of Statistics at about 47,2% (trimester May-July 2012). This is one of the lowest levels in the region and is linked to a variety of issues. Traditional patterns of sexual division of labor are still ingrained in Chilean society and prevent women from participating in the labor market. The influence of paternalistic and catholic values that maintain the image of women as mothers and housewives has to be recognized (Contreras et al. 2013). Coupled with the absence of adequate and affordable childcare, to name just one example of institutional barriers, it becomes clear that gender inequality in the labor market functions on diverse levels (BM/ BID/ SERNAM 2007).

However, in part it seems that the expansion of the labor force benefits particularly women in their participation in the labor market. In comparison to data from 2009, a much stronger increase of participation of women can be identified than among men. While male participation in the labor market increased less than 2%, female participation grew over 4%.

**Table 2.6: Labor force participation rate in Chile according to sex**

<i>Labor force participation rate</i>	Male	Female	Total
Trimester January - March 2009	70,8	43,5	56,9
Trimester January - March 2012	72,5	47,7	59,9

*Source: INE (2012a)*

Undoubtedly, the enhanced participation of women in the labor market opens a variety of new opportunities and represents an important step in development. The augmented entry of women into the labor market brings along a broad range of issues to be considered, as its effects are felt far beyond the confinement of the labor market (Todaro/ Yañez 2004). Gender roles undergo transformations and the needs of working women gain increasing importance. In this context, it becomes particularly necessary to ask what kind of jobs these women who currently enter the workforce take on and how their labor relations are configured. Hence, gender issues constitute an important part of the discussion regarding labor market development.

For a better understanding of the Chilean labor market, it is fundamental not only to take a look at economic indicators and participation rates, but also at its composition. Changes in the occupational structure reflect transformations in the productive structure that took place over the years and coined Latin American societies in a very particular way. Analysis of the Latin American social structure gained momentum in the second half of the 20<sup>th</sup> century (Atria 2004; Filgueira 2001). It was found that similar tendencies of “early capitalist modernization”



as in the European context took place, however, with some Latin American peculiarities due to the productive model that involved a strong reliance on raw material exportation and belated and only partial industrialization. While consumption and lifestyles developed that corresponded to countries in plain industrialization process, the productive structure remained at a scarce level, leading to a paradoxical coexistence of “modern” and “traditional” structures.

The before mentioned model of industrialization via import substitution is of decisive importance regarding the occupational structure. The promotion of domestic manufacture and growing employment in the public sector led to a broad expansion of the wage-earning sectors, both among the urban industrial working class and among civil servants employed by the state (Filgueira 2001). Both trends succumbed after 1973 as the public sector experienced heavy downsizing measures and the domestic industry was faced with increased pressure from imported goods.

The following table by Torche and Wormald provide an overview of the development of the labor market structure from 1970 until 2000, which makes it possible to track the impact of the rupture in the productive process on the occupational structure. At a first glance, a reduction of the proportion of workers in agriculture is clearly observable since 1990. Other important tendencies are the decrease of the working class, particularly in the industrial sector, an ascent of employment in the tertiary sector and higher levels of employment in the private sector. These findings are in tune with the previously described policy of the regime to reduce public employment. The loss of public sector employment was compensated on the one hand through private sector salaried employment, on the other hand through small-scale independent productive units.

**Table 2.7: Occupational categories in the EGP Scheme 1971-2000**

Categories	1971	1980	1990	1995	2000
<b>I. Agriculture, fishing, hunting</b>	18,3	14,4	18,8	15	13,9
<b>II. Not agriculture</b>	81,7	85,6	81,2	85	86,1
<b>1. Employers</b>	1,3	1,4	3	2,7	2,4
<b>2. Middle classes</b>	26,2	33,5	31,3	36,2	37,2
a) Wage earners public sector	18,4	9	6,9	6,8	7,4
b) Wage earners private sector		15	18,2	21,3	21,6
c) Independent workers	7,8	9	6,3	8,1	8,2
<b>3. Traditional handicraft</b>	6,2	5,2	5,2	5,4	5,5
<b>4. Working class</b>	34,5	20,3	28	28,9	28,6
a) Mining industry	1,3	1,3	1	0,9	0
b) Industry and construction	25,8	11,1	12,1	13,1	12,2
c) Commerce and services	7,4	7,9	14,9	15	15,9
<b>5. Marginal groups</b>	9,6	10,4	12,5	11,2	11
a) Domestic workers	5,4	5,7	6,5	5,5	4,9
b) Marginal vendors	2	3	3,3	3,2	3,4
c) Marginal service workers	2,2	1,7	2,8	2,5	2,7
<b>III. Other</b>	3,9	14,7	1	0,6	1,4
Total	100	99,9	99,8	100	100

Source: Torche/Wormald (2004: 15)

In an effort to update Torche and Wormald's findings, Espinoza et al. (forthcoming) describe shift in the social structure from 2001 to 2009. They identify a growth in the "service class", consistent of owners and directors of large and medium enterprises, professionals and other accommodated groups. Their main finding is that the tertiarization of the workforce remains low in comparison (about a third of the population) and that Chile's social structure corresponds to the "social pyramid" (large working class, limited middle sector and small upper class) typical for Latin American societies.

The presented data indicates some fundamental differences that are characteristic for Latin American labor markets. On the one hand, due to transformations in the economic model, private sector employment is of higher importance than public sector employment. On the other hand, the share of workers who find themselves outside of labor market regulations is higher, resulting from the higher share of self employed workers as well as the higher share of wage earners whose employment relationship does not comply with given regulations (Torche 2006). While informal (sector) employment will be dealt with in more detail in later chapters, the following section points to a particular phenomenon on the Chilean labor market that will be of importance to this thesis.

### Employment in the “Grey Zone”: Honorary Contracts

A particular case in the context of informal employment are workers employed on “honorary contracts” (*boleta a honorarios*). These honorary contracts do not constitute an employment relationship per se as they are designated for independent workers who deliver services, as for example electricians. As such, they are not regulated in the Chilean labor code, given that their relationship is not considered as an employment relationship but a commercial relationship. The consequences of this classification are manifold. Mainly, it implies that workers’ rights as defined in the labor code, for example regarding leave entitlements or severance payments, do not apply in this case. Instead, any contract is based to a much higher extent on the arrangements as negotiated between the contracting parties (Dirección del Trabajo 2013).

A decisive feature of this form of contracting is that it is not linked to any obligations regarding social security. However, this gap is currently under revision and is planned to be closed by the Chilean government through a new law (Ley 20.255) that, beginning in 2012, gradually introduces obligatory contributions to retirement pension, work accident insurance and health insurance until 2018.

Honorary contracts have become a popular instrument to circumvent labor costs (that are generally already at an extremely low level anyway). Originally designed for independent workers, this form of contracting has become increasingly applied for workers who find themselves basically in a subordinate employment relationship, complying with a defined time schedule at a defined workplace etc. While grey zone employment is estimated at about 4% of the employed workforce (Leiva 2012: 200), it is considered an important component indicative of a transforming labor market (Mauro/ Yáñez 2005). Honorary contracts in wage employment are found particularly among professional categories such as doctors or teachers, but also in public administration. Honorary contracts exemplify a problem of increasing importance that concerns the growing difficulty to determine the levels of autonomy and subordination of workers (Leiva 2012)<sup>11</sup>.

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<sup>11</sup> The Sol Foundation, a Chilean research institute on labor market issues, publishes on a regular basis the percentage of wage earners who do not count with payroll employment, a percentage that has held between 15% and 20% in the past years (Sol Foundation 2013).

### **2.3. Conclusion**

Chile has experienced a series of profound changes that range from violent political upheavals that have “divided” the country to profound shifts in the productive structure. Not least the plan laboral and its consequences for the labor legislation constituted a significant rupture in Chilean labor market policy. Skyrocketing unemployment rates in the 1980s that triggered the largest emergency employment program in Chilean history contrast with the Chilean labor market today which in times of struggling European and US labor markets exhibits decreasing unemployment rates and continuous economic growth. Against the background of strong economic growth in the 1990s and with some disruptions also in the following decade, poverty levels were reduced decisively and GDP per capita reached about 15.000\$ in purchasing power parities. Salient features of the Chilean labor market include a growing participation rate especially for women and a gradual tertiarization of occupations. However, strong inequalities persist, expressed both in the inequality of income and in the lack of opportunities of occupational mobility to higher positions in the hierarchy.

The past decades marked various changes in regard to the labor market that brought Chile in a clearly favorable position relative to the rest of the region. At the same time, problems persist that are issues of academic and public discussion such as the stagnating reduction of poverty levels, continuing high inequalities or the lack of power of labor unions. These are important aspects to be kept in mind when studying employment relations in Chile.

### 3. INFORMALITY OF EMPLOYMENT

*“If you don’t have a contract, you don’t have any security about your job. And that gives you dissatisfaction, frustration and insecurity... You don’t know if you will be able to work or not the following day.”*

-Market vendor, former employer

*“Basically, I don’t ask the government for anything. They haven’t given me anything either. (...) As I don’t ask for anything, they shouldn’t ask me for anything either.”*

-Artisan on Santiago’s main street

The preceding excerpts from interviews already give a hint on the controversy that governs to a large extent the discussion on informality. Both positions are reflected in the literature and will be elaborated on in this section. Furthermore, the conceptual framework for the following empirical analysis will be provided. The following excursion includes a discussion of the terms “work” and “employment”, a necessary step that sets the basis for the following delimitation of the population to be analyzed. Subsequently, the discussion on (in-)formality of employment will be addressed.

The outlined approaches are based on different perspectives that determine the conceptualizations of informality. However, they do not represent independent “theories of informality”. In this context, it should be kept in mind that the discussion on informality has been guided predominantly by the results of empirical research on the phenomenon (Portes/Haller 2005). Given the heterogeneity of informality, a diversity of competing concepts and associated terms have developed, which all have their place when it comes to explain different aspects of the phenomenon. By discussing the most relevant conceptualizations regarding informality, always maintaining a particular focus on Latin America, its ambiguity and complexity will be highlighted and problems regarding its analysis will be outlined.

The following conceptualizations of informality that will be presented do not necessarily correspond to the definition of informality which will be employed in the empirical analysis. However, their reconstruction is crucial in order to understand the origin of the informality debate and how different conceptions of informality have developed.

### **3.1. Excursion: “Work” and “Employment” as Sociological Categories**

The German term “Arbeit”, just as its English equivalent “work” or the Spanish “trabajo”, encompasses a broad range of activities. As a central aspect in human life that is essential for shaping our identity, work constitutes a matter of interdisciplinary analysis that has drawn the attention of scholars from almost any field, from as early on as in ancient Greece. All the more it is important to determine the sociological perspective from which this subject will be addressed (Pettinger et al. 2005; Voss 2010).

The concept of work has escorted sociology from its beginnings when Marx turned it, in opposition to capital, into one of the determinants of the structure of society. In fact, in the context of sociology of work Marx constitutes an inevitable basis. But when writing about work, Marx actually had a very philosophical category in mind. According to his view, work implies human interaction with nature and the human’s capacity to plan and implement action upon the surrounding environment. Work follows a particular purpose and can be distinguished from animalistic work, as human work involves conscience. Other aspects of work are its utility and its consequence of human self-development.

This only very short outline indeed follows the only intention to point out that one of the founders of sociology of work had a much broader category in mind than the concept that became dominant in the 20<sup>th</sup> century (Voss 2010). The famous contrast of work and capital constitutes then a result of the application of the term to his contemporary society, but is not defined as constitutive to Marx’s concept of work.

While sociologists emphasized different aspects according to the national context, the development of sociology in the post-war period was deeply linked to the study of work itself. Under the label of “industrial sociology”, studies were principally focused on male formal income-generating activities in capitalist organizations (Halford/Strangleman 2009; Voss 2010). An important point to consider is that in this respect, the focus of academic attention reflects the understanding of work in a society itself (Voss 2010).

Based on the diagnosis that this concept of work is no longer able to explain the processes of diversification taking place in reality, the demand for an extension of the concept grew. Since the understanding of work as a whole experienced transformations, the narrow conceptualization of work was increasingly criticized. Ann Oakley's "Sociology of Housework" introduces the discussion on the status of housework and brings forward a more general critique regarding the neglect of women's work both inside and outside of the employment relationship (Halford/ Strangleman, 2009).

The feminist critiques can be seen as symptomatic for a growing focus on work that takes place outside of the before mentioned "standard employment relationship". The mentioned conceptual extension of sociology of work beyond the standard employment relationship led to the discussion what remains the essential common characteristic of different forms of work. As will be addressed in more detail later on, the concept of the informal economy or informal employment triggered a very similar discussion concerning the question how to differentiate between informal work and activities that are not counted as work.

For this thesis, it is essential to distinguish work from employment ("Beschäftigung"/"empleo"). The basic mode of distinction between both terms is that employment constitutes an income-generating activity, as defined by Jary and Jary (1995: 196): "any activity engaged in for wages or salary". Thus, the moment when work is carried out in exchange for a certain price, we speak of employment. Although a widely recognized distinction among labor market analysts, this distinction undoubtedly bears its difficulties, particularly in the Latin American context. For example, it has become a very common approach to include the category of unpaid family members among the occupational categories, which implies their inclusion in the employed population, although they do not receive direct payment for their work.

The traditionally lower rate of labor force participation in Latin America suggests that a decisive part of the population (particularly women, as was demonstrated earlier) engages in activities that do not fall under the category of employment but nonetheless are counted as work (reproductive work, household chores etc.). While these findings may lead to the conclusion that for a considerable part of the population, participation in employment is not a decisive factor, it must be emphasized (again) that the Chilean population is highly dependent on income generated from employment, as 82,2% of the population's income is derived from employment (Wormald/ Torche 2004). This makes employment an essential resource in order to access income and material wellbeing and thus defines the life chances of the majority of the population. Traditionally, employment issues also range highest among the population's concerns and induce politicians to address the topic again and again (Sehnbruch 2006, 2009).

In the moment when we focus on employment, as defined as work in exchange for wages or salary, the analogy to markets as analyzed in economic models is very suggestive. Basically, a supply and demand side can be identified that find their equilibrium through the allocation of wages. From this perspective, the labor market model seems all too familiar to other commodity markets. However, it has been made clear that a diversity of forces is present on the labor market that calls into question this analogy. Even in Chile, one of the countries that most promoted free-market dynamics since the 1970s, there are serious limitations to this model. However, the denomination of "labor market" prevails for the totality of the population engaged in income-generating activities.

But independently from the perspective of employment as an income-generating activity, it has been found that employment at the same time fulfils a non-monetary function. Inter alia, employment enables social participation. Employment is also linked to social norms whose neglect results in negative consequences (Kurz-Scherf 2004). As such, it is not surprising when Torche and Wormald (2004) found that 72,4% of the employed Chileans would continue in their employment even if they had the money to leave it. Thus, while the income-generating characteristic of employment is certainly an important one, it remains clear that the effects of employment and employment conditions on society are much more diverse than that.

It becomes clear that, while work and employment constitute essential mechanisms for the organization of society and reflect changes that take place on a more general level, it is also a highly complex matter. Informality constitutes one of its facets that defies simple explanations. It will be studied more closely in the following.



### **3.2. Informality: Origins and Development of its Conceptualizations**

#### **3.2.1. The Informal Sector in Urban Africa**

Purportedly, the concept of the informal sector was developed in the 1970s in the course of various studies that focused on employment in urban Africa. These include a study of the urban labor market in Ghana by Keith Hart, an English anthropologist, and the report of the Kenya mission of the ILO in 1972 (Portes and Haller, 2005; Perry et al., 2007). In his analysis of informal income opportunities in an urban area in Ghana, Hart anticipated a variety of issues that would become relevant for research on informal employment in the following decades, which is why his research is dealt with in more detail here.

A preoccupation of research at that time was the increased urban population that resulted from industrialization processes and rural-urban migration in developing regions. The resulting surplus of unqualified labor was viewed as the “marginal masses”, living in the urban periphery, unable to become integrated in the urban labor market. Significant issues at that time were strategies of the “urban poor” to adapt and survive in the new environment. In this respect, it is possible to observe a tension between this “deficiency” view and those studies that emphasized the innovative and adaptive potential of the informal sector.

Hart (1973) based his studies of informal income opportunities on the observation that unemployment constituted an extremely uncommon phenomenon in urban Ghana. Instead, workers engaged in a variety of income-generating activities, often in addition to a regular wage earning job, in order to make ends meet. As the underlying motive for these informal activities, Hart identified inadequate income derived from the average formal wage earning opportunities.

Similar to other efforts in research to develop a typology of informal activities, Hart distinguished formal from informal income opportunities and elaborated on different forms of informal employment. While formal activities were mainly related to public and private sector wage employment, informal activities were seen as predominantly self-employed, although Hart recognized that informal wage employment also existed.

Informal activities were divided in legitimate and illegitimate activities, understanding as illegitimate the provision of goods and services defined as criminal by the law (in this case, Ghanaian law). Among legitimate informal activities, workers engage in primary and secondary activities such as farming or the manufacturing of goods. The skills and the capital

inputs required are highly dependent on the type of activity. In the service sector, Hart identified as a predominant element trade activities, both the distribution of goods and the intermediation between business partners. Other services would involve housing or repair services and also entertainment or religious services. Many of these activities were found to be realized in combination with a formal income-generating activity. Other forms of informal income also considered are transfers from relatives or friends and begging.

On the other hand, illegitimate informal activities include for example smuggling, theft or burglary. Particularly among women, he identified prostitution as an illegitimate (since illegal) informal income-generating activity. Also, confidence tricksters, money lenders at usurious rates and recipients of bribes are counted in this category. The classification of a person to either legitimate or illegitimate informal activities is often not that clear as a person can switch between both categories (and also between formal and informal activities) in a very short time and generate income from activities from several categories.

Hart describes the informal sector as highly dynamic and as including highly heterogeneous activities. It comprehends all kinds of income-generating activities that workers engage in as a strategy of adaptation and compensation of low or missing income. Regarding the entry barriers to different forms of informal employment, various potential barriers are identified. These can involve the requirement of particular skills (including, but not limited to, literacy or technical and management skills), a sufficient amount of capital or possibly a position of power, in the case of receiving bribes.

Also, the income generated in informal activities is found as highly variable and not necessarily related to the time spent working. At the same time, instability of employment and of the generated income is highlighted, which leads workers to engage in several activities at once, following a strategy of risk diversification. Similarly, informal activities function as a buffer during (formal) unemployment spells as they potentially substitute the lost income.

While very different in scope and methodology, Hart's position found itself in line with the famous ILO report on Kenya in various respects. The ILO report drew attention to the importance of the informal sector in urban labor markets in Africa and transformed the informal sector into an issue on the international development agenda. A shift of the view that focused exclusively on the formally employed and the unemployed was suggested. In contrast to developed countries, it was argued that in developing labor markets most of those traditionally seen as "unemployed" are actually engaged in informal income generating activities. This finding should have far-reaching consequences for the conceptualization of research on labor markets in developing countries, also in other regions such as Latin America.

### **3.2.2. The Discussion on Informality in Latin America**

Around the same time that the informal sector became an object of investigation regarding urban labor markets in Africa, literature on the issue also began to develop in Latin America. This development was decisively influenced by the ILO and its report on Kenya and promoted by the Regional Programme for Employment of Latin America and the Caribbean (PREALC) that later was integrated in the Economic Commission for Latin America and the Caribbean (ECLAC).

Similar to the African case, the urban informal sector was explained by the growth of the urban population resulting from rural-urban migration. In this context, attention was drawn to the distinction of a "modern" urban sector and a "traditional" sector formed by individuals of rural origin who maintain traditional values. In other cases, the informal sector was visualized as consisting of "marginal" activities; marginal in regard to modernization and the capitalist mode of accumulation, but also in terms of use of technology (Cortés 2000). The view of the informal as a poor and disadvantaged group became more prominent as more studies in this area were conducted. These studies localized informality not only at the geographical margins of urban areas, but described them also as excluded in social, cultural, economic and political terms (Portes/ Haller 2005). Two contributions will be dealt with in more detail as they represent different approaches towards the issue that have been of high influence. This includes on the one hand the work of Hernando de Soto and on the other hand of Alejandro Portes and colleagues.

### 3.2.2.1. The Revolutionary Potential of the Informal Sector: Hernando de Soto

Hernando de Soto is a Peruvian economist who played a major role in the discussion on the informal sector in Latin America. As one of the founders of the Institute for Liberty and Democracy (ILD), de Soto's position is best defined as one in favor of liberal market democracy. Intellectual precursors of the ILD include Milton Friedman and Friedrich Hayek. *The Other Path* (first published in Spanish in 1986), a study on informal settlement, trade and transport in Peru turned into a seminal work on the informal sector in general. Main ideas of the book are based on the results of an extensive survey conducted among street vendors in Lima.

Against the backdrop of increased rural-urban migration in Peru, de Soto describes in *The Other Path* how those arriving in the city – which in most cases meant the capital Lima – were met with practically insurmountable legal barriers that would keep them from building up a new existence. The Peruvian state is characterized as “mercantilist”, given its excessive regulations and authoritative policymaking that prevent the free development of private formal enterprises and foster corruption. As a consequence, a great part of the population is forced to develop its economic activities outside of this strict legal framework. The resulting difficulties affect all spheres of life and become eminent regarding aspects such as housing, transport and work. According to his study, informality thus is not just a feature of the employment relationship, but is regarded as characteristic for the entire existence of a particular group of the population in the context of rural-urban migration.

The exclusion of the “informals” from key services and legal protection leads to alternative forms of organization that may adopt some of the existing rules but may also work quite differently regarding other aspects: “Consisting essentially of informal customary law and of rules borrowed from the official legal system when these are of use to informals, the system of extralegal norms is called on to govern life in the informal settlements when the law is absent or deficient. It is the ‘law’ that has been created by informals to regulate and order their lives and transactions and, as such, is socially relevant.” (de Soto 1989: 19).

As migration to the city continues, the share of the informals becomes larger and larger. As a growing number of people do not follow the established – rigid – rules, the authority of public institutions is undermined and political instability is increased. This eventually forces those in power to adapt existing rules to the changing reality, according to the principle that rules that are complied with by a shrinking number of people eventually lose their validity. For de Soto, this “revolutionary force” of the informals is also reflected in profound changes such as England’s transition to a market economy in the 19<sup>th</sup> century or, more radically, in the French revolution.

De Soto strongly criticizes the importance conveyed to the state in organizing Latin American economies. The growth of the informal sector is interpreted as a possibility to bring about changes in the mercantilist system that supposedly continues in place in countries such as Peru. De Soto’s ideas are characteristic for a trend at this time among economists later labeled as “neoliberal” to argue in favor of less state intervention and a free play of market forces as epitomized by the informals. Consequences of neoliberal systems such as the one imposed during the military regime in Chile have led to increasing critiques of this approach, for example regarding their ability to tackle poverty and inequality.

However, “The Other Path” remains a valuable resource due to its in-depth survey of living conditions of the informals. An important insight constitutes that informality results inter alia from unrealistic forms of state regulation, causing the development of a “parallel universe” that may eventually lead to an overthrow of existing structures. This parallel universe is constituted by those denied participation in the dominant legal system, or who may outright decide not to form part of it.

### 3.2.2.2. The Regulation Perspective: Alejandro Portes et al.

#### The Central Role of State Regulations

In further research, systematization of the mounting literature regarding informal activities became essential. An important advance in the conceptualization of informality constitutes the work of Alejandro Portes et al. (1989), which gave rise to the “regulation perspective” on informal activities. According to this approach, institutional regulation plays a fundamental role in the characterization of informal activities, as the authors emphasized in the suggested definition: “The informal economy is ... a process of income-generation characterized by one central feature: it is unregulated by the institutions of society, in a legal and social environment in which similar activities are regulated.” (Portes et al. 1989: 12). The main idea of this perspective on informality was to “not advance an a priori judgment of whether such activities are good or bad, leaving the matter to empirical investigation.” (Portes/ Haller 2005: 404). In this sense, the proposed definition tries to filter the “essence” of informal activities in order to enable its differentiation from other – similar – activities.

An important basic thesis that arises from this definition is that informality exists as long as state regulation exists and constitutes thus a relevant issue for about any society. Only where the role of the state as a regulating institution of economic relations is not existent, the discussion of informality becomes irrelevant. This finding implies that informality is not a phenomenon limited to developing countries, but is present in any country and also renders most unlikely its disappearance. This signified an important step towards the acceptance of informality as a continuous issue of research and towards its more general conceptualization. While other perspectives towards informality have developed, results from research under this approach have influenced about any subsequent analyses due to their contribution to the systematization of the subject.

Institutional boundaries become thus essential for the distinction between formal and informal activities. It is essential to consider that in this case, informality does not result from the intrinsic characteristics of the concerned activities, but from the social definition of state intervention. What may be defined as informal in one setting can be perfectly formal in another. What kind of activity is defined as in/formal depends on the historical relations between state and society and between state and economy. This explains why informal activities assume such a variety of forms, as mentioned relations differ between societies.

Attitude of the State towards informal activities

Previous studies had pointed to the often hostile attitude of state institutions toward informal sector workers (Sethuraman 1981). State measures included for example slum clearings or license controls of street vendors. Portes et al. however detected a contrasting tendency. It was found that governments often assumed an attitude of tolerance towards the informal sector, considering it as a way to resolve potential social conflicts and to reduce open unemployment. In some cases (such as in Tuscany, Hong Kong or Miami), it was found that supportive state intervention in informal economies could lead to productive results. Measures included for example occupational training and other entrepreneurial services. This led the authors to argue for more flexible strategies on part of the state towards the informal sector, as neither complete de-regulation nor rigid planning constitute appropriate reactions.

Informal employment itself also functions as “an indictment of the overall effectiveness and legitimacy of the state” (Perry et al. 2007: 215). If the institutions and regulations established by the state are unable to answer to the actual processes that are present in society, if the link between the state and the public is weak, then it is likely that the channels provided by the authority will be ignored. Thus, the share of informal employment in the labor force depends strongly on the composition of regulations and their effectiveness. As argued by de Soto, excessive regulation by the state, in association with corruption, is likely to drive workers into informality in order to evade the barriers set by the official apparatus. On the other hand, active labor market policies that lead to the creation of formal jobs can result in a decrease of informal employment.

One of the interesting paradoxes concerning informality is the following: it would not exist without a formal counterpart. If there was no state with established institutions and regulations that demand their compliance, there would be no way for informality to exist. Following the same logic, the more regulations exist and the more the state seeks to regulate vast areas of society, the more possibilities exist for informality to take on different forms (Portes/ Haller 2005). However, levels of informality are not only determined by the state’s “regulatory intent”, but also by the strength of the state to supervise these regulations. A state that shows a high level of regulatory intent (by establishing rules to ensure high state control)

but holds de facto a weak position to actually enforce these rules might result in high levels of informality. This kind of separation between the state's intentions and reality is likely to amplify the tendency of the population to "arrange themselves" without the state, which, at the same time, reduces the levels of trust in state institutions (ibid).

The developed set of motives and reasons indicates a complex interaction of a variety of factors in the state's role regarding informal employment. On one side, regulations and state institutions are found to have a strong influence. On the other side, employers and workers respond to these regulations and act according to their particular situation. Evaluating the advantages and disadvantages of complying with the regulations, they may decide for informal employment if disadvantages prevail. Low legitimacy and effectiveness of the state reinforces the actors' disposition to engage in informal employment. Thus, studying informal employment implies that not only labor market legislation per se has to be taken into consideration for the analysis, but also its perception by society (see chapter 2.2.2 for more details).

#### Informal vs. Illegal activities

A further conceptual development was the differentiation between illegal and informal activities as already anticipated by Hart. He counted both types of activities to the informal sector, whereas subsequent studies introduced a clear distinction between both. While some activities may be hard to be assigned to either one or the other category, the nature of the final good or service was identified as the decisive criterion of differentiation. The illegal economy encompasses goods and services where both the mode of production and the product/service per se are illicit. In contrast, the informal economy provides licit goods and services that result from an illicit mode of production (Portes/ Haller 2005). To give an example, in the overwhelming majority of countries drug traffic would be considered not as an informal, but as an illegal activity, as the provided products themselves are considered illegal. On the other hand, assembly or construction workers provide services that per se are not considered illegal, but often their mode of employment does not follow established regulations, which would locate them within the informal category.<sup>12</sup>

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<sup>12</sup> Undoubtedly, this classification is far from unproblematic. Many products or services are not themselves declared as illegal by law, but as any activity related to them is prohibited, it corresponds to a de facto prohibition of the product/service.



**Table 3.1: Distinction between Formal/Informal/Illegal Activities**

<i>Process of Production and Mode of Distribution</i>	<i>Product/Service</i>	<i>Type of Activity</i>
+	+	Formal
-	+	Informal
-	-	Illegal/Criminal

*Source: Portes/ Haller (2005: 405)*

While authors such as de Soto focused predominantly on the positive potential of the informal sector as the impellent force of growth and innovation, Portes and colleagues assumed a more critical position in this respect, as empirical investigations did not provide unambiguous results. Positive aspects were recognized, as it was acknowledged that informal activities can result in advantages both for workers and local economies, particularly when networks of informal entrepreneurs are established. These advantages include possible higher income, the realization of creative potential and lower unemployment. However, it was adverted that wages of informal activities in general tend to be lower. In combination with other disadvantages of informality such as insecurity, worse working conditions and fewer benefits, they asserted that informalization should not be adopted as a policy goal and described informal work as “downgraded labor”.

### Goals of Informal Activities

Informal activities can be differentiated according to their goals. In this context, Castells and Portes distinguish three types of informal activities:

- **Survival:** In this case, informal activities are not mainly aimed at income-generation but at the direct provision of goods through subsistence production.
- **Dependent exploitation:** The rising pressure towards the flexibilization of firms and the simultaneous reduction of labor costs lead to increased employment of informal workers, e.g. through the subcontracting of informal entrepreneurs
- **Growth:** Small firms that find themselves in networks with other small firms mobilize solidarity relationships and in this way manage to accumulate capital.

The enumerated goals are not mutually exclusive, as the goal of survival on part of the informals may overlap with the goal of flexibilization on part of formal firms. Here we find already an indication that the definition of the informal sector as existing independently from the formal sector would become more and more questionable. The trend of formal enterprises to develop from large corporations to semiautonomous units that are more likely to include informal workers is brought in direct connection with practices of flexibilization.

Specific social effects are postulated from this process, as for example the undermining of power of organized labor, as rising informality contributes to the de-collectivization of the labor movement. At the same time, informality also exhibits a “cushioning function” for workers that otherwise may not find employment. As such, it contributes to avoiding growth of political instability. In this way, in contrast to de Soto’s ideas, informality may provide certain advantages for the stabilization of the status quo and forego political upheavals. This finding offers a possible explanation for the attitude of tolerance of some governments towards informal activities.

In summary, Portes and colleagues drew attention to the contingent aspect of informality and contributed to its characterization and differentiation from other forms of work, while also exploring reasons for its development and possible consequences. While the employed definition constituted an important advance of the conceptualization of informality, it also pointed to the wide range of activities subsumed under this phenomenon. Thus, it constituted a decisive step towards a more differentiated view on informal activities.

### **3.2.3. Towards International Definitions: The International Labour Organization and Informality**

The ILO has played an important role in the constitution of informality as an issue of discussion. Its report on employment in Kenya in 1972 is often cited as the starting point for a corpus of literature on informality that was to be developed in the following decades. Another impulse originated from the organization’s Conference of Labor Statisticians in 1993, which led to the internationally acknowledged definition of the “informal sector”, a denomination that continues to be employed by researchers up to this date (Bangasser 2000; Torche 2006; Infante 2011). This definition constituted a major contribution to the production of internationally comparable data on informality. Despite of the concerns raised over the coverage of the definition, it remains an important orientation for institutions and researchers concerned with the subject.

A decision of far-reaching consequences was to locate the concept of the informal sector at the level of the economic unit. As such, the informal sector encompasses microenterprises with a maximum of five employees and individuals or households with low productivity and no legal separation between the enterprise and its owner, including self-employment (Perry et al. 2007; Jütting et al., 2008). As a consequence, belonging to the informal sector is not so much determined by how workers are employed, but where: “*Employment in the informal*

*sector* then includes all jobs in informal sector enterprises or all persons who, during a given reference period, were employed in at least one informal sector enterprise, irrespective of their status in employment and whether it was their main or a secondary job.” (Husmanns 2002: 2).

The view of the informal sector as operating without engaging in any kind of relationship with the formal sector aimed to stimulate the development of remedial measures, but also received growing critique for not encompassing a large amount of informal workers. In recognition that informal work also takes place outside of informal sector enterprises, not the informal sector but the phenomenon of informal employment itself moved to the center of attention. In view of a rising number of atypical jobs that lacked protection and benefits of the hitherto considered “standard employment relationship”, it became inevitable to broaden the scope of the discussion. The concept of “informal employment”, as proposed by the ILO at the 90<sup>th</sup> Labour Conference in 2002, aimed to include all forms of informal employment, that is, all jobs “outside the regulatory framework because they are not subject to labor legislation, social protection, taxes or employment benefits” (Jütting et al. 2008: 11). The influence of the regulation perspective in this development is hard to neglect.

The ILO’s proposal constituted a shift of the focus of analysis from the economic unit to the characteristics of the job itself. As such, it was accepted that informal employment not only occurs in the formerly defined informal sector, but also in formal sector enterprises. The following table provided by Husmanns (2002: 17) depicts the correlation between informal sector enterprises and informal employment:

**Table 3.2: Informal Sector and Informal Employment according to the ILO Definition**

Production units by type	Jobs by status in employment								
	Own-account workers		Employers		Contributing family workers	Employees		Members of producers' cooperatives	
	Informal	Formal	Informal	Formal	Informal	Informal	Formal	Informal	Formal
Formal sector enterprises					1	2			
Informal sector enterprises	3		4		5	6	7	8	
Households	9					10			

Source: Husmanns (2002: 17)

The illustration differentiates between dark grey cells (these type of jobs do not exist by definition), light grey cells (this type of employment is not relevant for neither of the employed definitions) and unshaded cells. The latter are relevant for either informal sector employment or informal employment. According to the table, informal employment includes cells 1 to 6 and 8 to 10, while employment in the informal sector includes only cells 3 to 8. The main difference that is relevant for this thesis is the “addition” of cells 2 and 10. Basically, it implies that workers who are employed informally in formal sector enterprises, and domestic workers are recognized as part of informal employment.

At the same time, this broader conceptualization allowed for different dimensions of informality to be taken into account. Dimensions of informality would include for example the contractual status, the employment protection status or the social protection status. As a consequence, the concept was opened to a range of operationalizations that would not necessarily overlap and would include very different groups of workers depending on the definition employed (Jütting et al., 2008).

As described above, Portes et al. already expressed a similar view towards informality, also anticipating difficulties in its operationalization, as labor legislation differs not only between countries, but also between occupational groups. Thus, the proposal of the ILO was not necessarily new. However, it should be noted that the discussion of the topic by the ILO, due to its particular tripartite structure and position as an international organization, made informal employment an issue of concern for governments and statistical institutes from a variety of nations.

Regarding the definitions employed by researchers in studies concerned with informality, the influence of the ILO's work becomes clear. Gasparini and Tornarolli (2006) identified two main strands of definitions that roughly correspond to the discussed ILO conceptualizations: the productivity definition and the legalistic or social protection definition. The productivity definition identifies informal work predominantly among enterprises in the low-productivity sector and relates this type of work to small firms, low human capital, low income and low use of technological innovations, which relates to the ILO concept of “informal sector”. In contrast, the legalistic definition considers as informal work the type of work that takes place outside of official norms and regulations such as contractual regulations, the right to a retirement pension insurance, unemployment insurance etc, which are predominantly characteristics of salaried work and as such correspond to the concept of “informal employment”.

However it should be made clear that, although there are detectable tendencies, denominations vary between disciplines, publication dates and authors. The definitions used and their subsequent operationalizations differ considerably, which adds to the confusion of the subject and implies that many publications that supposedly treat the same subject refer to not exactly the same group of workers. Also, denominations such as “informal employment”, “informal economy” or “informality of labor” are not used in a consistent way. Authors have tried to identify different perspectives in research of informality<sup>13</sup>, but disparities prevail. The widest consent seems to have been generated by the definitions published by the ILO.

### 3.3. The Genesis of Informal Employment

*“Then I started to work in a refrigerated warehouse. Without contract, anything. Because my husband and I, we were really short of money, so I said, I’ll work by any means. (...) My daughter was born with pulmonary cancer, so we had to find money. I searched and searched, but I was indebted at that time, not much, but when you’re in DICOM<sup>14</sup>, no one will give you work.”*

-Secretary

Different approaches exist to explain the existence of informal employment. The reasons employed in order to explain the phenomenon are intrinsically linked to its conceptualization, reasons that often overlap or are strongly related. It has to be considered that it makes little sense to speak of an “appearance” of informal employment. As indicated by Cortés (2000), many activities nowadays subsumed under the term “informal sector” or “informal employment” have existed in Latin America for a long time; rather new in comparison are efforts of conceptualization and their reflection on a theoretical level.

According to Portes and Haller (2005), informal employment can only exist in parallel to formal employment and regulating institutions. Thus, the distinction between formal and informal employment only makes sense under the condition that appropriate criteria to define formal employment exist. In the Latin American context, this can be illustrated by the change in the role assumed by governments up to the 1970s. A stronger involvement of the state and the creation of different criteria of workers with different entitlements and benefits contributed decisively to the “formalization” of employment relationships (de Oliveira/Roberts 1994). But at the same time, the increased regulation also created more possibilities

<sup>13</sup> See Tokman (2001), Gasparini/Tornarolli (2006), Perry et al. (2007), KAF (2010), Pok/Lorenzetti (2007).

<sup>14</sup> A nationwide register administered by the company EQUIFAX that provides publicly available information on people’s credit history.

for workers to become informal in the first place. In a similar dynamic, the development of the welfare state in some European countries may have functioned as a catalyst of informal employment (Castells/ Portes 1989).

Similarly, the rise of informal employment has been found as a reaction of companies and individual workers to strong unions, as these constitute “an obstacle to capitalist accumulation” and function “as a corporatist pressure group eager to defend its interests even at the expense of unorganized workers” (Castells/ Portes 1989: 28). Thus, undermining union power in order to maintain competitiveness can constitute a motive for the informalization of labor on the part of the companies.

Transformations in the productive structure of Latin American countries play a fundamental role in the development of informal employment. The implementation of the formerly discussed model of industrialization by import substitution was concentrated on urban areas where appropriate infrastructure was available (Portes/ Schauffler 1993). Those processes of industrialization led to an increase in rural-urban migration and subsequently a higher concentration of the population in urban areas<sup>15</sup>. At the same time, the economically active population grew constantly. The resulting surplus of unqualified labor in urban labor markets is seen as a common motive for the increase of informality, particularly in earlier decades up to 1980 (Rakowski 1994b; Pok/ Lorenzetti 2007). The idea that workers who are unable to find a formal job work in informal jobs until they find an opportunity to move into formal employment persists (Perry et al. 2007). In this case, a labor market is postulated in which there are not enough formal jobs available. This view implies that every worker would prefer formal to informal employment.

Rises in informal employment have been linked to economic recessions, regarding the informal sector as a “safety net” for the unemployed. However, increased informal employment has also been observed in times of economic growth, as it may lead workers to take the risk of starting their own informal business (Jütting et al. 2008). Thus, evidence on the relationship between the magnitude of the informal sector and the development of the economy is contradictory and obviously depends on a variety of other influences.

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<sup>15</sup>Between 1950 and 1980, the share of the urban population in Latin America rose from about 50% to over 70%. Particular high levels (over 85%) were reached in Argentina, Chile, Uruguay and Venezuela. Lowest levels were registered in Bolivia, Guatemala and El Salvador (under or close to 50%) (Portes/ Schauffler 1993).

While the informal sector is often seen as a result of increased rural-urban migration in the context of industrialization, a more recent approach constitutes the “globalization” perspective, which is rather focused on informal employment (Husmanns 2002). This perspective regards informal employment as a result of the globalization process and the simultaneous decentralization of production. Due to growing pressure on enterprises to flexibilize the productive process, the externalization of fluctuating demands of the market gains importance (Tokman 2001). Informal workers are then the first ones to absorb the risks of market fluctuations. This puts informal employment in context with other atypical employment relationships that are introduced in order to enable enterprises to operate more flexibly and to transfer these risks from employers to workers (Voss/ Pongratz 1998). It is indicative that atypical contracts, above all limited contracts, are sometimes counted as informal (ILO 2003).

In contrast, other approaches have emphasized the “exit” component of informality that views informal employment as a voluntary decision (Perry et al. 2007). From a macroeconomic perspective, it can be argued that, if regulations and tax impositions are high, companies are more likely to operate (at least in part) informally. This constitutes the classic case of tax evasion. However, while this behavior may constitute a calculated action by part of firms, workers may by no means consent to their informal condition.

Certainly, it was found that workers may also prefer informal employment if the formal alternative does not provide any advantages according to their cost-benefit analysis. This perspective constitutes an important supplement to previous approaches that determined the view towards informal employment for a long time. Motives in this case can be very diverse: workers may come to the conclusion that the benefits of formal jobs are irrelevant to them, but they may also value characteristics of their informal job. Particularly valued characteristics are autonomy and flexibility (Perry et al. 2007; Maloney 2003). In particular reference to the Chilean situation, it has been found that workers’ trust in legal employment protection is low, citing on the one hand many possibilities to circumvent employment legislation and on the other hand the lack of controls of regulations in place (Acuña/ Pérez 2005: 135).

These different approaches show that explanations for informality are competing and have changed over time. Given the highly heterogeneous groups of workers that are often included in the analysis, it is not surprising that different explanations are valid for different groups of informal workers. Motives to work informally vary between wage-earners and the self-

employed as well as between self-employed with different educational levels. As a consequence, the circumstances leading to informal employment also require a more differentiated analysis and cannot be reduced to a single cause.

### **3.4. Attempts to measure Informality**

Preceding chapters have shown how the phenomenon of informality has received growing attention throughout the decades. As empirical evidence on informal activities accumulated, concerns increased to make the phenomenon understandable and seizable through concrete indicators. According to the multiple shapes of informality, the attempts to measure it have been diverse, although some more prominent than others. The challenge of measurement of informality arises primarily from the heterogeneity of the phenomenon, as it encompasses activities as diverse as from the unskilled self-employed to the salaried worker in a large firm who is not offered an employment contract and the according benefits. This is reflected in the diversity of denominations that has emerged, but also in its diverse forms of measurement. For example, the report on economic informality published by the World Bank in 2007 provides various measures of the phenomenon, pointing out the difficulty of its definition: “The mere fact that we need to employ multiple measures of informality capturing distinct approaches to the sector suggests that we are not clear on exactly what it is and what we should be studying” (Perry et al. 2007: 1).

As Loayza et al. (2009: 3) observe, “given that it is identified with working outside the legal and regulatory frameworks, informality is best described as a latent, unobserved variable. That is, a variable for which an accurate and complete measurement is not feasible but for which an approximation is possible through indicators reflecting its various aspects.” This section is focused on these different forms of how researchers have tried to approximate informality. Attempts to measure informality are either more focused on the macroeconomic or on the individual level. The approaches serve different objectives and cannot be designated principally as better as or worse than the other.



Indirect methods aim to determine the level of informality in a given country based on estimations from aggregate data. An option is for example to calculate the difference between the aggregate income and the aggregate expenditure. Another way of measurement is also to compare the growth rate of GDP and the growth rate of electricity consumption (Oviedo et al., 2009). Apart from obvious problems of accuracy, these approaches are not very helpful if they should serve to analyze the relationship between informality and other determinants of the social structure.

Other widespread forms of measurements are aimed at the individual level and apply direct methods such as household surveys. Questions such as if the interviewee holds a formal contract or is affiliated to social security constitute the most common practice. A very simple measure that also enjoys considerable popularity is the share of self-employed workers in the workforce. Perry et al. (2007) identify as the most common practices to measure economic informality the following:

- Percentage of self-employed workers among employed workers
- Percentage of labor force not covered by a pension scheme
- Informality according to the productive definition (a summary of the unskilled self-employed, not remunerated family members, wage earners in small firms of either less than 10 or less than 5 workers, zero-income workers)
- Informality according to the legalistic definition (only salaried workers without the right to a pension upon retirement)

Forms of indirect measurement have been employed particularly in advanced economies where obtaining data through household surveys is more difficult. This problem has been described as the “measurement paradox” by Portes and Haller (2005: 418): “The more credible the state enforcement apparatus is, the more likely record-keeping mechanisms will miss the actual extent of the informal economy”. Accordingly, it was found that in settings where informal activities are (relatively) widespread and semiopen, it is possible to arrive at more reliable estimates on the basis of direct surveys, as would be the case for example in Latin America.

On the other hand, direct measurement in household surveys which constitutes the data base for this analysis counts with another obvious disadvantage, as all gathered information is dependent on respondents' answers and cannot be verified except through correcting mechanisms in the survey itself. Particularly in the context of a sensitive issue such as informality, this may constitute a considerable problem. Undoubtedly, results have to be viewed with care and possible inaccuracies must be taken into account.

Two important aspects have to be considered regarding different forms of measurement. Firstly, any study of Latin American labor markets must take into account the great share of self-employed workers in the workforce, which in Chile has held steadily at around 20% since 1990. This number is below the Latin American average, according to the ILO in 2010 at 25,0%, and much lower than for example in Bolivia (31,0%), Colombia (41,9%) or Ecuador (29,6%) (OIT 2011)<sup>16</sup>. The self-employed are often counted as informal employment par excellence, as their social security coverage is extremely low and they are usually employed in the least productive sectors. However, the group of the self-employed is highly heterogeneous. Depending on their educational background, some of the self-employed fall in the highest income groups (e.g. lawyers, doctors). Hence, in some cases research practice has proceeded to count only the unskilled self-employed as informal (Gasparini/ Tornarolli 2006; Perry et al. 2007; Tokman 2001).

Secondly, microenterprises also represent a considerable share of Latin American economies, and are traditionally counted to the informal sector, according to the productive definition of informality. Thus, any salaried worker in a firm counting a maximum of 5 workers would be considered informal, irrespective of his or her contractual status or social security coverage. According to the CASEN 2003, about 18% of the workforce was employed in microenterprises (not counting the self-employed). Although employment relationships tend to be more informal in smaller firms (Perry et al. 2007), counting them automatically as informal constitutes only a very rough approximation (Rodgers/ Reinecke 1998).

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<sup>16</sup> In comparison, data from EUROSTAT for 2012 shows that the self-employed without employees constitute about 10,9% of total employment in the European Union (EU27) and about 6,5% of total employment in Austria (EUROSTAT 2013).

### **3.5. Characterization of Informal Employment in Latin America**

Moving beyond the aspects of conceptualization, explanation and measurement of informal employment, the following section concentrates on empirical findings regarding the characterization of informal employment in the Latin American context. The aim is to collect indicators on how informal employment is located within the social structure with a view to the following empirical analysis.

The preceding sections have addressed the particular difficulties researchers are confronted with in the study of informality. The variety of definitions, but also the diversity of data sources where information on informality is gathered from complicates the comparison of results. For the following sections, this reservation should be taken into account. A more detailed discussion of the Chilean case can be found in the last part of the chapter.

The discussed influences on informality are roughly divided into characteristics that are attributed to workers themselves, such as sex, age, nationality or education, and characteristics of the workplace, which involve the sector of economic activity, the occupational status, the firm size or the length of job tenure. This division aims to distinguish roughly between workers and the structure encountered by them on the labor market.

#### **3.5.1. Personal Characteristics and Informal Employment**

##### **3.5.1.1. Women in Informal Employment, Domestic Work and the Family**

Earlier studies of the informal sector which were focused primarily on self-employed workers described the phenomenon as affecting predominantly male workers (Sethuraman 1981). However, with the conceptual shifts that took place, it became obvious that the share of women working in informality is at least equal, if not higher. At the same time, women and men are found to exhibit diverging patterns of informal employment.

In general, it is found that women are overrepresented among informally employed workers. Particularly domestic work remains inextricably linked to female informal employment in Latin America (Infante 2011). Although the share of domestic workers in the workforce has declined over the years, they still represent a significant number of workers, about 11 million in the region (Valenzuela/ Mora 2009). Domestic workers are affected by a particular invisibility: On the one hand, their workplaces are households, places that are generally hidden from public access and realms of private (family) life. On the other hand, domestic

workers do not produce any goods or services for the market, but take care of reproductive work. In this way, they often facilitate the participation in the labor market of other women who would otherwise take charge of this work.

The particular position of domestic work in contrast to other income-generating activities has been reinforced through the fact that domestic workers by the majority used to live where they worked, that is to say, to a certain extent they formed part of the household they worked in. In-house domestic employment has become less common in the past decades, which has contributed to its recognition as a form of employment and the entitlements to protection of workers related to it (Leiva 2012).

While workers in the informal sector in general tend to earn less than their formal counterparts<sup>17</sup>, the formal-informal wage gap is even larger for women. An important feature in this respect is the fact that women are more likely to work as contributing family members, which generally does not provide a proper income. A significant aspect in this context is that care for the family remains a female domain that prevents women from engaging in formal employment (Kucera/ Xenogiani 2009). Accordingly, Perry et al. (2007) identified reasons for women to engage in informal activities to a greater extent than men that are primarily linked to family commitments. These informal jobs often have the function to complement the family income, while providing the necessary flexibility to attend to family and personal activities. In this respect, female informal employment can be considered as an option for making work and family compatible, fulfilling a similar function as part-time work.

However, increased flexibility and other advantages of informal work are primarily linked to self-employment, where the share of women is generally lower. The situation can vary greatly when women engage in informal salaried jobs. In this context, it is more likely for women to choose informal employment when limited access to education and other resources prevent them from employment in formal jobs. While this often translates into insufficient income in order to provide adequate care for children, it can also imply less flexibility and lead to the opposite outcome of the above described reasons (Rodin et al. 2011).

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<sup>17</sup> Evidence in this respect is ambiguous, as income from informal self-employment in some cases is found as higher than from formal wage employment (Castells/ Portes 1989; Perry et al. 2007). Informal wage earners however are generally seen as the most disadvantaged group.

An important influence in female informal employment is also the status of formality of the partner's employment, as in this case, social security benefits as for example in the form of health benefits may be accessed over the partner's coverage (Perry et al. 2007). However, this implies simultaneously a higher engagement in formal employment on the partner's side, a relationship that for example could not be confirmed for Argentina (Bour/ Susmel 2010: 13).

These findings show how male and female workers tend to exhibit diverging patterns of informality. Furthermore, particular events such as entering a partnership or the foundation of a family are likely to influence in the behavior of workers in this respect and are components to be considered when studying informality.

### 3.5.1.2. Age

*"We work based on tips. If the clients of the supermarket decide to give something, that's our income. It's an agreement with the supermarket to work like this. (...) This is a benefit for university students, in some stores there are also retirees."*

-Two student shopping packers in a large supermarket in Santiago

*"I work in a project financed by the government, at the same time I study, and at the same time I'm co-insured with my dad. (...) If I had a contract, I would lose the social insurance benefits I have now. It doesn't suit me. In two years when I finish, that will be different, but now I would lose my health insurance and some benefits."*

-Actress

As mentioned, informal wage earners and the self-employed exhibit very diverging age distributions. While the levels of informal wage earners are highest among younger workers, levels of self-employment rise as the age of workers increases. In fact, it has been found that "self-employment is concentrated among older workers and is not an entry point of work." (Perry et al. 2007: 74). Data from Mexico indicates that self-employment (both formal and informal) constitutes for a great share of workers a voluntary and high-regarded option, while salaried employment serves to "accumulate knowledge, capital, and contacts" (Maloney 2003: 3). It has to be considered that younger workers may also choose to engage in informal employment due to the flexibility of schedule, as it may be more compatible with other

activities such as studies (Perticara/ Celhay 2010). In addition, younger workers in some cases are still covered by health insurance plans of their parents. These plans that usually count with longer periods of accumulation often include more and better services than those of workers with shorter durations of contribution.

However, informal wage employment persists over the life course and is not only limited to the youngest age group of workers. For older workers in informal or self-employment for example, the motivation for moving to formal jobs is potentially lower, as they may not be able to accumulate sufficient savings for retirement anyway (Perry et al. 2007). On the other hand, already retired workers who aim to raise their income through sideline employment have even less reasons to declare their job. Thus, both age groups have particular reasons to engage in informal employment to a higher extent, reasons that are for example linked to the assessment of the loss of social security benefits.

Analyzing the effect of demographic variables on the propensity to informal employment in the Dominican Republic, Argentina and Bolivia, the prevalence of younger workers among informal wage earners was confirmed. However, it is found that the difference is mainly due to employment of younger workers in smaller firms and with shorter tenure (ibid). This thesis aims to discover potential spurious correlations as it was found in this particular case. It is important to consider diverse influences that may only at first glance constitute an age effect, as it was found in this particular study.

#### 3.5.1.3. Education

Comparing several Latin American countries according to their levels of informality, Gasparini and Tornarolli (2006) find a clear decrease of informality with higher educational levels. This pattern seems to repeat itself across the region and also when different definitions of informality are applied. However, informal wage earners and self employed workers exhibit different patterns, as the self employed on average have higher educational levels (Jütting et al. 2008).

In a cross-country analysis, Loayza et al. (2009) analyze variations of levels of informality in different Latin American countries and come to the conclusion that public services are one of the most important factors to explain this variation, while low educational levels do not contribute significantly to explain the differences in informal employment levels. This constitutes an indicator that the effect of education may be produced by other factors that have

to be considered in the analysis. Loayza et al. also identified socio-demographic factors as particularly relevant to explain labor informality (in this study defined both as contribution to a pension scheme and the share of self employment to total employment). Regarding the productive definition of informality, the quality of state services proved as the most important factor.

#### 3.5.1.4. Immigration

The issue of migration in Latin America has been linked for a long time to European immigration in the 19<sup>th</sup> and 20<sup>th</sup> century and the subsequent emigration of Latin Americans to developed countries. At present, another component is becoming more and more significant, which is intraregional migration (Christiny et al. 2009). Increasingly, countries that have experienced particularly strong development such as Argentina and Chile also receive migrants from Latin American countries<sup>18</sup>. However, it is impossible to define region-wide trends, as migration patterns diverge considerably from countries close to the US American boarder such as Mexico to the countries of the Southern Cone. As a consequence, the role of migrants in informal employment varies significantly across the region.

Generally, it is found that immigrants provide a potential source of labor for informal activities (Perry et al. 2007). They constitute a more vulnerable group which is more likely to find themselves in informal employment, especially when it is a matter of undocumented migration. In the past however, it was found that migrants do not necessarily constitute a source of growth in informal employment (Castells/ Portes 1989). On the other hand, case studies have pointed to communities of migrants that concentrate in particular activities and form a network of informal entrepreneurs, as it was found for example in the case of Cuban immigrants in Miami (Stepick 1989).

These empirical findings point to potential differences in the share of informal employment according to particular characteristics of the workers, underlining also the necessity to distinguish between informal employment and self-employment. However, research points to influences that go beyond these personal characteristics and which are discussed in the following.

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<sup>18</sup> Recently, a new trend in migration patterns has been registered, consisting in a rise of European migration to some Latin American countries (predominantly Argentina, Brazil and Mexico), simultaneous to a decline in migration in the contrary direction. However, stocks of Latin American migrants in Europe still outnumber by far the totality of European migrants in Latin America (UNRIC 2012; Wall Street Journal 2012).

### 3.5.2. Workplace Characteristics and Informal Employment

#### 3.5.2.1. Firm size

*“If you work independently, from the start, as we were only a few people, we began more or less informally. Well... while we were organizing the whole thing, you see. But then... when everything started to work out, this is also part of what I call respect for the workers, they had their contract, their social security contributions, everything as they should.”*

-Market vendor, former employer

As indicated in the previous chapter, microenterprises constitute a considerable part of Latin American labor markets (Perry et al. 2007). Informal employment in Latin American labor markets is deeply linked to microenterprises, or very small enterprises (VSEs). As a matter of fact, workers in microenterprises are by definition of the ILO part of the informal sector. Generally, microenterprises are characterized by a firm size of a maximum of either 5 or 10 workers. The distinctive feature of VSEs is seen in their low visibility and ease of displacement (Castells/ Portes 1989). As such, they provide the most appropriate setting for casual hiring, under- or unreporting of income and other informal practices. In addition, due to their size they experience fewer difficulties in becoming completely “unofficial”.

Among microenterprises, a very heterogeneous panorama can be found. They operate in very diverse sectors and reach from the *cuentapropistas* (self-employed) to family-run enterprises that also employ external workers (Reinecke et al. 2006). Accordingly, productivity levels are very unequal, but in general lower than among large enterprises. Similarly, the status of formality of microenterprises is highly variable, as interaction with public institutions is organized very differently according to the scope of activities of the firm. A microenterprise may participate in some formal institutions, but not in others, which points once more to the difficulty of constructing a dichotomy between formal and informal enterprises or workers.

An explanation for the high levels of informality among VSEs is that formalization implies elevated costs for these firms. These barriers to formalization limit growth of microenterprises, which in turn prevents them from reaching a size where formalization would pay off. As a general rule, it was found that smaller and younger firms tend to operate more informally than other VSEs (Perry et al. 2007).



Studies have shown that microenterprises continue to exhibit much higher shares of informality. However, more recent conceptualizations of informal employment refer to the fact that there is a substantial amount of informality also to be found outside of these productive units. This finding constitutes a central aspect for the empirical analysis where the focus will be put on informal employees, irrespective of the size of the firm they are employed in.

#### 3.5.2.2. A transitory or a permanent Condition?

In comparison to many OECD countries, Latin American countries exhibit a considerably reduced length of job tenure. This elevated labor turnover is, amongst other factors, traced back to the elevated share of younger workers in Latin American labor markets, who have participated in the labor market only for a limited time and who change their jobs more frequently than older workers. In this way, they contribute to the reduced duration of jobs (Tokman 2007). In the particular case of informal employment, it was found that informal jobs are on average of shorter duration than formal ones. That is to say, in a setting where workers in general tend to change their jobs more often, informal workers experience an even higher level of job insecurity.

The elevated level of job insecurity has different potential consequences which depend on the particular institutional context of the labor market. For example, labor turnover is also particularly high in Denmark. However, the instituted “flexicurity” system implies comprehensive social security for workers in unemployment spells (Jorgensen 2009). As a consequence, although labor turnover is also comparatively high, general fear of workers from unemployment and perceived insecurity is very low. Latin American countries do not offer this kind of security to their workers in case of unemployment. Thus, it is not surprising that fear of unemployment is widespread among workers (Tokman 2007). Informal employees constitute the most vulnerable group in this respect, as they cannot access any form of social security, as limited as it may be. This implies also a lack of employment protection which makes them potentially the first group to be affected in case of layoffs.

In the context of high labor turnover, it becomes a crucial issue to investigate how transitions between jobs are constituted. Regarding informality, this issue has been approached by measuring mobility of workers between formal and informal employment. It has been found that mobility of workers between the formal and informal sector exists (Fortuna/ Prates 1989). ‘Permeability’ between both sectors is higher in Brazil and Mexico, but lower in Chile,

although mobility has improved in the past decades (KAF 2010). Depending on the definitions employed and the years observed, mobility was found both from formal to informal jobs and vice versa (Rodríguez-Oreggia 2007; Perry et al. 2007). Perry et al. (2007: 57) recognize that “it seems safe to say that, on average, workers do not graduate unidirectionally from informal work to available jobs in the formal sector.” For the Chilean case, Perticara and Celhay (2010) identify an increased permeability between formal and informal employment, which implies a higher number of transitions of workers from informal to formal jobs, but also vice versa. These findings suggest that workers who find themselves working informally do not necessarily maintain jobs in this category throughout their working lives. Particularly among younger workers, informal employment can function as an entrance to the labor market that may lead to formal employment in the future (Perry et al. 2007).

#### 3.5.2.3. Sectors of Economic Activity

Reports of the ECLAC (2008, 2010, 2012) have pointed to the high levels of “structural heterogeneity” found in the region. In other words, the value added per worker differs severely between sectors of production. While for example financial services, electricity services and mining are traditionally sectors of high productivity, commerce, community and social services and particularly agriculture are to be found on the other end of the scale (ECLAC 2010: 89). According to these patterns, sectors are classified according to their levels of productivity (Infante/ Sunkel 2009).

- *Low productivity*: Agriculture, community services, commerce
- *Medium productivity*: Construction, transport, manufacture
- *High productivity*: Financial services, electricity, gas and water services, mining

The detected disparities are substantial. In high productivity sectors, productivity levels exceed up to 20 times the achieved productivity in sectors such as agriculture. In comparison, the highest ratio of productivity between sectors in the US amounts to only 3 (ECLAC 2010: 89).

Productivity is also strongly linked to the respective firm size. While micro- and small enterprises prevail in the low productivity sector, their share decreases considerably in sectors of higher productivity. For instance, the agricultural sector mainly consists of small enterprises. In contrast, no enterprises of this category are found in the mining sector, where large enterprises account for 70% of all enterprises<sup>19</sup>.

These economic imbalances not only contribute to the stark differences in income observed between sectors, but also to the discrepancies regarding working conditions and levels of informality. In the quality of employment index for Chile, Kirsten Sehnbruch (2006: 230) identified agriculture and construction as those sectors with the lowest scores and mining and financial services among those with the highest quality<sup>20</sup>. The observed patterns of inequality in productivity are also reproduced in the levels of informality according to sectors (Días/Guerra 2010; Infante 2011). These findings suggest that an imminent link exists between the productivity achieved and the concrete situation of workers who are employed in the particular sector.

In the previous chapter it has been highlighted that the concept of the informal sector was developed with view to urban labor markets in developing countries. This limitation to urban areas is due to the idea of the informal sector as a result of migration to urban areas in the context of modernization (see chapter 3.3). As a consequence of this conceptualization, employment in rural areas and in the agricultural sector is often excluded from corresponding analyses (Perry et al. 2007; Ben Salem et al. 2011). However, as the conceptualization of the informal sector has gradually shifted, research in some cases has also extended its scope to include the agricultural sector in the analyses. According to these studies, the importance of agriculture in informality varies widely depending on the employed definition and the respective context (Ben Salem et al. 2011; KAF 2010). A study on informality in Turkey for example points to particularly high levels of informality in agriculture, whereas this could not be confirmed for Venezuela. For this study, rural areas are included while possible differences in dynamics between the agricultural and other sectors are taken into account.

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<sup>19</sup> See Infante and Sunkel (2009: 40) for a detailed chart regarding shares of small, medium and large enterprises according to productivity levels in Chile.

<sup>20</sup> The index, based on Amartya Sen's Capability Approach, includes the following items: Occupational status and social security (duration and status of contract as well as social security coverage), tenure, income level, participation in vocational training. The additive index is calculated from scores awarded for each category. Based on this score, jobs can be classified in very low-quality, low-quality, medium-quality or high-quality employment. The calculated scores are applied to diverse population groups, according to sex, level of education, economic sector, age group or firm size.

Efforts have been made to identify particular dynamics of informality and to detect general tendencies. However, dynamics of informal employment also respond to particular circumstances and developments in the labor market. Given the particular situation of the Chilean labor market as discussed in Chapter 2, the following section aims to go more into detail on informal employment in the Chilean context and to provide an overview of hitherto existing studies and findings. Previously discussed aspects will be addressed with regard to the Chilean situation.

### **3.6. Informal Employment in Chile**

As already brought up in the second chapter, Latin American labor markets are characterized by a higher share of informal workers, both workers in the informal sector and workers in informal employment relationships. A decisive cause for the increase of informal employment since the 1980s is seen in the structural changes triggered by the retrenchment of the public sector paired with economic crises and lack of job creation. Not only did the informal sector constitute a refuge for former public sector employees, also new jobs created were predominantly informal (Tokman 2007). This led to a growth of informal employment in the majority of the Latin American countries. Chile constitutes one of the cases where informality seems to have remained stable (Gasparini/ Tornarolli 2006).

Regarding recent research in social structure, it was found that the informal sector does not constitute a “line of division” according to class differences. While workers in the informal sector find themselves clearly in a disadvantaged position, high permeability exists between the formal and informal sector in terms of both intergenerational as well as intragenerational mobility (Torche 2006; Sehnbruch 2006). As such, employment in the informal sector is not likely to serve as a criterion of differentiation regarding social classes.

Infante (2011) studied the development of informal employment from 1990 to 2006 in Chile. Although permeability between the formal and the informal sector is high, the share of informal employment has remained on a similar level over the years, exhibiting a slight downward tendency. It is found that formal employees predominate among medium and large firms, while proportions are drastically reversed among small and very small enterprises. Women exhibit higher shares of informality and predominate regarding domestic service and not remunerated family members as well as among the unqualified self-employed.

Levels of informality differ considerably according to sectors. It was found that agriculture (47,6%), community services (39,2%) and commerce (47,0%) are the most “informalized” sectors in contrast to mining (12,7%), electricity, gas and water services (14,0%) and financial services (25,8%). In this context, patterns diverge to a certain extent according to sex. Manufacture (48,2%), commerce (51,4%) and community service (41,9%) show a much higher share of female than male informal workers. The opposite effect is observable in transport, construction and agriculture, where the share of male informal workers is higher than of female informal workers, although disparities are smaller.

In comparison, informal workers exhibit a lower number of years of education than formal workers. Both in formal and informal employment the number of completed years of education increases in accordance with firm size. Irrespective of their condition of formality, employed women exhibit higher educational levels than employed men. The increase in educational levels among informal workers over the years results from the increase of education mainly among female informal workers (Infante 2011). Perticara and Celhay (2010) confirm the importance of qualification as a decisive factor of the formal status of employment. However, they also point to the rise of informal employment among the most qualified, younger workers between 1998 and 2006, due to the previously discussed phenomenon of honorary contracts.

Age also results as a significant difference between formal and informal employment. Informal workers are shown to exhibit a higher age average than formal workers. Over the years, the study also found an increase of the age average in the informal economy, a tendency that coincides with the demographic change that encompasses the entire Chilean workforce (Infante 2011). However, a more differentiated examination reveals that independent informal workers are indeed older than their formal counterparts, which is reversed for wage earners. In this group, informal workers are shown to be younger than formal workers (Perticara/ Celhay 2010).

Regarding immigration, Peruvians constitute the largest groups of immigrants in Chile (about 60% of immigrants, Christiny et al. 2009). In this context, it should be noted that Peruvian migration is predominantly concentrated on women (about 70%) in working age. Part of the female Peruvian immigrants is employed as domestic workers and nannies, while male immigrants concentrate in construction (ibid). Given this concentration in a particular activity, migration constitutes a relevant aspect regarding informal employment. However, even though the immigration rate in Chile has increased in the past decades, the dimension has to be considered – at the moment, about 1,3% of the Chilean population is foreign born. Nevertheless, immigration is emerging as a relevant object of investigation, not least in relation to labor market issues (Contreras et al. 2012).

Although it is likely that informal employment constitutes an “intermediate station” for the affected workers, it is a recurring and stable pattern for a substantial share of the labor force. Thus, it is important to investigate what particular groups of workers are more likely to engage in informal employment and under what circumstances.

### **3.7. Conclusion**

This chapter provided an overview of results regarding research on the informal sector and of different perspectives regarding its origins, constitution and functions. While authors that were discussed in more detail regarded the group of the informals as excluded from the legal system, their views on the potential of the informals to exert pressure and produce changes differ decisively. On the one side, informal workers are seen by de Soto as the revolutionary force that may bring about profound changes to an exploitative, excessively regulated system. On the other side, Portes et al. point to the atomization of workers and the resulting weakening of their position of power vis-à-vis the employers’ side.

Besides the question of consequences for relations in the labor market, the fundamental question of who actually is to be counted among the informals was addressed, in this way guiding the discussion towards issues of operationalization and measurement and presenting different ways of responding to this question. In wide parts, scholars agree that informality constitutes a hidden, latent phenomenon that eludes concrete measurement. Accordingly, suggestions on how to approach the difficult task of comprehending the incomprehensible diverge considerably.

The last section draws on empirical findings regarding informal employment in the region and particularly in Chile. From a general perspective, Chile certainly holds a particular position in comparison to the rest of the region regarding the extent of informal employment, as according to different measures, informality rates in Chile are lower than the Latin American average. However, in other respects, informal employment in Chile seems to correspond to a more general pattern observed in the region, regarding particularly the high structural heterogeneity and the related difference in share of informality according to sectors of economic activity.

Past studies give hints on groups that are particularly affected by informality in the labor market and underline once again the importance to differentiate between wage earners and self-employed workers in this respect. The presented results point to possible factors that determine which groups of workers rather find themselves in informal employment. Results so far show that besides personal characteristics of workers, certain characteristics of the workplace are of particular relevance in this respect. In this context, multivariate analyses as employed in the empirical analysis can facilitate the detection of factors that are more relevant and of those that only apparently are associated with higher levels of informality.

## 4. HYPOTHESES

This section serves to expose the hypotheses derived from the previously discussed theoretical perspectives and empirical findings to date. Hypotheses concentrate either on the extent of informality in the Chilean labor market in general or on specific factors that potentially have an effect on the risk of informal employment, differentiating between personal characteristics of workers and characteristics of the workplace.

### **General**

The Chilean labor market features a variety of developments that potentially influence the share of informal employment and which underline the complexity of the phenomenon. On the one hand, structural characteristics of labor force have evolved: In the past two decades, the available labor force has grown decisively and has become more qualified than ever before. Simultaneously, the share of women in the labor market has increased. On the other hand, labor market policy has set certain impulses that potentially take effect on informal employment. More legal opportunities to flexibilize the employment relationship have been created, while at the same time controlling institutions such as the Dirección del Trabajo have been strengthened. These components constitute incentives for the formalization of employment, and suggest a decreasing tendency of informality (H1a).

The observed time span includes two crises that were of significance for the Chilean economy. Former research has produced inconsistent results regarding the share of informality in times of crises. While an upward tendency of informal self-employment was rather detected in times of economic growth than of economic recession, an opposite trend has been observed for the share of informal salaried workers. Sehnbruch (2006: 123) found that the impact of the 1999/2000 crisis in Chile affected particularly the dependent sector of the labor market, both through a mounting number of flexible employment arrangements and through a lower share of jobs covered by social protection. With regard to the definition employed for this work, a positive effect of economic crises on the share of informal employment is expected (H1b).



**Personal Characteristics**

While informal self-employment has been found to affect men to a higher degree, informal employment seems to constitute rather a female domain. A variety of reasons are relevant for this imbalance, ranging from social norms that are passed on over generations and consider women in charge of the greater part of the reproductive work to reduced access of women to professional networks and other relevant resources (Kucera/ Xenogiani 2009). In this respect, the Chilean labor market constitutes a setting for the current re-negotiation of gender relations: While traditional gender roles maintain their influence to a certain extent, particularly among younger generations women increasingly take part in the labor market. The enhanced labor market participation is reflected not only in a higher share of women in the workforce, but also in their increased access to higher qualified employment (Todaro/ Yañez 2004). Thus, although a positive effect of women's employment on informality is expected to be found (H2a), its development over the observed time span is expected to exhibit a downward tendency (H2b).

The role of gender is closely linked to the aspect of family status. For women, starting a family and taking charge of the reproductive work has been linked to increased informal employment (Rodin et al. 2011). However, the position as head of household is related to a higher engagement in formal employment. These contrarious tendencies point to a more complex relationship between family status and informality. As reproductive work is not only linked to higher informality, but also to an increased tendency to withdraw from the labor market altogether, it is expected that the negative effect on informality prevails (H3).

Regarding the age structure, the literature identifies particular tendencies towards informality among the youngest and oldest groups of workers. Studies point on the one hand to a reduced access to formal employment, particularly among younger workers, and on the other hand to a reduced willingness to comply, for example with contributions to the pension system, predominantly among older workers (Perry et al. 2007). Considering these difficulties that younger workers face at the entrance in the labor market, they are expected to exhibit a particular high risk of informal employment independent of their educational levels and other characteristics (H4a). While this risk is expected to decline for prime age workers, a similar effect for older workers is likely (H4b).

Ethnicity constitutes an issue of particular importance in the Latin American context where conflicts regarding access to resources of different kinds for members of indigenous groups continue. High levels of poverty and informality in combination with low levels of education and labor market participation have been highlighted as characteristics for the Mapuche, the largest ethnic group in Chile (Cerdeira 2009). As a consequence of this particularly disadvantaged situation on the labor market, a positive effect of declared membership to an ethnic group and informality is expected (H5).

Education has been widely accepted as playing a particular role in deciding workers' chances on the labor market. As a vehicle for the transfer of social and cultural capital, it is considered an important factor for the development – or reduction – of wider social inequalities (ECLAC 2010; Atria 2004). Regarding informality, education levels have been found to diverge according to the status of in/formality, as formal workers exhibit higher educational levels in comparison to informal workers (Gasparini/ Tornarolli 2006; Infante 2011).

In regional perspective, educational levels in Chile are among the highest. Primary education has approached universal coverage, and particularly tertiary education has expanded considerably throughout the past two decades. The importance of education in relation to informal employment is expected to be reflected in a negative effect on the risk of informality (H6a). Nevertheless, it should be taken into account that the lack of contractual arrangements or atypical contractual arrangements (such as honorary contracts) have increasingly spread to workers with higher educational levels (Cárdenas 2012), which in consequence are likely to lose the advantage of lower levels of informal employment (H6b).

While the former hypotheses focus predominantly on personal attributes of workers, the following section addresses characteristics of the productive structure that may have an impact on the risk of being employed informally.

### **Workplace Characteristics**

The connection between firm size and risk of informality has been at the very beginning of the discussion on the issue. Informality has been shown to correlate negatively with firm size - on the one hand due to the organizational restrictions that prevent smaller enterprises from becoming formal, and on the other hand due to greater possibilities for smaller enterprises to remain “invisible” in comparison to larger ones (Portes et al. 1989). Informal employment as defined in this work is not necessarily restricted to smaller enterprises. However, the described effect is expected to persist in the Chilean case independently from other effects (H7).

Domestic workers constitute a particular group with regard to informality, not least due to the invisibility of their work (Valenzuela/ Sanches 2012). As a consequence, compliance with labor regulations is often patchy or non-existent. It also has to be considered that for a long time, labor legislation for domestic workers was very limited in comparison to other occupations. In fact, domestic workers are often automatically considered as an element of the informal sector. Thus, a particularly strong effect of domestic work on informality is expected (H8).

Recent studies promoted by international organizations have pointed to the high level of “structural heterogeneity” in the Latin American region, which is particularly pronounced in the Chilean case (Infante/ Sunkel 2009; ECLAC 2010). From an economic point of view, this implies that the major part of the country’s growth is produced by a selected group of enterprises (particularly in the mining sector), while most enterprises have a much smaller partake in the generated growth. Significantly, this imbalance implies a variety of other inequalities, as workers in the lower productivity sector tend to be employed in jobs of lower quality. The lower quality is reflected in the working conditions in various ways, ranging from lower income and higher insecurity to higher shares of informality. These results point to a decisive influence of the sector of economic activity on the risk of informality. It is to be expected that, independent from other influences, employees in sectors of higher productivity exhibit lower risks of informality than employees in sectors of lower productivity (H9).

In conjunction with rising educational levels, transformations in the Chilean occupational structure have been observed that are reflected in an expansion of occupations that require higher qualifications and simultaneously concentrate in the tertiary sector (De Mattos et al. 2005). This development implies a particular decline of manual occupations and occupations

seen as traditionally “working class” (Espinoza et al. forthcoming). Generally, this finding can be seen as conducive for better employment conditions and an overall process of formalization. However, an opposed tendency has been increasingly taken into account by contemporary studies of (Latin American) labor markets, a tendency denominated variably as “precarization”, “flexibilization”, or also “informalization”, depending on the particular focus of the respective research (Kalleberg 2012; Vega Ruíz 2008; De Mattos et al. 2005). Based on new challenges faced by a globalized economy, authors refer to an increasing number of working arrangements alternative to traditional “standardized” employment relationships in terms of contractual status, working hours or other aspects of the employment relationship. It must be considered that “standardized” employment as coined in western post-war labor markets has hardly ever characterized a large part of the labor force in the Latin American context. However, the expansion of new forms of employment that correspond to the changing needs of the labor market and exhibit increased levels both of autonomy and of insecurity has been found to affect particularly higher qualified occupations (Gálvez 2001). This development points to a gradual transformation of informality that is not necessarily limited to occupations in positions of lower qualification levels but also affects workers in higher positions (H10).

## 5. THE STRUCTURE OF INFORMALITY – DESCRIPTIVE ANALYSIS

The following chapter should be regarded as a first introduction to the data in preparation for subsequent multivariate models. At this stage, the descriptive analyses will provide a general picture of the situation on the labor market, reflecting developments described and discussed in chapter 2. However, the first step consists in providing more detail on some particular characteristics of this data source in order to make clear what can be expected from the results presented in the following.

### 5.1. Description of the Data Source<sup>21</sup>

For the present analysis, data from the CASEN survey was used. The *encuesta CASEN* (Socio-Economic Characterization Survey) has been implemented since the end of the 1980s by the Chilean Ministry of Social Planning. Other organisms involved in the preparation, implementation and processing of the survey are the Faculty of Economics of the University of Chile, the National Institute of Statistics, the Economic Commission for Latin America and the Caribbean, and the United Nations Programme for Development.

The household survey works as an instrument for evaluating and planning social policy and is characterized by a strong focus on poverty. This implies detailed questions on income and on the participation in government programs aimed at the population living below the poverty line. In addition, the CASEN survey constitutes the longest continuous household survey in the country that is representative on the national level and provides information on employment. As such, CASEN data constitutes an instrument of analysis also for many researchers concerned with the Chilean society and labor market.

The CASEN data comprises various modules including education, employment, housing, and health. As such it is a valuable source of information for the analysis of a range of topics<sup>22</sup>. For many years, the CASEN also constituted the most complete and detailed source of information on employment conditions (Sehnbruch 2006). The labor market survey (ENE, National Employment Survey) carried out by the National Institute of Statistics remained

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<sup>21</sup> If not indicated otherwise, this section is based on the survey documentation published jointly with the CASEN survey data at the webpage of the Ministry of Social Development ([observatorio.ministeriodesarrollosocial.gob.cl](http://observatorio.ministeriodesarrollosocial.gob.cl)).

<sup>22</sup> Modules included in the CASEN have widely remained unchanged over the years, although additional questions have been introduced for issues such as migration, ethnicity, disability or participation in specific governmental programs. For future implementations, the introduction of rotating modules similar to surveys such as the European Social Survey or the International Social Survey Program is intended.

predominantly focused on unemployment and not on the characterization of employment. In 2009, a major revision of the survey was implemented, resulting in the NENE (New National Employment Survey) that provides more detailed information on employment on a trimestral basis. This constitutes an important progress for labor market analysis in Chile. However, the time period since its first implementation is still very short to give a picture on occurring trends. Hence, the analyses presented in this thesis are based on the CASEN data.

The data for the following analyses is provided by CASEN surveys from various years between 1994 and 2011. The survey has been carried out either bi- or triannually since its first implementation in 1987. Irregularities in its periodicity are mainly due to financial reasons. The sample of the survey has grown continuously since its first implementation. While the first CASEN survey comprises 22.793 households, the survey implemented in 2011 includes information on as many as 90.122 households.

A critical aspect to take into account is the coverage of the CASEN survey. Particular sampling methods are employed in order to obtain representativeness of the population. The sampling frame of the survey is based on the population census of 1982 (CASEN 1987-1994), 1992 (CASEN 1996-2000) and 2002 (data from pre-census for 2003, data from census for 2006 and 2009). In 2011, the sampling frame for rural areas was based on the population census of 2002, while the sample for urban areas was based on a new sampling design created by the National Institute of Statistics in 2008. Areas of difficult accessibility (particularly in the far north and south and the Juan Fernandez and Easter Islands, which account for a total of 0,4% of the population) are excluded from the sample. The applied random sampling method is multi-stage and includes regional stratification and clustering. Stratification is geographical, whereas the number of strata has been extended over the years in order to obtain higher accuracy.

As with any complex survey, working with the CASEN survey implies to take into account problems of non-response of different forms. One aspect to consider is unit non-response, observable for the 2011 version where for about 20% of the selected households no interviews were conducted. It was found that unit non-response was higher in more affluent areas, which results in a distortion of the survey data with respect to the socio-economic characteristics of

the population. In order to respond to this problem, the survey weights are adjusted in a way that cases included in the survey compensate for those where no interview was conducted. For all years of the CASEN survey, different weights were calculated that provide representativeness of the survey both in urban/rural areas and on the national, regional and communal level<sup>23</sup>.

Due to its declared focus on the measurement of poverty and coverage of social programs, the determination of income occupies an important role in the design and processing of the CASEN data. Given the distorted occurrence of non-response regarding socio-economic status on the one hand, but also the misreporting – generally underreporting - of income on the other hand, a complex procedure is applied by the ECLAC in order to determine actual income levels. This includes the before mentioned calibration of survey weights, but also the adjustment of the income information obtained from the CASEN survey with the National Accounts System of the Chilean Central Bank.

Throughout Latin America, Chile is the only country to apply this kind of procedure to its most important household survey (Bravo/ Valderrama 2011). Regarding poverty and inequality measures, it was found that the adjustment procedure leads to slightly lower results regarding the poverty rate and higher estimations of inequality (Bravo/ Valderrama Torres 2011; Pizzolitto 2005). Controversies regarding the publication of CASEN data usually revolve around the issue of the determination of incomes and the resulting poverty rate in the country. Undoubtedly, the CASEN survey has turned into an instrument of evaluation of the government in charge, which triggered an even more intense debate concerning the CASEN 2011, the first to be published under the new right-wing government. Discussions predominantly focused on the published poverty and indigence rate and the variables included in the determination of income (latercera.com 2012; FT.com 2012; CIPER 2012).

Traditionally, the CASEN data is collected in the months of November and December of the respective year. In the data for 2011, a second period of data collection was introduced in October. In order to maintain comparability with other CASEN years and to avoid distortion of the information due to seasonal fluctuations, the sample referring to the usual period of data collection will be used for the analysis of 2011.

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<sup>23</sup> Achieving representativeness on the communal level is the main reason why the sample size of the CASEN has grown in the before mentioned extent. Current discussions suggest that this objective will be omitted in future versions of the survey, which would imply no further extension of the sample (MIDES 2012).

## **5.2. Definitions and Concepts**

This section addresses the definitions employed for the relevant concepts in the context of studying informal employment. Firstly, it is important to take into account that this analysis concentrates on the employed population of working age, that is, 15 years or more. No upper age limit was defined. The employed population encompasses all persons who declared to have worked a minimum of one hour during the week prior to the interview, including all those who usually work but find themselves sick or temporally absent from work for other reasons. Furthermore, only dependent employment relationships are taken into account, excluding self-employment and employers from the analysis. Helping family members and members of the armed forces were not part of the analysis.

What this work cannot take into account is thus the situation of both the unemployed population – those who declared not to have worked the week before but made concrete efforts to find work in the past 4 weeks – and the inactive population, that is, all persons who are neither working nor looking for work, which applies for instance to students (who are not working), retirees or persons not participating in the labor market for other reasons.

### **5.2.1. Operationalization of Informality**

Informality of the employment relationship as defined in this study consists of two different dimensions: contribution to the pension system and tenure of a written contract. This approach reflects that the phenomenon of informality is particularly hard to grasp and requires an approximation through suitable indicators. The selected indicators were chosen in line with the regulation perspective of Portes and colleagues as discussed in chapter 3.

#### **Tenure of a written contract**

The written employment contract constitutes the main instrument to stipulate the rights and obligations of workers and employers. An employment contract implies that the employment relationship is regulated according to the employment legislation, i.e. that the employment relationship “exists” for public records. Formality thus means for workers the possibility to insist on their rights. Principally, the same rights also apply for workers without contracts, but in this case they would have to prove that the labor relationship effectively exists. Obtaining this proof is extremely difficult, and in any case hardly any workers go that far, as this measure is practically equivalent to job loss.



The tenure of a written contract was registered slightly differently throughout the years. However, a clear distinction between those in possession of a written contract and those without one remains feasible. It should be emphasized that in this analysis, there is no distinction made regarding the type of contract at hand, for instance, no distinction is made between so-called atypical contracts (as for example temporary or subcontracting) and unlimited contracts. While it is not to be denied that atypical contracts do not offer the same level of protection to the employee as standard employment contracts do, this work is focused on the formal aspect of the employment relationship that is of particular relevance in Latin America (Leiva 2012).

### Contribution to the Pension System

While the employment contract represents a strong and widely-used measure for informal employment, it has been shown that informality is often rather a question of degree than of a clear distinction between a completely formal or completely informal employment status (Jütting et al. 2008). The most-used alternative measure of informality constitutes contribution to social security, in most cases the contribution to a pension fund (Henley/Arabsheibani 2008). Apart from the fact that contribution to a pension fund is an obligatory constituent of virtually all salaried employment contracts in Chile, it also responds to the “social protection” perspective of informality. Workers contributing to social protection have access to assistance in case of adverse circumstances such as unemployment, death of a family member or also disability. Contribution to the pension system in this case represents workers’ participation in the social protection system.

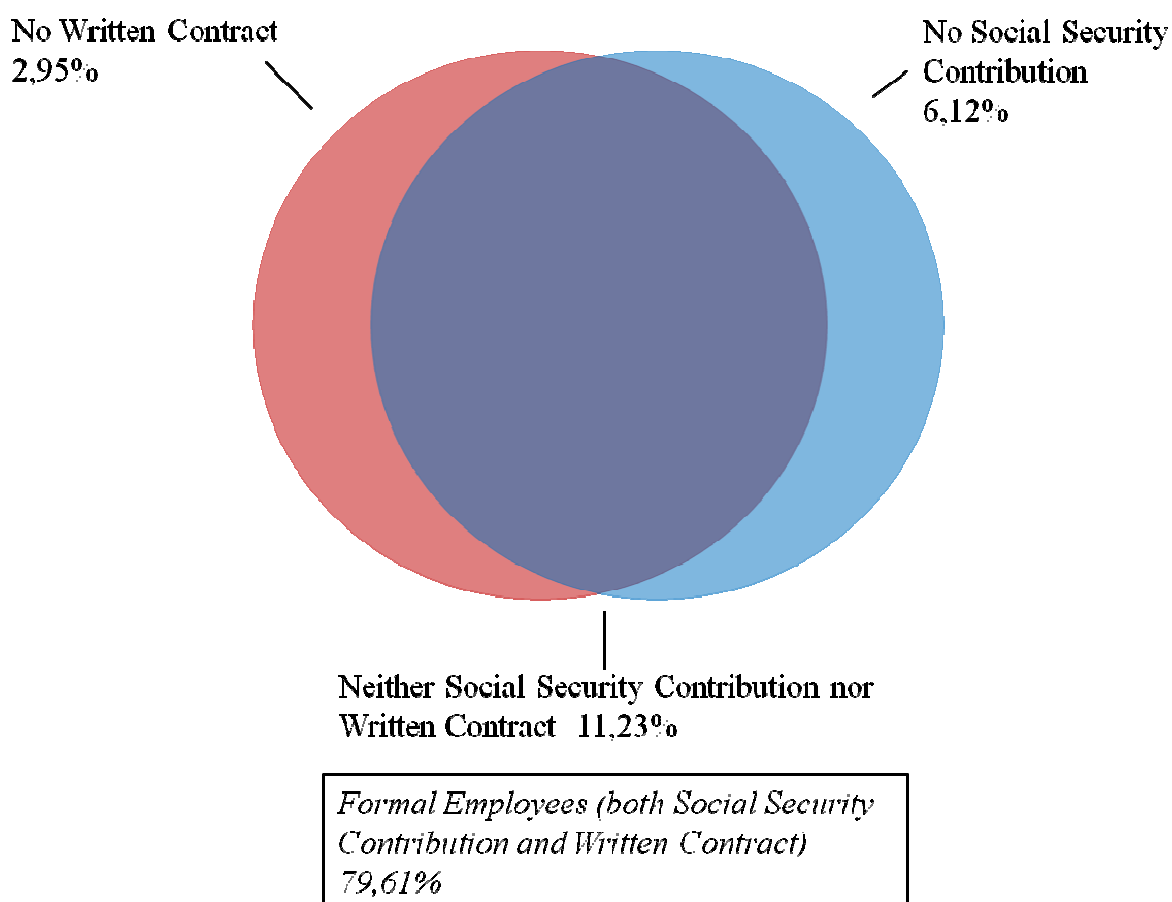
In some years, the CASEN survey distinguishes between being affiliated to the pension system, that is, having an established account at one of the private pension funds (AFPs), and actually contributing to a particular pension plan. In the years when this distinction is made, only the second case is counted as formal. An established account indicates nothing more than that the worker, at some point in his or her life, has contributed to the pension system, but it does not provide any information about the current status of employment.

The aim of integrating these both criteria in the definition of informality is to account for cases in which the distinction between the formal or informal status of employment is particularly difficult. As described in previous chapters, some workers may find themselves employed via honorary contracts, find themselves in a de facto subordinate employment

relationship with the corresponding obligations, but not have access to the same protection as salaried workers. Workers who are classified as “informal” according to one of the chosen categories – that is, workers who either do not have a written contract or do not contribute to social security – are consequently considered as informal. In the case that no information was available in one of the categories (workers who responded “don’t know” in one of the categories), the other category served for the classification.

Figure 5.1 exemplifies the employed categorization with data from the CASEN 2011. The shaded circles each represent workers defined as informal by one of the categories and form together the totality of informal employees. As can be observed, the categories overlap to a large extent. However, nearly half of informal workers are classified only according to one of the categories, the larger part according to social security contributions.

**Figure 5.1: Informal Employment according to social security contribution and tenure of a written contract**



Source: CASEN (2011), author's calculations

### 5.3. Descriptive Analysis<sup>24</sup>

The following section gives an overview of the extent of informality as constructed from the described dimensions and its development in time. Subsequently, the specific development of levels informality among particular population groups and of relevant factors will be presented on a descriptive basis in order to provide a first insight on its unequal distribution in the working population.

#### 5.3.1. Status of Informality

The combination of the two described measures (workers who are either outside of the pension system or do not count with a written contract) reveals the extent of informality as defined for this work<sup>25</sup>. As is to be expected, the informality rate turns out higher than any of both measures on its own, and remains above 25% for most of the time<sup>26</sup>. The most abrupt drop in the informality rate is found between 2009 and 2011, a decline of over 5% within 2 years (from 25,5% to 20,3%). Both crises are reflected with slight increases of the informality rate in 2000 and 2009.

The more or less constant share of informal workers during the 1990s and 2000s coincides with a general extension of the participation rate until about 1995 (Banco Mundial/ BID/ SERNAM 2007) and a rise of unemployment. While during this period of strong economic growth (see chapter 2 for more details) a great number of jobs was created, it was not sufficient for the growing size of the workforce. Besides this issue of job creation, the data shows that the jobs created did not contribute to a higher share of formal employment.

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<sup>24</sup> All analyses in this chapter were performed with weighted data in order to provide national representativeness.

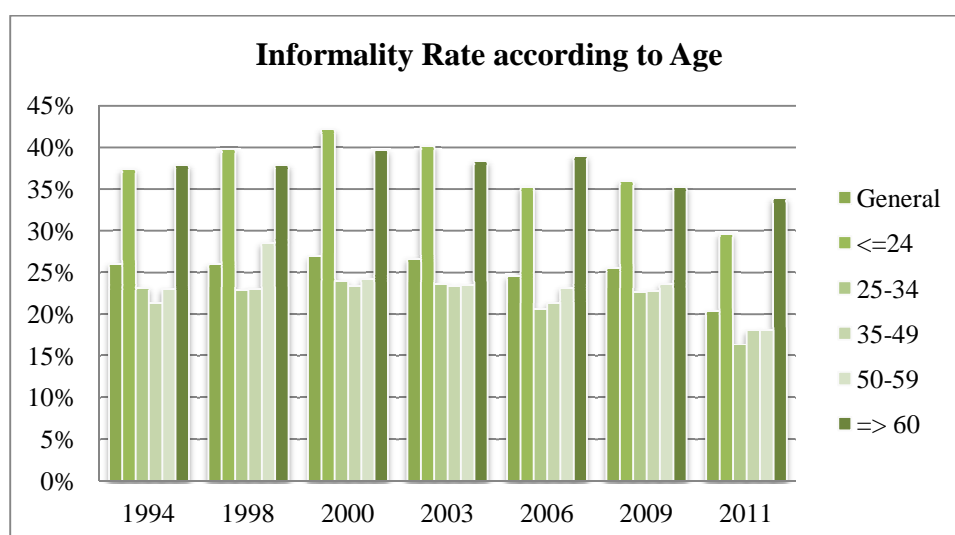
<sup>25</sup> For more detailed information of informality rates according to the chosen dimensions, see Annex 9.1.

<sup>26</sup> Data on workers without a written contract report generally slightly lower figures than those on contribution to the pension system (the difference varies between -0,2% in 1998 and 3,1% in 2011). An explanation of this difference is offered by studies that document workers in the so-called “grey zone” as discussed in chapter 2: Although considered as independent workers, including the corresponding obligations (which may be documented in an “agreement” that fulfills the same function as an employment contract), these workers are formally self-employed. These circumstances can lead a worker to consider him-or herself as dependent worker, even holding something similar to a working contract, without contributing to the pension system or other social security mechanisms (Leiva 2012).

If we remember the development of the unemployment rate as exposed in chapter 2, the data shows that the rate of informal workers reacted similarly to the crises of 1998/99 and 2008 as the unemployment rate, with slight increases. This data suggests that both crises not only left a part of the workforce without jobs, but also had an impact on the social protection of jobs held by those who managed to remain in employment<sup>27</sup>.

Similar to the 1990s, the decade of 2000 was marked by a further extension of the labor force participation rate. At the same time, the rate of informal workers dropped from 2000 to 2006, a pattern repeated after the crisis of 2008. As mentioned, labor market reforms have been on the political agenda since the return to democracy. However, regarding participation in the pension system, the reform decided in 2008 is of particular importance. The “reforma previsional” introduced important changes regarding the individual savings account system, aiming to gradually extend its coverage to independent workers and providing incentives for participation of particularly vulnerable groups in the labor market. Apart from these measures, the pension reform envisaged a stronger role of the state in the provision of pensions for those who do not count with the necessary minimum of contributions and a stronger emphasis on voluntary contribution (Arenas de Mesa 2010). Among other aspects, these measures are certainly involved in driving the rate of informal workers to the lowest in the observed time span.

**Figure 5.2: Share of informal employees, overall and specific rates according to age**



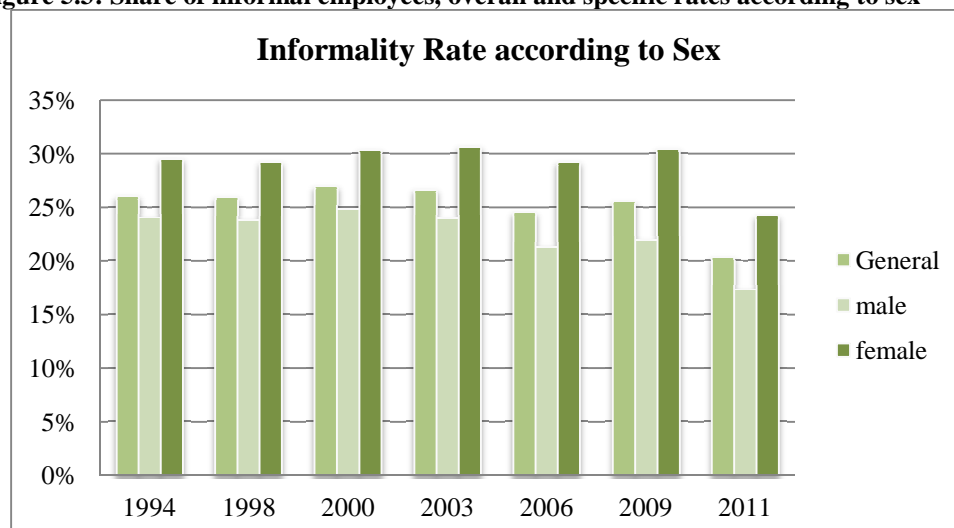
Source: CASEN (1994-2011)

<sup>27</sup> It should be remembered that this data only refers to salaried employment and does not represent the situation of self-employed workers.

Figure 5.2 also provides insights on the salient differences in the informality rate according to age. Describing a clear U-shaped pattern, a considerably higher share of older and younger workers find themselves working informally than is the case among middle-aged workers. This points to a large group of workers “not yet” and “no longer” in informal employment. Both groups reached an informality rate of over or close to 40% in 2000. That is, more than every 4 out of 10 workers in these age groups were employed informally in some way at that time. However, it is also in this group (and among workers between 50 and 59 years of age) that in the following years the rates of informality decline considerably.

Various factors may contribute to this unequal distribution of the informality rate according to age groups. Older workers may be already receiving some kind of pension while obtaining some additional income informally. It should also be taken into account that contracts from before 1983 do not necessarily stipulate an obligation of contribution to the pension system. Furthermore, as the institution of a system of individual savings accounts in the early 1980s made itself felt after some decades when it became obvious that a large group of workers would not qualify for any benefits from the system, many may have decided to remain in the workforce outside of the system.

Younger workers on the other hand may also rather accept a status of informality, viewing it as a bridge to formal employment, or simply not attaching much importance to this aspect of employment (yet). In view of the particularly high rate of young workers outside of the pension system (which reached over 37% in 2000, describing a considerable increase in comparison to 1994), the reform created an incentive in form of a subsidy for every young worker employed to a certain wage limit (up to 1,5 times the minimum wage) who contributes to the pension system. Since 2000, the informality rate for the youngest group of workers has decreased considerably (over 10%), pointing to a progressive share of young workers with written contracts and covered by the pension system. Simultaneously, informality rates of workers between 25 and 59 years of age remain on comparatively similar levels throughout the years, following a pattern of slight increase in times of crisis and of decline afterwards.

**Figure 5.3: Share of informal employees, overall and specific rates according to sex**

Source: CASEN (1994-2011)

Data on the share of informal employment according to sex gives evidence of clearly perceivable differences between men and women. The share of informal workers among women remains constantly over 5% higher than among men. This disparity follows a tendency of becoming larger over the years: Women show a 5% higher share of workers outside of the pension system in 1994, a gap that remains roughly stable during the 1990s and then widens to between 7% and 8% during the 2000s. In 2011, 6,9% less employed men find themselves in informal employment than their female counterparts. Based on the descriptive analysis, the “gender gap” in informality as indicated in chapter 3.5 is thus confirmed.

A more detailed view on the development of informality illustrates that the turn of the century also constituted a turning point with regard to informal employment. While the decade of strong economic growth did not lead to improvements in this area, the 2000s show a gradual decline of informality in its various dimensions. Previous figures also illustrated how informality does not affect all workers equally but rather concentrates in the first and last phases of working life and is also rather to be found among women.

The graphs provided first insights that certain characteristics of workers are important for determining if they are more likely to be employed informally or not – age and sex are confirmed as relevant influences in this respect. To what extent these findings are consistent when the influences of other factors are accounted for will be the subject of the multivariate analyses in chapter 5. The following section will focus on the variety of further factors that were identified to play a role in informal employment and provide an overview of their development over the observed time span.

### **5.3.2. Relevant Variables**

In the following, the variables are presented that were identified as relevant for the analysis from the literature review. This section deals on the one hand with the kind of information gathered by the included variables and on the other hand with the development of these variables over the observed time span. In this way, the transformations taking place in the labor market are demonstrated on the basis of concrete information derived from the CASEN data set. The employed method also requires the determination of one response category as the reference group. It constitutes the “perspective” from which the results are interpreted. More details on logistic regression is provided in chapter 6.1. In this section, the selection of the reference groups will be discussed.

Growth in women’s labor market participation is reflected in a continuously growing share of female employees between 1994 and 2011. While their share was as low as 36% in 1994, this percentage amounts to over 43% in 2011. As the data show, women continue to account for a smaller part of the (wage earning) workforce. However, if this information is put into time-comparing perspective, it becomes obvious that actually a slow process of closing the gap is in place. For the subsequent analysis, male workers were chosen as the reference group.

The development of workers’ family status reflects particularly high changes between 1994 and 2011. As can be observed, the status of marriage is found in decrease, while the share of single workers (this category also includes married respondents living in separation, divorced, and widow/ers) and particularly of persons living in partnership is on the rise. Workers in the single category were assigned as the reference category.

Age was already discussed as a decisive factor for informality. For the empirical analysis workers were divided into groups, from the youngest (until 24 years of age), those in the main age for labor market participation (25 to 34 years, 35 to 49 years and 50 to 59 years), to older workers (60 years and older). As reference group the so-called ‘prime-age’ workers (35-49 years) were selected.

Information on education provided by the CASEN survey is twofold: the highest completed course and the years of education completed. This work draws on information provided by the respondents on the highest course completed. According to the structure of the Chilean educational system, educational levels include complete primary school or less (regularly completed after 8 years of schooling), complete secondary school (after 12 years of schooling) and tertiary education. Furthermore, respondents had the possibility to indicate possible incomplete secondary and tertiary education.

The remarkable drop in the share of workers under the age of 25 between 1994 and 2000 can only be understood when simultaneously taking into account the massive rise in education levels over the considered time span, particularly on the tertiary level. The institutional diversification in higher education that took place since the end of the military regime made higher education accessible for a great part of the Chilean population who had not had this option before. Between 1990 and 2004, enrollment in the higher education system doubled (PNUD n.d.). As can be observed, the share of the population with completed secondary education also increased, pushed decisively by a law passed under president Lagos in 2003 that extended compulsory education to 12 years.

CASEN data reflect this development: While in 1990 hardly 40% of workers in the sample had completed secondary education, this share increased to over 66% in 2011. A logical consequence of this trend is the increase of workers’ age at the start of work, reflected in a smaller share of workers under 25. A decline is also observable among workers between 25 and 34 years of age. Besides the prolonged stay in the educational system, lower fertility rates may also contribute to this shift towards a higher average age (see chapter 2.2).



Regarding ethnicity, the available data show an increase (from 3,7% to 7,3%) of respondents who declared themselves as belonging to an indigenous group. The Chilean law recognizes 9 indigenous groups, among which the Mapuche constitute the largest one. Ethnicity in the CASEN is registered through self-declaration, an aspect that seems crucial in this context. It has been suggested that the observed increase is not so much due to higher fertility rates, but due to a stronger tendency within the population to recognize membership to an indigenous group (Cerdeira 2009).

Migration was approximated through nationality, i.e. migrants in this model are defined as respondents of non-Chilean nationality. From the data it is impossible to differentiate between foreign nationalities. It has been shown however that most migrants are of Bolivian and Peruvian nationality (Contreras et al. 2012). The presented data cannot give information on trends over time as the measurement of nationality was introduced after 2000, but it becomes evident that the share of workers with foreign nationality is very limited (1,7%).

In order to control for possible effects, the occupational structure was also taken into account for the calculation of the models. Information in this respect is organized according to the ISCO-88 classification. This classification facilitates the organization of jobs by the corresponding tasks and duties. Depending on the level of skills required for the jobs in question, they can be divided into 4 groups that are ranked from the lowest to the highest necessary skill level (Bergman/ Joye 2005). The ISCO classification enables the subdivision of occupations into up to 390 groups (ILO 2010). However, this analysis will only take into account the corresponding skill levels<sup>28</sup>. Although the ISCO classification is very similar to information provided by the educational level, it also gives insight on the extent to which the acquired educational level corresponds to the qualifications necessary for the job in question. Thus, including information on ISCO levels serves to control for the level of qualifications required by a particular job. Skill level 2 is selected as the reference group, which corresponds roughly to educational requirements on completed secondary schooling level.

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<sup>28</sup> Although the first occupational group (legislators, senior officials and managers) is not assigned to a particular skill level by the official classification, they are included in the model in the highest skill level (skill level 4).

Sectors of economic activity are included according to the ISIC-classification (Rev. 2)<sup>29</sup>. Again, the classification allows for a very detailed categorization of jobs. However, only the main groups will be considered for this analysis, differentiating between agriculture, mining, manufacture, electricity, gas and water services, construction, commerce and gastronomy, transport and communications, finance, and community and social services. In contrast to the ISCO classification, the ISIC classification does not imply a hierarchical organization of jobs but rather concentrates on the branch in which the particular activity is performed. As reference category community and social services was defined.

The classification of workers according to branches confirms the trend of tertiarization as observed by Torche and Wormald and Espinoza et al. (see chapter 2.2.5). Typical branches of tertiary employment such as commerce and the hotel and restaurant industry have gained in importance, as the share of workers employed in commerce grew over 5% between 2000 and 2011. On the other hand, employment in sectors such as agriculture and manufacture declined considerably, with particularly the share of workers in manufacture being nearly halved between 1994 and 2011.

A central aspect as identified in the literature is to analyze workers' risk of informality according to the size of the firm they are employed at. Categories are formed in order to differentiate between very small (under 10 workers), small (11 to 49 workers), medium (50 to 199 workers) and large firms (200 and more workers). Small enterprises were defined as the reference group<sup>30</sup>.

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<sup>29</sup> In order to ensure comparability, information from 2011 which uses the ISIC-classification Rev. 3 was converted to Rev. 2 according to the correspondence table provided by the United Nations Statistics Division (unstats.un.org). For further detail, see Annex 9.2.

<sup>30</sup> In the analysis, discrepancies in the data became evident as some self-declared employees defined the firm size as "1". These cases were also regarded as self-employed and therefore excluded from the analysis. However, an exception was made for domestic workers, which make up the majority of employees who responded in this category. They were grouped in a single category.

Except for the gradual decrease of the share of domestic workers, information on firm size does not suggest a clear trend. The largest category over the years is constituted by firms with between 10 and 49 workers. The trend towards a concentration of workers in larger organizations as is observed between 1994 and 2000 is reversed according to data from 2011. However, rather than drastic changes in the productive structure, these fluctuations may relate to changes in the wording of the question<sup>31</sup>.

Information on the length of the employment relationship was calculated from the year that respondents declared as the year when they started working in their current job. This information only became available in the 2000 version of the survey. For the multivariate analysis, categories were formed for tenure of 1 year or less, 2 to 5 years (defined as the reference category), 6 to 10 years, 11 to 15 years, and over 15 years.

The data indicates that categories of shorter tenure prevail, as workers that started their job 5 years ago or less constitute over 60% of all respondents. Interestingly, a comparison of 2000 and 2011 indicates a trend of workers to remain for longer in the same occupation. The average tenure increased from nearly 6 years to about 6,8 years.

An important influence to control for in the context of informal employment constitutes employment on honorary contracts (see chapter 2). As a consequence of the previous limitation of the sample, only those workers are included who defined themselves as employees (in contrast to self-employed workers). Thus, this variable captures information on workers who, irrespective of their status as employees, declared to work on an honorary basis. It is an issue of discussion if these workers are actually to be defined as self-employed or as employees (Gálvez Pérez 2001). In this case, it is assumed that their employment relationship is basically one of employer-employee which is disguised as self-employment<sup>32</sup>.

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<sup>31</sup> While earlier versions of the CASEN refer only to the size of the establishment (“tamaño del establecimiento”), newer versions differentiate between the number of persons employed at the establishment in particular and the number of persons employed by the firm in the whole country. In newer versions, the question related only to the establishment in particular was taken into account.

<sup>32</sup> The CASEN survey does not allow for the differentiation between workers whose employment on an honorary basis relates to the principal activity and those where this form of employment may constitute a potential secondary activity. This implies potential inaccuracies of measurement.

**Table 5.1: Distribution of relevant variables**

Descriptive Analysis		1994	2000	2011
<b>Dependent variable</b>				
<i>Informality rate</i>		26,0%	26,9%	20,2%
<i>Workers outside of pension system</i>		20,8%	22,4%	17,3%
<i>Workers without written contract</i>		19,8%	22,9%	14,2%
<b>Independent Variables</b>				
<i>Sex</i>				
	Men	64,0%	60,8%	56,8%
	Women	36,0%	39,2%	43,2%
<i>Age</i>				
	<=24	20,0%	13,9%	14,7%
	25-34	32,3%	30,3%	25,9%
	35-49	32,5%	39,2%	35,2%
	50-59	11,1%	12,2%	17,5%
	=>60	4,3%	4,4%	6,6%
	Average	35,71	37,33	39,23
<i>Civil status</i>				
	Single	40,1%	37,0%	44,6%
	Married	53,5%	52,1%	36,8%
	Living in partnership	6,4%	10,9%	18,6%
<i>Ethnicity</i>				
	No ethnic group	n.a	96,3%	92,7%
	Mapuche	n.a	3,1%	6,4%
	Other ethnic group	n.a	0,6%	0,9%
<i>Nationality</i>				
	Chilean	n.a	n.a.	98,3%
	not Chilean	n.a	n.a.	1,7%
<i>Education</i>				
	Complete primary education	31,7%	25,6%	19,8%
	Some secondary education	18,6%	16,6%	13,8%
	Complete secondary education	29,1%	31,8%	36,0%
	Some tertiary education	5,0%	6,4%	8,6%
	Complete tertiary education	15,6%	19,6%	21,8%
<i>Attending an educational establishment</i>				
	Yes	2,6%	3,5%	6,0%
	No	97,4%	96,5%	94,0%
<i>Occupational status</i>				
	Skill level 1 <sup>33</sup>	40,0%	15,7%	28,9%
	Skill level 2 <sup>34</sup>	45,5%	72,1%	51,6%
	Skill level 3 <sup>35</sup>	5,8%	10,6%	7,0%
	Skill level 4 <sup>36</sup>	8,7%	1,6%	12,4%

<sup>33</sup> Includes elementary occupations<sup>34</sup> Includes clerks, service workers, skilled agricultural workers, craft workers, plant and machine operators<sup>35</sup> Includes Technicians and associate professionals<sup>36</sup> Includes legislators, senior officials, managers, professionals

*Sector of economic activity*

Agriculture	13,8%	12,2%	9,3%
Mining	2,2%	2,0%	3,6%
Manufacturing	17,0%	14,9%	10,0%
Electricity, gas and water	0,9%	1,1%	1,0%
Construction	8,1%	7,6%	9,0%
Commerce and gastronomy	14,0%	14,8%	20,3%
Transport and communications	7,2%	7,0%	8,3%
Financing, real estate	6,4%	8,4%	8,1%
Community, social and personal services	30,5%	31,8%	30,4%

*Firm size*

Domestic workers	8,5%	8,7%	8,1%
2-9	24,2%	22,6%	22,6%
10-49	31,8%	24,8%	29,6%
50-199	17,3%	17,1%	20,7%
=> 200	18,2%	26,8%	19,0%

*Employment on honorary contracts*

Yes	n.a.	n.a.	3,4%
No	n.a.	n.a.	96,6%

*Tenure (in years)*

<=1	n.a.	37,6%	29,3%
2-5	n.a.	28,8%	34,5%
6-10	n.a.	14,9%	13,9%
11-15	n.a.	7,2%	8,8%
>15	n.a.	11,6%	13,4%
Average	n.a.	5,95	6,82

N	39516	54326	52035
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Source: CASEN (1994-2000-2011), author's calculations, weighted analysis

#### **5.4. Conclusion**

The presented data is instructive in various respects. From a general perspective, it becomes clear that informal employment remains a highly relevant phenomenon for dependent workers, as at least a fifth of workers in this group are affected at any given time of observation. Thus, apart from independent workers who constitute the traditional “informal sector”, a considerable amount of dependent workers finds itself working in informal conditions. Although levels of informality have declined over the years since 2000, informal employment relationships in Chile are anything but disappearing and remain an issue to be considered in labor market analyses.

What is more, first bivariate analyses according to sex and age indicate that informal employment relationships are not distributed evenly across different groups of workers, which makes informal employment a potential basis for social inequality. Groups that find themselves traditionally in more disadvantaged positions in the labor market, such as women and younger and older workers, exhibit continuously higher levels of informality than men and the so-called prime-age workers.

Furthermore, a first descriptive comparison of relevant variables provides an overview of changes that have occurred in the labor market over the observed period, depicting inter alia a shift in the age structure, the growing share of women participating in the labor market, or the declining importance of marriage. While these changes are indicative of a series of transformation taking place at the moment in the Chilean labor market, it remains to be seen how these findings relate to the central issue of informal employment, a question which will be elaborated on in the following section.

## 6. MULTIVARIATE ANALYSIS

Following the descriptive analysis of relevant variables, multivariate models for the respective years were calculated. The first part of the chapter gives an introduction to the used method, offering a general orientation. The actual multivariate analyses concentrate on the one hand on personal characteristics of workers and on the other hand on characteristics that reflect the characteristics of the workplace. A comparison of the developments of factors for informal employment over time is provided, taking into account the observed shifts in the labor market.

### 6.1. The logistic regression model

The multivariate models were calculated by using logistic regression. In contrast to linear regression modeling where the direct effect of one or more variables on a dependent variable is measured, multivariate logistic regression explores the influence of several independent variables on the probability of occurrence of a particular event. Typical areas of application of logistic regression include for example the analysis of risks of mortality, where factors that increase or decrease the probability of death are investigated (Backhaus et al. 2008).

As a consequence, the regression equation as usually employed in linear regression analysis has to be slightly modified for logistic regression analysis:

$$\ln \frac{P(y=1)}{1-P(y=1)} = \beta_0 \cdot x_0 + \beta_1 \cdot x_1 + \beta_2 \cdot x_2 + \dots + \beta_n \cdot x_n$$

The resulting regression curve asymptotically approaches 0 and 1. Thus, it is highly appropriate for the analysis of categorical dependent variables that have only two different values. In the model, the influence of different factors on the probability of occurrence for either one or the other event is estimated, i.e., for default or payment, for death or survival, or as expressed in statistical terms, for the variable to take on the value 0 or 1. In the present thesis, logistic regression provides a tool to analyze the probability for workers to find themselves either in a formal or informal employment relationship.

As a consequence, the method to calculate the best possible fit of the model to the given data also differs from linear regression models – while linear models generally employ ordinary least squares regression, the logistic regression was calculated on the basis of maximum likelihood estimation. In general, this procedure aims not to reduce the difference between expected and the observed value to a minimum, but to maximize the likelihood that the distribution of the estimated values corresponds to the distribution of observed values.

The influence of categorical variables on this probability is generally expressed relatively to a reference group. If for example the influence of educational levels on the probability of informal employment is to be modeled, a group of workers with a particular educational level (e.g. completed secondary schooling) is chosen as the reference group and the effect of educational level is expressed in reference to this particular group of workers. The effect of completed primary schooling would then describe the difference in the probability of informal employment between a worker with completed primary and completed secondary schooling.

Explaining a significant percentage of the variance of informality is one of the objectives of the constructed models. Even so, their prime contribution lies in the identification of effects that enhance or decrease the probability for informal employment. The advantage provided by multivariate models as these is the possibility to analyze the effect of one of the variables “corrected” by the interferences that might result from other variables.

For the interpretation of logistic regression models, the concept of odds ratios is of fundamental importance. As the equation shows, the relationship between the independent variables and the dependent variable is not linear. There is however a linear relationship to be found between the independent variables and the logarithmized odds ratio of the dependent variable. As a consequence, the coefficients resulting from the calculation of logistic regression models (“logit-coefficients”) cannot be interpreted as in usual linear regression models. The interpretation should only be undertaken on a general level in relation to the positive or negative value of the coefficient (Backhaus et al. 2008).

Through the insertion of the coefficient in the following equation, the logarithmized odds ratios (= logit-coefficients) can be transformed into predicted probabilities of occurrence that are much more appropriate for interpretation.

$$p(y=1) = \frac{1}{1 + e^{-z}}$$

$e$  ... Euler's number

$z$  ... logit-coefficient



Various regression models were calculated both for the year 2011 as for the years 1994, 1998, 2000, 2003, 2006, and 2009. In addition, the results of the regression analyses are subjected to a further statistical test. Differences among coefficients between certain years<sup>37</sup> were tested for statistical significance by means of the ‘seemingly unrelated estimation’ command in STATA. This method serves as a tool for the comparison of estimators between groups and has also been employed for testing the significance of differences between estimators across time (Cloïn et al. 2011; Verwiebe/ Fritsch 2011). In this way, apparent differences across time between the models are tested for their ability to describe actual changes in the population.

## **6.2. Factors for Informal Employment**

This section is dedicated to the presentation and discussion of the information obtained from the logistic regression models. All models produced for the most part highly significant results, i.e. a wide range of the tested factors are relevant for the determination of the probability of workers to be employed informally. In fact, effects that do not reach the highest level of significance are rather the exception than the rule. This finding implies that, independently from a variety of other influences that are controlled for, risks of informal employment differ greatly between different groups of workers. This stratification of the risk structure is not reducible to one factor; instead, several influences need to be considered. These influences will be discussed differentiating between personal characteristics and workplace characteristics as follows.

### **6.2.1. Factors for Informal Employment – Personal Characteristics**

The first part of the analysis is focused on the comparison of the influence of personal characteristics of workers over the years. Relevant factors to be included in the analysis are sex, age, education, family status and ethnicity.

Students of the Chilean labor market have repeatedly pointed to the considerable differences between men and women regarding labor market integration. Not surprisingly, the analysis also shows that risks for informal employment differ according to sex. It becomes clear that women constitute a group prone to informal employment. Despite controlling for other effects that may lead to a higher risk of informality for women, an independent effect remains.

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<sup>37</sup> Due to the sometimes opposing trends that were detected between the years 1994-2000 and 2000-2011, the tests for significance of the differences were calculated for both time periods. For the variables included in 2003, the difference between 2003 and 2011 was calculated.

Several factors have been found that contribute to the higher share of women in informal employment. The importance of female domestic workers, for instance, is not to be underestimated in this context. The descriptive analysis shows that the share of domestic workers in the dependent workforce is slowly declining over the years but remains at 8,1% in 2011. Considering that a great part of domestic workers are women and work informally, a part of the effect of sex on informal employment should be explained through this relationship. However, a significant gender effect remains that is not explained by the other introduced variables. That is to say, domestic workers do not (only) work informally due to the elevated percentage of women in the occupational group; neither is the elevated risk of women to work informally reducible to their greater share in domestic employment. Moreover, earlier studies have suggested that an elevated level of informality among women is due to the reconciliation of work and family. However, it has been shown that this strategy to combine work and family is mainly followed by women who engage in self-employment, as informal employment often does not provide this sort of flexibility (see chapter 3.5.1).

Risks of informality for female workers vary slightly between 1994 and 2000 and again between 2000 and 2011. From 1994 onwards, risks of informality for female workers increase until reaching their peak in 2000. Afterwards, risks continually decrease, except for the year 2009 where another rise is registered. The observed development is in line with increases and decreases of general levels of informality, as indicated in the previous chapter. That is to say, as informality decreases, risks of informality for women decrease particularly, and their risk of informality approaches that of male workers, while in turn in times of increasing informality rates, their risk of informality increases to a stronger degree.

For a long time, the Chilean labor market has been characterized for its particularly low participation of female workers. While differences in labor market participation are still considerable, a process of adjustment has been observed that has led to a gradual approximation of the labor market participation rate between men and women. The consequences of this development are potentially far-reaching and diverse and require a more thorough analysis than can be provided at this stage. Based on the information provided from this analysis it is observable that, as the share of female employees in the Chilean workforce increases continually, they are still confronted with different challenges regarding contract status and pension insurance in comparison to male workers. It should be noted however, that particularly in the last two years of the observed period, differences have become more subdued.

Information on civil status shows the continuous relationship between married workers or workers living in partnerships and informality. While the risk of informality is only slightly reduced for workers living in partnerships (in some years, no significant difference is observable), married workers definitely tend to work rather in formal jobs than those who are not. Informal employment affects workers *inter alia* through a lack of social protection and protection of worker's rights, which results in insecurity and insecure future perspectives. Under these circumstances, long-term commitments such as marriage are more difficult to sustain and tend to be postponed or even abandoned (Mills/ Blossfeld 2003). Under control for other variables, the risk of married workers is about 20-30% lower than that of single workers. That is to say, taking into account the fact that many single workers are younger and thus from the outset are affected by a higher risk of informal employment, they still experience a higher risk that is not to be attributed to the age effect but seems to belong to the effect of family status itself. In line with previous studies, this result thus provides support against the view of informal employment as a strategy for the reconciliation of work and family. Rather, it seems to indicate the contrary (Rodin et al. 2011).

Furthermore, the calculated models confirm that the risk of informality varies to a very strong degree as workers advance in their working lives. Clearly, the phenomenon of informal employment is to be located predominantly on the margins of the age distribution: youngest and oldest workers exhibit the highest risks of being employed informally. Workers in the age group of up to 24 years are clearly more likely to be employed informally as "prime-age" workers between 35 and 49 years. With increasing age, the probability for informal employment diminishes. Under control of other effects, the probability work in an informal job is lowest for workers between 50 and 59 years of age. However, for older workers the probability increases considerably and doubles in comparison to the reference group.

The significantly increased risk of informality for younger workers under control of tenure and firm size responds to a pattern found in most Latin American countries (Perry et al. 2007: 51). Younger workers, particularly in the age group in question (up to 24 years), may engage in informal employment as a means to enhance their or their family's income while they still attend educational institutions. In fact, the probability for informal employment is doubled through the attendance of an educational institution. However, even then a particularly elevated risk for the age group in question remains. This finding suggests that younger workers are confronted with particular difficulties to access formal employment, independent from their educational level or attendance of educational institutions.

Notably, the shifts in the age structure that have taken place over the observed time span and are reflected in an overall increase of the average age of workers (see chapter 5.3.2) seem not to be associated with a significant change of the risks of informality for the respective age groups. Descriptive analyses point to a tendency of workers to enter the workforce at a later age and, at the same time, remain in the workforce for longer. However, the effect of age remains relatively stable over the observed time period as younger and older workers consistently exhibit higher risks of informal employment.

Educational levels seem to interfere significantly with the risk of informality. Workers who completed primary education (8 years of schooling) or a lower level (which includes workers without formal education) exhibit a risk of informal employment nearly twice as high as those who completed secondary schooling. This effect is found to be even higher when other effects are not controlled for. For instance, lower educational levels are very likely to go along with more instable employment histories, which are another indicator for informal employment (Sehnbruch 2006).

These figures support on the one hand that education does not influence the risk of informality as much as it may seem from descriptive analyses. Particularly between groups with higher education levels (complete secondary education or higher), risk structures converge increasingly. On the other hand, low educational levels remain an important factor for informality. For the Chilean context, it should be remembered that by now complete secondary education is compulsory. While this measure (among others) seems to have a very positive impact on educational levels, it also implies that those with lower educational levels experience increased pressure and constitute a group in particular need of support.

In spite of considerable shifts regarding educational levels in the observed time span, the effect of education on risks of informality remains largely stable. Workers with lower educational levels than complete secondary education exhibit higher risks of informal employment, whereas complete tertiary education provides significantly lower risks of informality in any of the observed years. This shows that education is a reliable indicator for the risk of informal employment, both over the course of time and across different multivariate models. Findings by Infante (2011) point in a similar direction: Despite of an increase of educational levels among workers both in formal and informal activities, he detected a constant average difference of 2 years of schooling between those employed formally and informally between 1990 and 2006.

However, a particular shift is taking place among higher qualified groups of workers. As time comparison shows, the differences in the risk of informality between workers with completed secondary schooling and higher educational levels disappear increasingly. While completing secondary schooling remains an indicator for lower risks of informality, higher educational levels increasingly cease to lower this risk any further. Particularly in a moment where an increasing number of workers with secondary education and higher qualification levels are entering the labor market, this finding is of relevance regarding their employment outlook.

Declared membership to an indigenous group is one of the factors that do not appear as influential on the status of in/formality in this analysis. If ethnic background alone is included in the regression on informal employment, Mapuche workers exhibit a significantly higher risk of informality. However, the explanatory power of the variable is extremely low, and when other variables are introduced, no significant influence is detected. The statement of workers to have a Mapuche or other ethnic background does not point in any way to a higher or lower risk of informal employment in any of the calculated models. The higher percentage of informal workers among Mapuche is thus not to be attributed to their ethnicity but rather to other aspects of their job such as employment in a particular branch or in smaller enterprises (Perry et al. 2007; KAF 2010). For workers with another than Chilean nationality, the data indicates a similar effect as for Mapuche workers. While the number of informal wage earners is definitely higher among this group than among Chileans, other factors that are not related to nationality contribute to this imbalance. For instance, particularly female migrants are predominantly engaged in domestic work where, as indicated, particularly high levels of informality are observed (Stefoni 2009).

### 6.2.2. Factors for Informal Employment - Workplace Characteristics

Firm size has already been identified as a particularly relevant factor for informality<sup>38</sup>. Generally, the importance of this measure is linked to the elevated levels of informality among the self-employed and is often linked to the discussion on informal enterprises (Perry et al. 2007: 9; De Soto 1987). However, the analysis shows that a similar relationship is found for wage-earners. The data suggests that smaller firms are not only more likely to belong to the informal sector themselves (i.e. to function invisibly to any official registers), but also to employ their workers on an informal basis. With growing firm size, the risk to be employed informally decreases significantly.

This relationship is closely linked to the finding that, the longer microenterprises manage to “survive”, the higher is the probability of their formalization. Prior research has encountered informality as a growth strategy, indicating that small enterprises initially remain in informality until they have reached a certain size. As formalization is generally connected to certain costs, both once-only payments (such as a registration fee) and continuous costs (such as paying taxes), a large part of enterprises decide not to formalize until a certain level of income is assured (ibid)<sup>39</sup>. This situation is also reflected in the status of formality of their employees – whereas it must be kept in mind that formalization of enterprises and formalization of employment relationships are not necessarily simultaneous processes, as one may happen earlier than the other and vice versa.

Table 6.1 also shows that the strong relationship between firm size and informal employment persists over the observed period. Between 1994 and 2011, workers in smaller firms are constantly subjected to a higher probability of informal employment than workers in larger firms. However, a contraction of the risk structure seems to be taking place, as differences between workers in firms of different sizes become slightly smaller. That is to say, while firm size remains an important indicator for informality, its capacity to predict the in/formal status of workers has declined, as workers in firms of different sizes experience more similar risks to become employed informally.

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<sup>38</sup> The relevance of firm size is confirmed by a look at the pseudo-R<sup>2</sup>-statistics which provide information about the share of variance of the dependent variable explained by the various factors. What can be deducted from these statistics is that the model that includes only personal characteristics by itself explains only very little – about 7% of the total variance. As more factors are included, this measure eventually reaches 20%. It can be observed that firm size alone explains as much of the variance as is accounted for through all personal characteristics taken together. The importance of firm size regarding levels of informality is thus already confirmed even before taking into account the resulting odds ratios.

<sup>39</sup> These “barriers” to formalization constitute a focus of the FORLAC Program, a program recently instituted by the ILO to promote formalization in Latin American countries (ILO 2013).

Domestic workers are included as a particular category and exhibit extremely high risks of informal employment. Their probability to be employed informally is about nine times as high as for workers in enterprises between 10 and 49 workers. Hence, domestic workers represent one group where different definitions of informality overlap to a particularly high degree. While some definitions of the informal sector count them automatically as informal, a particularly high share of domestic workers is also affected by informal employment as defined for this work.

Considering data sets from various years also points out how domestic workers are particularly affected by the phenomenon of informality. In any given year domestic workers exhibit over 4 times the risk of informality than workers in firms with between 10 and 49 workers. While the years with the lowest risks are those immediately following the crises in 1998/99 and 2008, 2011 records the highest risk of informality in comparison to all other observed years. The extent of domestic work in Chile has been shown to respond quickly to economic downturns, as their employment depends predominantly on the capacity to pay of middle- and higher-income families (Valenzuela/ Sanches 2012: 154). As informal domestic workers are not protected by any kind of employment legislation, the reduced risk of informality may have been produced through the exit of informal workers from the domestic workforce.

The sharp increase of risks in informality in 2011 seems hard to explain at first sight. Domestic workers have experienced an increasing alignment of their labor legislation with the labor legislation valid for the majority of workers (*ibid*). Main adjustments concerned remuneration and the regulation of working hours. These measures aim to contribute to the improvement of working conditions of domestic workers and seem to find themselves rather in contradiction with the observed development. However, as these regulations have hardly been accompanied by more thorough controls, employers may have become actually more prone to hire domestic workers informally in order to avoid the higher costs related to hiring according to the new legislation.

According to table 6.1, sectors that imply the highest risk of informality for workers are agriculture, construction and transport. The middle field is constituted by community services, manufacture and commerce, and the lowest risk of informality is found in the mining sector, in financial services and in the electricity and gas providing sector. For example, workers in agriculture are twice as likely to be employed informally as workers in community and social services. At the same time, for workers in the mining sector this probability is only about half

of that for employees in the community and social services sector. This ranking corresponds roughly to the classification of sectors into low, medium and high productivity (Infante/Sunkel 2009). Although the strong effect of firm size is controlled for, the relevance of sectors regarding the differentiation of risks of informal employment remains.

Changes in the risk structures for sectors of economic activity are foremost observable between 2000 and 2011. In comparison to workers in the public or community service sector, most branches have reduced their risk of informal employment. Particularly for workers in sectors with traditionally lower levels of informality such as mining or electricity and gas provision, the ratio has evolved from virtually no significant difference in 1994/2000 to hardly 50% of the risk of workers in the public or community service sector in 2011.

The highest differences in the odds ratio are observable in the sectors of agriculture, transport and construction. In all three sectors, workers exhibited a risk of informality twice as high (or more) as that of workers in the reference group. In construction and transport, the risk remains elevated at a level of about 40%-50% in 2011, while in agriculture the difference is still about twice as high. These developments suggest that, while some sectors seem to have drawn closer in their risk of informality, the distance to those sectors with the lowest risk of informality remains large.

Employment on honorary contracts needs to be taken into account in this context. It exhibits particular patterns according to branches, as it was originally created for the provision of services (see section 2.2.5). Particularly public sector employment is marked by this form of employment as the hiring of new public sector workers functions predominantly through honorary contracts. Thus, the reduction of risks of informality of other branches in comparison to public services may be related to a modification of risks in the reference group rather than vice versa.

A particular interest of this study lies in the observation of the risk structure of informality according to the occupational structure. The observed fluctuations in the data indicate a shift of the risks of informality regarding particular groups. At the same time, the provided information over several years points to an advantage of this particular kind of data. For example, the considerable reduction of risk of informality in the year 2000 for skill level 1 occupations, which are characterized by the lowest requirements in qualification and responsibility, proves as a temporary low, while generally the risk of informality remains higher than that of skill level 2 occupations. Nevertheless, a general trend of risk reduction in



comparison to the reference group seems to be taking place. Simultaneously, the advantage of higher qualified occupations which include for example professionals, technicians or managers and seems to wear off over the years, as the difference in risks of informality becomes less important.

These results are in line with an observed spread of “flexible” employment arrangements that are not necessarily limited to occupations requiring lower qualifications (Mauro/ Yáñez 2005). Particularly in the case of grey zone employment as approximated through honorary contracts, it has been shown that they concentrate in higher qualified positions (Leiva 2012). This development points to a facet of informality that may become more important as educational levels rise and shifts in the occupational structure take place. “Qualified” or “professional” informality may appear as a new form of informality that affects different groups in the labor market than before.

The prevalence of short-term employment among informal workers is confirmed in this model. Particularly during their first year, workers have a much higher risk of informal employment than later on. This finding supports previous studies that point to the instability of informal jobs. On the one hand, this suggests that informal workers (are obliged to) change their jobs more often and experience elevated job insecurity. On the other hand, informal employment may at first serve as a “probationary period”, similar to temporary employment contracts, which potentially leads to the formalization of the worker after some time.

Table 6.1 also provides for a comparison between 2003 and 2011 of the significance of tenure for informal employment. Figures describe a similar development as was found concerning firm size. Highly significant differences persist, pointing to a much higher risk of informality for workers with shorter tenure, while the risk decreases the longer workers remain in the same job. However, the risk of informality for workers who have held the same job less than a year, in comparison to those with a tenure between two and five years, decreases from nearly 300% in 2003 to about 220% in 2011. Again, the risk structure seems to narrow down as differences become less accentuated. Under the perspective that levels of informal employment in general have decreased, this points to a generally positive trend of risk reduction for workers, particularly for those who formerly exhibited higher risks of informality.

The effect of employment on honorary contracts is, as expected, very high. While the risk of informality for workers who are employed on honorary contracts actually dropped between 2003 and 2006, the comparison to 2009 and 2011 shows a considerable increase. The latest available data indicates a risk of informality nearly 11 times as high for workers who emit honorary notes in comparison to those who do not.

This exorbitant discrepancy is primarily the result of the fact that in the case when honorary notes are applied, the labor relationship is officially of commercial nature, in which case an employment contract is not considered necessary. As this form of employment is not (yet<sup>40</sup>) linked to obligatory social security contribution, it is related to a particularly high level of informal workers. As a consequence, although their application among workers who consider themselves as employees and not self-employed (i.e. find themselves in a subordinate labor relationship, in which case the labor code actually stipulates its regulation through a written employment contract) is certainly not to be approved, the highly increased risk of informality is not particularly surprising. In fact, the application of honorary contracts in this kind of labor relationships rather constitutes an informal practice per se that requires further attention than a factor for informality.

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<sup>40</sup> This regulation is presently under reform, for more details see chapter 2.

**Table 6.1: Comparison of factors for informal employment 1994-2011**

	1994 Exp(B)	1998 Exp(B)	2000 Exp(B)	2003 Exp(B)	2006 Exp(B)	2009 Exp(B)	2011 Exp(B)	Diff 1994-2000	Diff 2000-2011
<i>Sex (Ref: Male)</i>									
Female	1.175***	1.298***	1.299***	1.296***	1.282***	1.368***	1.184***	0,124*	-0,115*
<i>Age (Ref: 35-49 years)</i>									
<=24	1.965***	1.926***	2.016***	2.072***	1.898***	1.818***	1.925***	0,051	-0,091
25-34	1.182***	1.152***	1.203***	1.255***	1.155***	1.134***	1.136***	0,021	-0,067
50-59	0.940	0.807***	0.910**	0.871***	0.898***	0.861***	0.833***	-0,03	-0,077
=>60	1.641***	1.898***	1.613***	1.550***	1.687***	1.448***	1.653***	-0,028	0,04
<i>Education(Ref: Completed secondary education)</i>									
Complete primary	1.749***	1.759***	1.970***	1.791***	1.710***	1.623***	1.822***	0,221*	-0,148
Some secondary	1.306***	1.410***	1.532***	1.437***	1.512***	1.404***	1.486***	0,226**	-0,046
Some tertiary	1.071	1.010	1.046	1.155*	0.942	0.924	0.990	-0,025	-0,056
Complete tertiary	0.816**	0.732***	0.756***	0.776***	0.752***	0.837***	0.881*	-0,06	0,125*
<i>Attending an educational establishment (Ref: No)</i>									
Yes	1.869***	2.227***	1.877***	1.933***	2.403***	2.250***	2.193***	0,008	0,316
<i>Ethnicity(Ref: No declared ethnicity)</i>									
Mapuche				0.985	1.027	1.067	0.962		-0,023
Other ethnicity				1.205*	0.992	0.953	1.082		-0,123
<i>Nationality (Ref: Chilean)</i>									
Non-Chilean							1.204*		
<i>Civil Status (Ref: Single)</i>									
Married	0.748***	0.779***	0.710***	0.699***	0.701***	0.759***	0.725***	-0,038	0,015
Living in partnership	1.022	1.102*	1.025	0.946	0.877***	0.906**	0.908**	0,003	-0,117**

*Sector of economic activity (Ref. Public and community service)*

Agriculture	2.253***	2.308***	2.559***	2.080***	1.634***	1.445***	2.165***	0,306*	-0,394**
Construction	2.095***	2.030***	2.179***	2.192***	1.629***	1.401***	1.428***	0,084	-0,751***
Transport	1.996***	1.956***	2.421***	2.145***	1.759***	1.376***	1.419***	0,425*	-1,002***
Commerce, gastronomy	1.274***	1.235***	1.224***	1.266***	1.215***	1.200***	1.249***	-0,05	0,025
Manufacture	1.141*	1.096	1.301***	1.366***	1.072	0.900*	0.995	0,16	-0,306***
Finance	0.906	0.913	0.948	0.908	0.836**	0.721***	0.766***	0,042	-0,182*
Mining	0.911	0.779*	0.871	0.760*	0.697***	0.620***	0.500***	-0,04	-0,371***
Electricity, gas	1.293	1.105	0.892	0.461***	0.541***	0.623***	0.554***	-0,401	-0,338*

*Occupational position (Ref. Skill level 2<sup>41</sup>)*

Skill level 1 <sup>42</sup>	1.595***	1.444***	0.683***	1.464***	1.256***	1.605***	1.182***	-0,912***	0,499***
Skill level 3 <sup>43</sup>	0.757***	0.926	0.759***	1.293***	1.313***	0.951	0.890	0,002	0,131
Skill level 4 <sup>44</sup>	0.726***	0.852*	0.813	1.058	1.229**	0.850*	1.014	0,087	0,201

*Firm size (Ref. 10-49)*

Domestic workers	5.148***	5.069***	5.685***	4.375***	5.824***	4.223***	7.291***	0,537	1,606***
2-9	2.814***	2.657***	2.318***	2.804***	2.810***	2.434***	2.184***	-0,496***	-0,134
50-199	0.621***	0.618***	0.674***	0.556***	0.603***	0.687***	0.715***	0,053	0,041
=>200	0.487***	0.550***	0.519***	0.445***	0.459***	0.583***	0.592***	0,032	0,073*

*Tenure in years (Ref. 2-5)*

<=1				3.200***	2.479***	2.084***	2.254***		-0,946***
6-10				0.681***	0.770***	0.861***	0.817***		0,136**
11-15				0.593***	0.553***	0.714***	0.790***		0,197***
=>16				0.700***	0.700***	0.793***	0.767***		0,067

*Employed on honorary contracts*

				6.989***	5.740***	10.649***	10.950***		3,961***
Constant	0.112***	0.125***	0.156***	0.136***	0.138***	0.176***	0.105***	0,044	-0,051
Nagelkerke's R <sup>2</sup>	0,191	0,182	0,165	0,176	0,162	0,147	0,147		

\* p< .05; \*\*p< .01; \*\*\* p< .001; Tests for significance of difference regarding ethnicity, tenure, and honorary contracts refer to data from 2003 and 2011.

Source: CASEN (1994-2011)

<sup>41</sup> Includes clerks, service workers, skilled agricultural workers, craft workers, plant and machine operators

<sup>42</sup> Includes elementary occupations

<sup>43</sup> Includes technicians and associate professionals

<sup>44</sup> Includes legislators, senior officials, managers, professionals

### **6.3. Conclusion**

Analyzing the risks of informal employment in detailed multivariate models allows for the identification of central influences on these risks. It becomes clear how particular factors, from demographic characteristics of workers to workplace characteristics shape these risks. Furthermore, the results highlight the pronounced disparities in the risks of informality experienced by workers according to various criteria. Far from constituting a homogeneous workforce, Chilean workers are exposed to a highly variable risk of informality, depending on their age, the economic sector they are employed in, or the years they have spent in their job.

The risk structure as observed for 2011 is consequently put into perspective when the development over time is taken into account. The development of the odds ratios over time demonstrates that, while some influences are of remarkable continuity, other factors exhibit significant differences between the observed years. While a range of characteristics prove decisive in 2011, the time comparison indicates that differences in the risk structure were in part even more pronounced in earlier years and have actually declined in some cases. That is to say, as divergent as risks of informality may have resulted in 2011, in many respects these differences between workers were even larger in previous years. However, this tendency does not apply to all factors, as for example domestic workers or workers attending an educational institution actually show an increase of risks in 2011 compared to previous years.

The observed contraction of risks applies primarily to three factors that have been identified as central to informal employment in previous research: firm size, occupational position, and length of job tenure. The decreasing importance of these factors indicates a trend of informal employment to change its structural determinants. It has been discussed already in previous chapters how the Chilean labor market has seen considerable shifts in its composition over the past years, which includes for example a general increase of educational levels and age levels of workers or a higher share of female workers. The analysis focused on informal employment shows that some of these shifts also affect informally employed workers. For example, as the share of female workers has continuously increased, their risk to be employed informally has also shifted, and has particularly in the last observed year approached that of their male counterparts. However, a domain of principally female employment, domestic work, remains a source of employment with high risks of informality, despite all efforts to improve this situation and to adapt the employment legislation of domestic workers to international labor standards (Leiva 2012).

## **7. CONCLUDING REMARKS**

### **7.1. Definition and Measurement Issues**

One important aspect of this work has been to provide an idea of what informality is and how it can be grasped in social research. It has been discussed how informality can be conceptualized and operationalized, making reference to the origins of the debate in the 1970s and the further development of research on the issue by different authors and organizations. It has been highlighted that the measurement of informality is a complex venture that has been done differently depending on the research discipline and objective of the respective observer. Thus, the employed definition and measurement of informal employment in this work represents only one among various possible ways to approach informality. The focus on informal wage earners constitutes at the same time a focus on the most “vulnerable” form of informality (Perry et al. 2007), which is reflected in the higher risk of informal employment for workers with lower qualifications, in lower skilled occupations, and for younger workers who are generally faced with difficulties regarding labor market integration.

The chosen operationalization – an and/or combination of the two defined dimensions of informality - deliberately constitutes a “less strict” understanding of informality, with the aim of drawing attention to so-called “grey zone employment”. While both dimensions overlap for a large part of the analyzed workers, for a considerable amount of workers they do not. This result points to the necessary recognition of the fact that not all forms of informality affect the same group of workers – the distinction between informal sector and informal employment constitutes an example of efforts to this finding.

However, a variety of aspects of the employment relationship also remain to be investigated when it comes to formal or informal practices at work, demonstrating once more how difficult it is to draw a clear line between formal and informal employment. Further components include for example unemployment insurance, health insurance, or labor union membership – all benefits that workers may or may not have access to on the grounds of the established employment relationship.

Consequently, another question arises that adds complexity to the phenomenon. Some of these benefits constitute obligatory elements of an employment contract, some are optional, and some elements apply in a different manner to different groups of workers. In addition, legislative reforms that are taking place as for example with regard to self-employed workers imply a shift of what is understood as informal in this moment and what is regarded as informal once the new regulation is in effect. Hence, in the strict sense of the regulation perspective, determining the informal is a task in constant flux that requires the close consideration of local circumstances.

Finally, it must be remembered that the CASEN survey, which constituted the data basis for this work, was originally not designed as a labor market survey, which complicates the coverage of indicators central to issues regarding labor market research. In analyses that do not include a comparison over time beyond 2009, the NENE survey definitely constitutes a more complete source of information which also delivers up-to-date labor market information on a trimestral basis. Furthermore, the NENE is used as the data source for the determination of international labor market indicators such as the unemployment rate.

## **7.2. A new Informalization of the Employment Relationship?**

On the basis of empirical data it has been shown that the Chilean labor market has seen considerable shifts regarding the labor force in the past decades. In the subsequent analysis, this work has focused on the investigation of relevant factors that enhance the risks of workers to be employed informally in the context of these changes. Some indicators that are traditionally considered as decisive for informality, such as tenure and firm size, seem to have become less pronounced in their divergent risk structure. However, other important indicators such as education and age hardly show any modifications in spite of considerable shifts both regarding educational levels and the age structure in the observed time period. Generally, it has been shown that enhanced risks of informality are found among workers in particularly vulnerable positions. However, it has also been demonstrated that higher qualified positions are not necessarily protected from informality. What can be concluded from the analysis of this particular form of informality is that it is also increasingly found not only among the lower qualified population.

Various studies have pointed to the increasing difficulty to distinguish between wage earners and the self-employed regarding subordination and autonomy. It is not to be denied that we may be observing a similar trend in Chile at the moment. Besides a remaining share of wage earners that are denied the protection of a contract and/or social security, another trend of “new informality” may be developing that is structurally different and is found among a different group of the workforce.

This “transformation of informality” is potentially linked to a variety of aspects that need to be considered: In what way does the employment relationship differ in comparison to “traditional” informal employment? To what extent is this form of informality based on mutual consent, could it be possible that we find a certain degree of voluntariness in this form of informality? Anecdotic evidence from focused interviews with workers indicates that, for particular groups of workers, informality may actually constitute a matter of choice, resulting from a variety of motives.

To answer these questions, it is indispensable to collect further information on the affected group of workers. Particularly, due to their positioning in the higher qualified segment, it seems likely that a certain degree of informality is met by financial compensations. Contrary to hitherto existing studies who confirm a considerable wage gap between formal and informal employees, these informal workers may actually be found in a higher income segment than their formal colleagues.

Particularly honorary contracts constitute a phenomenon that mirrors the increasing tendency of “subordinate self-employment” and which has been made particular reference to throughout this work. In this context, developments are observable that potentially follow similar patterns between Latin America and Europe. The problem of increasingly blurred limits between employment and self-employment seems to be of cross-border relevance and refers to a more generalized trend in labor markets where flexibilization is an issue (Leiva 2012; Gálvez Pérez 2001; Voss/ Pongratz 1998). This opens up a field for future research on the constitution of the phenomenon in labor markets of diverse structures. In spite of greater difficulties of access to information, informal employment constitutes an area of research that can enrich the study of labor markets, also in the European context. Particular aspects of interest lie for example in the – potentially diverse – constitution of informality or in processes of formalization of informal practices in the context of flexibilization.



Nevertheless, it should be taken into account that any form of comparative research in this area is confronted with particular difficulties due to the historical differences regarding the regulation and structure of the labor market. For example, Latin American labor markets traditionally exhibit higher rates of labor turnover and larger shares of self-employed workers – two important aspects when it comes to issues of flexibilization and informality.

### **7.3. Informality and the Quality of Employment – Sociopolitical Implications**

This work has emphasized that, in spite of the progress in development that has been made in Chile in the past decades, working conditions remain an essential issue. Although the unemployment rate currently experiences particularly low levels, it must be considered that the provision of jobs alone does not resolve social issues related with employment. It has already been shown that quality of employment in Chile suffers from serious deficits (Sehnbruch 2006). Formality is often considered as a decisive factor for “good jobs”, as it constitutes the precondition for the access to many of the benefits related to high quality employment. Thus, in the efforts to provide decent jobs for the Chilean workforce, the issue of formality should not get left behind.

However, the aspect of formality also relates to a broader issue concerning the constitution of the Chilean labor market - social dialogue between employers, workers and government institutions, an issue that has remained emotionally charged for decades. Formal employment relationships imply the recognition of workers’ rights and the recognition of the official employment regulation. Informality, in contrast, implies that regulations in force, and in consequence, institutions that are responsible for their enforcement, are denied their legitimacy. A generalization of formal employment relationships presupposes that all involved actors recognize each other as such and can trust each other to that extent that agreements reached in negotiations will be complied with.

In this moment, Chile finds itself in a decisive phase of development. Living standards have improved considerably, more young people than ever before have access to tertiary education, and a growing part of the population is able to participate in social and cultural aspects of society. A growing conscience for – and discontent with - remaining inequality and injustice constitutes a logical consequence of this process of development, in which more and more people demand to be included.

In this moment, when it seems that many of the grave social issues from the past have been overcome, it is appropriate to draw attention to deficits that are still to be resolved. In particular, the Chilean case exemplifies how, as some challenges seem to be overcome, new ones arise. The increasing share of employment in the service sector implies that new forms of employment relationships are constituted that need to be responded to by the labor market institutions. Current reforms that are under way regarding contributions to the pension system document the efforts to “formalize” the workforce. However, the attitude of workers towards the state has been shown to be marked by mistrust, a position that has been nurtured for decades and has hardly changed since the return to democracy, as labor unions remain in an extremely weak position and compliance with regulations lacks thorough controls. Consequently, one of the challenges is definitely the institution of a new form of dialogue between the most relevant actors on the labor market.

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## 9. ANNEX

### 9.1. Development of Informality Rate according to different Dimensions

<i>Workers outside of Pension System</i>	<b>1994</b>	<b>1998</b>	<b>2000</b>	<b>2003</b>	<b>2006</b>	<b>2009</b>	<b>2011</b>
<i>General</i>	20,8%	21,4%	22,9%	22,3%	20,2%	21,3%	17,3%
<i>&lt;=24</i>	31,4%	34,8%	37,7%	35,2%	31,0%	30,8%	26,8%
<i>25-34</i>	17,8%	19,0%	20,3%	19,9%	16,5%	19,3%	13,7%
<i>35-49</i>	17,2%	18,2%	19,8%	19,4%	17,3%	18,8%	15,5%
<i>50-59</i>	17,5%	14,6%	18,7%	18,7%	18,4%	19,2%	14,7%
<i>=&gt; 60</i>	28,9%	31,7%	34,1%	31,0%	31,3%	28,5%	27,8%
<i>male</i>	19,0%	19,5%	20,8%	19,6%	17,0%	17,9%	14,6%
<i>female</i>	24,0%	24,4%	26,3%	26,4%	24,8%	25,9%	21,0%

<i>Workers without written Contract</i>	<b>1994</b>	<b>1998</b>	<b>2000</b>	<b>2003</b>	<b>2006</b>	<b>2009</b>	<b>2011</b>
<i>General</i>	19,8%	21,6%	22,4%	22,1%	20,2%	18,0%	14,2%
<i>&lt;=24</i>	28,1%	33,1%	34,9%	33,2%	27,9%	26,0%	20,2%
<i>25-34</i>	18,0%	19,2%	19,6%	19,3%	17,1%	15,3%	11,6%
<i>35-49</i>	16,2%	19,9%	19,9%	20,3%	18,4%	16,4%	12,7%
<i>50-59</i>	17,0%	14,3%	20,3%	19,1%	19,3%	16,9%	13,2%
<i>=&gt; 60</i>	28,1%	26,8%	30,5%	27,8%	28,0%	23,9%	21,3%
<i>male</i>	17,5%	19,9%	20,3%	20,0%	17,3%	15,0%	11,3%
<i>female</i>	23,7%	24,3%	25,6%	25,2%	24,3%	22,2%	18,0%

<i>Informality Rate (Combined Measure)</i>	<b>1994</b>	<b>1998</b>	<b>2000</b>	<b>2003</b>	<b>2006</b>	<b>2009</b>	<b>2011</b>
<i>General</i>	26,0%	25,9%	26,9%	26,6%	24,5%	25,5%	20,3%
<i>&lt;=24</i>	37,3%	39,7%	42,1%	40,1%	35,2%	35,9%	29,6%
<i>25-34</i>	23,1%	22,8%	23,9%	23,6%	20,6%	22,6%	16,3%
<i>35-49</i>	21,3%	23,0%	23,3%	23,3%	21,3%	22,7%	18,0%
<i>50-59</i>	23,0%	28,5%	24,2%	23,4%	23,1%	23,6%	18,0%
<i>=&gt; 60</i>	37,8%	37,8%	39,6%	38,3%	38,9%	35,2%	33,8%
<i>male</i>	24,0%	23,8%	24,8%	23,9%	21,3%	21,9%	17,3%
<i>female</i>	29,5%	29,2%	30,3%	30,6%	29,2%	30,4%	24,2%

## 9.2. Syntax Files SPSS - Recoding and Preparation for Analysis

\*OPENING DATA FILES.

```
get file ="C:\CASEN\1994\Casen1994.sav".
get file ="C:\CASEN\1998\Casen1998.sav".
get file ="C:\CASEN\2000\Casen2000.sav".
get file ="C:\CASEN\2003\Casen2003.sav".
get file ="C:\CASEN\2006\Casen2006.sav".
get file ="C:\CASEN\2009\Casen2009.sav".
get file ="C:\CASEN\2011\Casen2011.sav".
```

\*-----.

\*FILTER of selected sample for various years.

\*1994.

weight off.

```
recode O9 (CONVERT) ('A'=1) ('B', 'C' =2) ('D'=3) ('E'=4) ('F'=5) ('G'=6) ('X'=99) into O99.
    delete variables O9.
    rename variables (O99 = O9).
```

compute analysis = 0.

```
    if (2 < o7 AND o7 < 7) analysis = 1.
    if (rama = 0 OR rama = 999) analysis = 0.
    if (oficio = 0 OR oficio = 9999) analysis = 0.
    if (e9 = 99) analysis = 0.
    if (O9 = 99) analysis = 0.
    if (edad < 15) analysis = 0.
    do if (o7 < 4 OR o7 > 5).
        if (O9 = 1) analysis = 0.
    end if.
```

delete variables v1 to v58.

delete variables s1 to s56.

delete variables yopraj to ysubhaj.

\*1998.

weight off.

compute analysis = 0.

```
    if (2 < o8 AND o8 < 6) analysis = 1.
    if (oficio = 0 OR rama = 0 OR oficio = 9999) analysis = 0.
    if (educ = 10) analysis = 0.
    if (o10 = 7 OR o10 = 9) analysis = 0.
    if (edad < 15) analysis = 0.
    if (ecivil = 9) analysis = 0.
    do if (o8 < 4).
        if (o10 = 1) analysis = 0.
    end if.
```

delete variables v1 to v46.

delete variables s1 to s54.

delete variables yopraj to ysubhaj.

\*2000.

weight off.

compute analysis = 0.

```

if (2 < o10 AND o10 < 8) analysis = 1.
if (oficio = 1 OR oficio = 11 OR rama = 0 OR rama = 999) analysis = 0.
if (educ = 99) analysis = 0.
if (edad < 15) analysis = 0.

recode o13 (CONVERT) ('A'=1) ('B'=2) ('C'=3) ('D'=4) ('E'=5) ('F'=6) ('X'=99) into o131.
exe.
delete variables o13.
rename variables (o131 = o13).
recode o13 (lowest thru highest = copy) into firmsize.
if (firmsize = 99) analysis = 0.
do if (o10 < 6).
if (firmsize = 1) analysis = 0.
end if.

delete variables p1 to v52.
delete variables s1 to s75.
delete variables yopraj to ysubhaj.

*2003.
weight off.
compute analysis = 0.
if (2 < o9 AND o9 < 8) analysis = 1.
if (oficio = 0 OR oficio = 9999 OR rama = 0 OR rama = 9999) analysis = 0.
if (educ = 99) analysis = 0.
if (edad < 15) analysis = 0.

alter type estrato (F6).
recode O14 (CONVERT) ('A'=1) ('B'=2) ('C'=3) ('D'=4) ('E'=5) ('F'=6) ('X'=99) into O141.
delete variables O14.
rename variables (O141 = O14).
recode O14 (lowest thru highest = copy) into firmsize.
if (firmsize = 99) analysis = 0.
do if (o9 < 6).
if (firmsize = 1) analysis = 0.
end if.

delete variables R7 to R24F.
delete variables S1 to S30E.
delete variables Y1_T1 to YASHAJ.

*2006.
weight off.
compute analysis = 0.
if (2 < o19 AND o19 < 8) analysis = 1.
if (oficio = 0 OR oficio = 10 OR rama = 0 OR rama = 99) analysis = 0.
if (educ = 99) analysis = 0.
if (edad < 15) analysis = 0.

recode o13 ('A'=1) ('B'=2) ('C'=3) ('D'=4) ('E'=5) ('F'=6) ('X'=99) into firmsize.
if (firmsize = 99) analysis = 0.
do if (o19 < 6 OR o19 > 7).

```

```

if (firmsize = 1) analysis = 0.
end if.

```

```

delete variables R7 to R17.
delete variables E7 to E19D.
delete variables Y2_H to T3.
delete variables T10 to V32C.

```

```
*2009.
```

```
weight off.
```

```
compute analysis = 0.
```

```

if (2 < o23 AND o23 < 8) analysis = 1.
if (rama = 0) analysis = 0.
if (oficio = 0 OR oficio = 10) analysis = 0.
if (o14 = 'X') analysis = 0.
if (educ = 99) analysis = 0.
if (edad < 15) analysis = 0.
do if (o23 < 6).
if (o14 = 'A') analysis = 0.
end if.

```

```

delete variables R7 to R18H.
delete variables E6 to E17C2.
delete variables Y22TA to T3E.
delete variables V1 to V32.

```

```
*2011.
```

```
weight off.
```

```
compute analysis = 0.
```

```

if (2 < o15 AND o15 < 8) analysis = 1.
if (rama1 = 18) analysis = 0.
if (oficio1 = 0) analysis = 0.
if (o13 < 1941 OR o13 = 9999) analysis = 0.
if (edad < 15) analysis = 0.
if (o24 = 9) analysis = 0.
do if (o15 < 6 OR o15 > 7).
if (o24 = 1) analysis = 0.
end if.

```

```

delete variables e4 to e0.
delete variables s1 to s16.
delete variables s22 to s0.
delete variables r9 to v0b.

```

```
*-----.
```

```
*Delete cases not included in the analysis.
```

```
USE ALL.
```

```
SELECT IF (analysis = 1).
```

```
EXECUTE.
```

```
*-----.
```

```
*CREATION OF DEPENDENT VARIABLE INFORMALITY.
```

```
*1994.
```



```
compute contract = -3.  
  if (o8 = 1 OR o8 = 8) contract = 1. /*signed contract.  
  if (o8 = 9) contract = 0. /*no information.  
  if (o8 = 2) contract = 2. /*no contract.
```

```
compute pension = -3.  
  if (o11 < 5) pension = 1.  
  if (o11 = 5) pension = 2.  
  if (o11 = 9) pension = 0.
```

```
*1998.  
compute contract = -3.  
  if (o9 le 3) contract = 1.  
  if (o9 = 5) contract = 0.  
  if (o9 = 4) contract = 2.
```

```
compute pension = -3.  
  if (o15 < 7) pension = 1.  
  if (o15 = 7) pension = 2.  
  if (o15 = 9) pension = 0.
```

```
*2000.  
compute contract = -3.  
  if (o11 < 4) contract = 1.  
  if (o11 = 5) contract = 0.  
  if (o11 = 4) contract = 2.
```

```
compute pension = -3.  
  if (o17 < 8) pension = 1.  
  if (o17 = 8) pension = 2.  
  if (o17 = 9) pension = 0.
```

```
*2003.  
compute contract = -3.  
  if (o11 = 1) contract = 1.  
  if (o11 = 2 OR o11 = 9) contract = 0.  
  if (o11 = 3) contract = 2.
```

```
compute pension = -3.  
  if (o28 < 6) pension = 1.  
  if (o28 = 6 OR o28 = 7) pension = 2.  
  if (o28 = 9) pension = 0.
```

```
*2006.  
compute contract = -3.  
  if (o20 = 1) contract = 1.  
  if (o20 = 2 OR o20 = 4 OR o20 = 9) contract = 0.  
  if (o20 = 3) contract = 2.
```

```
compute pension = -3.  
  if (o29 < 6) pension = 1.  
  if (o29 = 6 OR o29 = 7) pension = 2.
```

if (o29 = 9) pension = 0.

\*2009.

compute contract = -3.

if (o25 = 1) contract = 1.

if (o25 = 2 OR o25 = 4) contract = 0.

if (o25 = 3) contract = 2.

compute pension = -3.

if (o32 < 7) pension = 1.

if (o32 = 7 OR o31 = 2) pension = 2.

if (o32 = 9 OR o31 = 9) pension = 0.

\*2011.

compute contract = -3.

if (o17 = 1) contract = 1.

if (o17 = 2 OR o17 = 4) contract = 0.

if (o17 = 3) contract = 2.

compute pension = -3.

if (o29 = 1 AND o30 < 7) pension = 1.

if (o29 = 2 OR o30 = 7) pension = 2.

if (o29 = 9 OR o30 = 9) pension = 0.

value labels contract 0 'dont know' 1 'written contract' 2 'no written contract'.

value labels pension 0 'no data' 1 'contributing' 2 'not contributing'.

compute in\_formal = -3.

if (pension = 1 AND contract = 1) in\_formal = 0.

if (pension = 0 AND contract = 1) in\_formal = 0.

if (pension = 1 AND contract = 0) in\_formal = 0.

if (pension = 2 OR contract = 2) in\_formal = 1.

if (pension = 0 AND contract = 0) in\_formal = -2.

variable labels in\_formal 'Status of in/formality'.

value labels in\_formal -2 'dont know' 0 'formal' 1 'informal'.

missing values in\_formal (-3 -2).

\*-----.

\*RECODING OF OTHER VARIABLES.

\*-----.

\*SEX.

recode sexo (1=0) (2=1) into sex\_f.

var lab sex\_f 'Female'.

\*-----.

\*EDUCATION.

\*1994.

recode e9 ( 1 thru 4 = 1) (15 = 1) (5 = 2) (7 = 2) (6 = 3) (8 = 3) (9 = 4) (11 = 4) (10 = 5) (12 thru 14 = 5) into education.

\*1998.

recode educ (0 thru 2 = 1) (3 thru 4=2) (5 thru 6=3) (7=4) (8 thru 9 =5) into education.

\*2000.

recode educ (1 thru 3 =1) (4=2) (6=2) (5=3) (7=3) (8=4) (10=4) (9=5) (11=5) into education.

\*2003.

recode educ (1 thru 3 =1) (4 = 2) (6 = 2) (5 = 3) (7 = 3) (8 = 4) (10 = 4) (9 = 5) (11 = 5) into education.

\*2006.

recode educ (0 thru 2 =1) (3 thru 4 = 2) (5 thru 6 = 3) (7 = 4) (8 = 5) into education.

\*2009.

recode educ (1 thru 3 = 1) (4 thru 5=2) (6 thru 7=3) (8=4) (9=5) into education.

\*2011.

recode educ (0 thru 2 = 1) (3 thru 4=2) (5 thru 6=3) (7=4) (8=5) into education.

value labels education 1 'until complete primary education' 2 'some secondary education' 3 'complete secondary education' 4 'some tertiary education' 5 'complete tertiary education'.

recode education (1 = 1) (2 thru 5 = 0) into ed\_compprim.

var lab ed\_compprim 'Complete primary education'.

recode education (2 = 1) (else = 0) into ed\_somesec.

var lab ed\_somesec 'Some secondary education'.

recode education (3 = 1) (else = 0) into ed\_compsec.

var lab ed\_compsec 'Complete secondary education'.

recode education (4 = 1) (else = 0) into ed\_sometert.

var lab ed\_sometert 'Some tertiary education'.

recode education (5 = 1) (else = 0) into ed\_comptert.

var lab ed\_comptert 'Complete tertiary education'.

\*-----.

\*ATTENDING AN EDUCATIONAL ESTABLISHMENT.

\*1994.

compute study = 0.

if (e3 = 1) study = 1.

\*1998.

compute study = 0.

if (e2 = 1) study = 1.

\*2000.

compute study = 0.

if (e3 = 1) study = 1.

\*2003.

compute study = 0.

if (E2 = 1) study = 1.

\*2006.

compute study = 0.

if (E4 = 1) study = 1.

\*2009.

compute study = 0.

if (E2 le 5 OR E3 = 1) study = 1.

\*2011.

compute study = 0.

if (e2a = 1 OR e3 = 1) study = 1.

value labels study 1 'attending educational establishment' 0 'not attending educational establishment'.

\*-----.

\*AGE.

recode edad (lowest thru 24 = 1) (25 thru 34 = 2) (35 thru 49 = 3) (50 thru 59 = 4) (60 thru highest = 5) into age\_groups.

value labels age\_groups 1 '<=24' 2 '25-34' 3 '35-49' 4 '50-59' 5 '>60'.

recode age\_groups (1 = 1) (else = 0) into age\_24.

var lab age\_24 '<=24'.

recode age\_groups (2 = 1) (else = 0) into age\_25\_34.

var lab age\_25\_34 '25-34'.

recode age\_groups (3 = 1) (else = 0) into age\_35\_49.

var lab age\_35\_49 '35-49'.

recode age\_groups (4 = 1) (else = 0) into age\_50\_59.

var lab age\_50\_59 '50-59'.

recode age\_groups (5 = 1) (else = 0) into age\_60.

var lab age\_60 '=> 60'.

\*-----.

\*FAMILY STATUS.

\*1994.

recode ecivil (3 thru 6 = 1) (1 = 2) (2 = 3) into civilstatus.

\*1998-2011.

recode ecivil (3 thru 7 = 1) (1 = 2) (2 = 3) into civilstatus.

value labels civilstatus 1 'single' 2 'married' 3 'living in partnership'.

recode civilstatus (2 = 1) (else = 0) into civil\_married.

var lab civil\_married 'married'.

recode civilstatus (3 = 1) (else = 0) into civil\_partnership.

var lab civil\_partnership 'Living in partnership'.

\*-----.

\*BRANCHES.

\*1994-2009.

recode rama (0 thru highest = copy) into branches.

\*2011, recoding according to ISIC rev 2 as used in previous CASEN versions.

recode rama4 (111 thru 500 = 1) (1010 thru 1030 = 2) (1110 thru 1429 = 2) (1511 thru 3720 = 3) (4010 thru 4100 = 4) (4510 thru 4550 = 5) (5010 = 6) (5020 = 7) (5030 thru 5211 = 6) (5219 thru 5259 = 6) (5260 = 9) (5510 thru 5520 = 6) (6010 thru 6420 = 7) (6511 thru 7020 = 8) (7111 thru 7113 = 7) (7121 thru 7240 = 8) (7250 = 3) (7290 thru 7492 = 8) (7493 thru 7494 = 9) (7495 thru 7499 = 8) (7511 thru 9219 = 9) (9220 = 8) (9231 thru 9900 = 9) (9999 = copy) into branches.

value labels branches 1 'Agriculture, Hunting' 2 'Mining' 3 'Manufacturing' 4 'Electricity, Gas, Water' 5 'Construction' 6 'Commerce, Gastronomy, Hotels' 7 'Transport, Communication' 8 'Financing, Real Estate' 9 'Community, Social, Personal Services' 0 'not specified' 999 'NS/NR'.

\*Creation of dummy variables.

recode branches (1 = 1) (else = 0) into branch\_agri.

var lab branch\_agri 'Agriculture'.

recode branches (2 = 1) (else = 0) into branch\_mining.

```

        var lab branch_mining 'Mining'.
recode branches (3 = 1) (else = 0) into branch_manu.
        var lab branch_manu 'Manufacture'.
recode branches (4 = 1) (else = 0) into branch_elec.
        var lab branch_elec 'Electricity, Gas & Water'.
recode branches (5 = 1) (else = 0) into branch_constr.
        var lab branch_constr 'Construction'.
recode branches (6 = 1) (else = 0) into branch_commgastro.
        var lab branch_commgastro 'Commerce, Gastronomy and Hotels'.
recode branches (7 = 1) (else = 0) into branch_trans.
        var lab branch_trans 'Transport & Communications'.
recode branches (8 = 1) (else = 0) into branch_finance.
        var lab branch_finance 'Finance'.
recode branches (9 = 1) (else = 0) into branch_public_social.
        var lab branch_public_social 'Public & Community services'.
exe.

*-----.
*OCCUPATION.
*1994-2009.
recode oficio (1 thru 2 = 4) (3 = 3) (4 thru 8 = 2) (9 = 1) into occupation.
*2011.
recode oficio1 (1 thru 2 = 4) (3 = 3) (4 thru 8 = 2) (9 = 1) into occupation.

        var lab occupation 'Occupation'.
        val lab occupation 1 'Skill level 1' 2 'Skill level 2' 3 'Skill level 3' 4 'Skill level 4'.

recode occupation (0=1) (else=0) into occupation_military.
recode occupation (1=1) (else=0) into occupation_1.
        var lab occupation_1 'Skill level 1'.
recode occupation (2=1) (else=0) into occupation_2.
        var lab occupation_2 'Skill level 2'.
recode occupation (3=1) (else=0) into occupation_3.
        var lab occupation_3 'Skill level 3'.
recode occupation (4=1) (else=0) into occupation_4.
        var lab occupation_4 'Skill level 4'.

*-----.
*FIRMSIZE.
*1994.
recode O9 (3 = 2) (4 = 3) (5 = 4) (6 = 5) (else = copy) into firmsize.
        if (o7 = 4 OR o7 = 5) firmsize = 1.
*1998.
recode o10 (1 = 1) (2 thru 3 = 2) (4 = 3) (5 = 4) (6 = 5) into firmsize.
        if (o8 = 4 OR o8 = 5) firmsize = 1.
*2000.
recode firmsize (1 = 1) (2 thru 3 = 2) (4 = 3) (5 = 4) (6 = 5).
        if (o10 = 6 OR o10 = 7) firmsize = 1.
*2003.
recode firmsize (1 = 1) (2 thru 3 = 2) (4 = 3) (5 = 4) (6 = 5).
        if (o9 = 6 OR o9 = 7) firmsize = 1.
*2006.
recode firmsize (1 = 1) (2 thru 3 = 2) (4 = 3) (5 = 4) (6 = 5).

```

```

        if (o19 = 6 OR o19 = 7) firmsize = 1.
*2009.
recode o14 ('A' = 1) ('B' = 2) ('C' = 2) ('D' = 3) ('E' = 4) ('F' = 5) into firmsize.
        if (o23 = 6 OR o23 = 7) firmsize = 1.
*2011.
recode o24 (1 = 1) (2 thru 3 = 2) (4 = 3) (5 = 4) (6 = 5) into firmsize.
        if (o15 = 6 OR o15 = 7) firmsize = 1.

        value labels firmsize 1 'domestic work' 2 '2-9' 3 '10-49' 4 '50-199' 5 '>= 200'.

*Creation of dummy variables.
recode firmsize (1=1) (else = 0) into domestic.
        var lab domestic 'domestic workers'.
recode firmsize (2 = 1) (else = 0) into firmsize_2_9.
        var lab firmsize_2_9 '2-9'.
recode firmsize (3 = 1) (else = 0) into firmsize_10_49.
        var lab firmsize_10_49 '10-49'.
recode firmsize (4 = 1) (else = 0) into firmsize_50_199.
        var lab firmsize_50_199 '50-199'.
recode firmsize (5 = 1) (else = 0) into firmsize_200.
        var lab firmsize_200 '>= 200'.

```

```

*-----,

```

#### \*ETHNICITY.

```

*2000.
recode etnia (0=0) (4 = 1) (9 = sysmis) (else = 2) into indigenous.
*2003.
recode r25 (0=0) (4 = 1) (9 = sysmis) (else = 2) into indigenous.
*2006.
recode T4 (90=0) (4 = 1) (99 = sysmis) (else = 2) into indigenous.
*2009.
recode t5 (4=1) (1 thru 3 = 2) (5 thru 9 = 2) (10=0) (else=copy) into indigenous.
*2011.
recode r6 (4=1) (1 thru 3 = 2) (5 thru 9 = 2) (10=0) (else=copy) into indigenous.
        var lab indigenous 'ethnicity'.
        val lab indigenous 0 'no ethnic group' 1 'Mapuche' 2 'other ethnic group'.

recode indigenous (2=0) (else = copy) into indigenous_mapuche.
        var lab indigenous_mapuche 'Mapuche'.
recode indigenous (2=1) (1=0) (else=copy) into indigenous_other.
        var lab indigenous_other 'Other ethnicity'.

```

```

*-----,

```

#### \*NATIONALITY.

```

*2011.
recode h11 (1 thru 2 = 0) (3 = 1) into nationality.
        var lab nationality 'Nationality'.
        val lab nationality 0 'Chilean' 1 'other'.

```

```

*-----,

```

#### \*TENURE.

```

*2000.
compute tenure = 2000 - o16a.

```

```

        recode tenure (lowest thru -1 = 999) (else = copy).
        mis val tenure (999).
*2003.
compute tenure = 2003 - o16.
    if (o16 = 9999) tenure = -3.
    mis val tenure (-3).
*2006.
compute tenure = 2006 - o17.
    if (o17 = 9999) tenure = -3.
*2009.
compute tenure = 2009 - o20.
    recode tenure (lowest thru -1 = 999) (else = copy).
    mis val tenure (999).
*2011.
compute tenure = 2012 - o13.
    recode tenure (lowest thru -1 = 999) (else = copy).
    mis val tenure (999).

recode tenure (0 thru 1 = 1) (2 thru 5 = 2) (6 thru 10 = 3) (11 thru 15 = 4) (16 thru highest = 5) into tenure_r.
    val lab tenure_r 1 '<=1 yr' 2 '2-5' 3 '6-10' 4 '11-15' 5 '>15 yrs'.

recode tenure_r (1=1) (else=0) into tenure_1.
    var lab tenure_1 '<=1'.
recode tenure_r (2=1) (else=0) into tenure_2_5.
    var lab tenure_2_5 '2-5'.
recode tenure_r (3=1) (else=0) into tenure_6_10.
    var lab tenure_6_10 '6-10'.
recode tenure_r (4=1) (else=0) into tenure_11_15.
    var lab tenure_11_15 '11-15'.
recode tenure_r (5=1) (else=0) into tenure_16.
    var lab tenure_16 '>15'.
exe.

*-----.
*EMPLOYMENT ON HONORARY CONTRACTS.
*2003.
recode O12B (1=copy) (else=0) into honorary.
*2006-2009.
recode O22 (1=copy) (else=0) into honorary.
*2011.
recode o14 (1=copy) (else=0) into honorary.

    var lab honorary 'employed on honorary notes'.
    val lab honorary 1 'honorary notes' 0 'no honorary notes'.

*-----.
YEAR OF OBSERVATION.
compute year = 1994.
compute year = 1998.
compute year = 2000.
compute year = 2003.
compute year = 2006.
compute year = 2009.

```

```
compute year = 2011.  
var lab year 'Year of observation'.  
  
*SAVE DATA FILE FOR FURTHER ANALYSIS (IN STATA)  
SAVE OUTFILE='C:\CASEN\1994\Casen1994klein.sav'  
/COMPRESSED.  
SAVE TRANSLATE OUTFILE='C:\UNI\CASEN\1994\Casen1994klein.dta'  
/TYPE=STATA  
/VERSION=8  
/EDITION=SE  
/REPLACE  
/MAP.  
  
SAVE OUTFILE='C:\CASEN\1998\Casen1998klein.sav'  
/COMPRESSED.  
SAVE TRANSLATE OUTFILE='C:\UNI\CASEN\1998\Casen1998klein.dta'  
/TYPE=STATA  
/VERSION=8  
/EDITION=SE  
/REPLACE  
/MAP.  
  
SAVE OUTFILE='C:\CASEN\2000\Casen2000klein.sav'  
/COMPRESSED.  
SAVE TRANSLATE OUTFILE='C:\UNI\CASEN\2000\Casen2000klein.dta'  
/TYPE=STATA  
/VERSION=8  
/EDITION=SE  
/REPLACE  
/MAP.  
  
SAVE OUTFILE='C:\CASEN\2003\Casen2003klein.sav'  
/COMPRESSED.  
SAVE TRANSLATE OUTFILE='C:\UNI\CASEN\2003\Casen2003klein.dta'  
/TYPE=STATA  
/VERSION=8  
/EDITION=SE  
/REPLACE  
/MAP.  
  
SAVE OUTFILE='C:\CASEN\2006\Casen2006klein.sav'  
/COMPRESSED.  
SAVE TRANSLATE OUTFILE='C:\UNI\CASEN\2006\Casen2006klein.dta'  
/TYPE=STATA  
/VERSION=8  
/EDITION=SE  
/REPLACE  
/MAP.  
  
SAVE OUTFILE='C:\CASEN\2009\Casen2009klein.sav'  
/COMPRESSED.  
SAVE TRANSLATE OUTFILE='C:\UNI\CASEN\2009\Casen2009klein.dta'  
/TYPE=STATA
```



```
/VERSION=8
/EDITION=SE
/REPLACE
/MAP.
```

```
SAVE OUTFILE='C:\CASEN\2011\Casen2011klein.sav'
/COMPRESSED.
```

```
SAVE TRANSLATE OUTFILE='C:\UNI\CASEN\2011\Casen2011klein.dta'
/TYPE=STATA
/VERSION=8
/EDITION=SE
/REPLACE
/MAP.
```

```
*-----
```

```
*AGGREGATION OF DATA FILES FOR TIME COMPARISON.
```

```
*1994-2000-2011.
```

```
get file ="C:\CASEN\1994\Casen1994klein.sav".
```

```
ADD FILES /FILE=* /FILE='C:\CASEN\2011\Casen2011klein.sav'.
EXECUTE.
```

```
ADD FILES /FILE=* /FILE='C:\CASEN\2000\Casen2000klein.sav'.
EXECUTE.
```

```
SAVE OUTFILE='C:\CASEN\Casen1994_2011.sav'
/COMPRESSED.
```

```
SAVE TRANSLATE OUTFILE='C:\CASEN\Casen1994_2011.dta'
/TYPE=STATA
/VERSION=8
/EDITION=SE
/REPLACE
/MAP.
```

```
*2003-2011.
```

```
get file ="C:\CASEN\2003\Casen2003klein.sav".
```

```
ADD FILES /FILE=* /FILE='C:\CASEN\2011\Casen2011klein.sav'.
EXECUTE.
```

```
SAVE OUTFILE='C:\UNI\CASEN\Casen2003_2011.sav'
/COMPRESSED.
```

```
SAVE TRANSLATE OUTFILE='C:\CASEN\Casen2003_2011.dta'
/TYPE=STATA
/VERSION=8
/EDITION=SE
/REPLACE
/MAP.
```

### 9.3. Syntax from STATA Analyses – Binary Logistic Regression and Time Comparison.

```
//2011 ONLY
```

```
clear
clear matrix
set mem 500m
numlabel _all, add
#d ;
set more off;
use "C:\CASEN\2011\Casen2011klein.dta"
```

```
logistic in_formal
sex_f age_24 age_25_34 age_50_59 age_60 ed_compprim ed_somesec ed_sometert ed_comptert study
indigenous_mapuche indigenous_other civil_married civil_partnership nationality;
estimates store M1_2011, title (Model 1);
```

```
logistic in_formal
sex_f age_24 age_25_34 age_50_59 age_60 ed_compprim ed_somesec ed_sometert ed_comptert study
indigenous_mapuche indigenous_other civil_married civil_partnership nationality branch_agri
branch_commgastro branch_trans branch_manu branch_constr branch_finance branch_mining branch_elec
occupation_1 occupation_3 occupation_4 tenure_1 tenure_6_10 tenure_11_15 tenure_16 honorary;
estimates store M2_2011, title (Model 2);
```

```
logistic in_formal
sex_f age_24 age_25_34 age_50_59 age_60 ed_compprim ed_somesec ed_sometert ed_comptert study
indigenous_mapuche indigenous_other civil_married civil_partnership nationality branch_agri
branch_commgastro branch_trans branch_manu branch_constr branch_finance branch_mining branch_elec
occupation_1 occupation_3 occupation_4 tenure_1 tenure_6_10 tenure_11_15 tenure_16 honorary domestic
firm_size_2_9 firm_size_50_199 firm_size_200;
estimates store M3_2011, title (Model 3);
```

```
estat classification;
estat gof;
estimates dir;
```

```
estout M1_2011 M2_2011 M3_2011, cells (b(star fmt(3))) eform legend label varlabels(_cons Constant) stats(r2,
fmt(3) label (Nagelkerke-R2));
estout M1_2011 M2_2011 M3_2011, cells (b(star fmt(3))) legend label varlabels(_cons Constant) stats(r2,
fmt(3) label (Nagelkerke-R2));
```

```
//TIME COMPARISON 1994-2011
```

```
clear
clear matrix
set mem 500m
numlabel _all, add
#d ;
set more off;

use "C:\CASEN\1994\Casen1994klein.dta"
```

```

use "C:\CASEN\1998\Casen1998klein.dta";
use "C:\CASEN\2000\Casen2000klein.dta";
use "C:\CASEN\2003\Casen2003klein.dta";
use "C:\CASEN\2006\Casen2006klein.dta";
use "C:\CASEN\2009\Casen2009klein.dta";
use "C:\CASEN\2011\Casen2011klein.dta";

```

```
logistic in_formal
```

```

sex_f age_24 age_25_34 age_50_59 age_60 ed_compprim ed_somesec ed_sometert ed_comptert study
civil_married civil_partnership branch_agri branch_commgastro branch_trans branch_manu branch_constr
branch_finance branch_mining branch_elec occupation_1 occupation_3 occupation_4 domestic firmsize_2_9
firmsize_50_199 firmsize_200;

```

```

estimates store M_1994, title (1994);
estimates store M_1998, title (1998);
estimates store M_2000, title (2000);
estimates store M_2003, title (2003);
estimates store M_2006, title (2006);
estimates store M_2009, title (2009);
estimates store M_2011, title (2011);
estimates dir;
estout M_1994 M_1998 M_2000 M_2003 M_2006 M_2009 M_2011, cells (b(star fmt(3))) eform legend label
varlabels(_cons Constant) stats(r2, fmt(3) label (Nagelkerke-R2));

```

```
//SUEST
```

```
use "C:\CASEN\Casen1994_2011.dta";
```

```
logistic in_formal
```

```

sex_f age_24 age_25_34 age_50_59 age_60 ed_compprim ed_somesec ed_sometert ed_comptert study
civil_married civil_partnership branch_agri branch_commgastro branch_trans branch_manu branch_constr
branch_finance branch_mining branch_elec occupation_1 occupation_3 occupation_4 domestic firmsize_2_9
firmsize_50_199 firmsize_200 if year==1994;
estimates store M_1994, title (1994);

```

```
logistic in_formal
```

```

sex_f age_24 age_25_34 age_50_59 age_60 ed_compprim ed_somesec ed_sometert ed_comptert study
civil_married civil_partnership branch_agri branch_commgastro branch_trans branch_manu branch_constr
branch_finance branch_mining branch_elec occupation_1 occupation_3 occupation_4 domestic firmsize_2_9
firmsize_50_199 firmsize_200 if year==2000;
estimates store M_2000, title (2000);

```

```
logistic in_formal
```

```

sex_f age_24 age_25_34 age_50_59 age_60 ed_compprim ed_somesec ed_sometert ed_comptert study
civil_married civil_partnership branch_agri branch_commgastro branch_trans branch_manu branch_constr
branch_finance branch_mining branch_elec occupation_1 occupation_3 occupation_4 domestic firmsize_2_9
firmsize_50_199 firmsize_200 if year==2011;
estimates store M_2011, title (2011);

```

```
estimates dir;
```

```
suest M_1994 M_2000;
```

```

test[M_1994_in_formal]sex_f=[M_2000_in_formal]sex_f;
test[M_1994_in_formal]age_24=[M_2000_in_formal]age_24;
test[M_1994_in_formal]age_25_34=[M_2000_in_formal]age_25_34;
test[M_1994_in_formal]age_50_59=[M_2000_in_formal]age_50_59;
test[M_1994_in_formal]age_60=[M_2000_in_formal]age_60;
test[M_1994_in_formal]ed_compprim=[M_2000_in_formal]ed_compprim;
test[M_1994_in_formal]ed_somesec=[M_2000_in_formal]ed_somesec;
test[M_1994_in_formal]ed_sometert=[M_2000_in_formal]ed_sometert;
test[M_1994_in_formal]ed_comptert=[M_2000_in_formal]ed_comptert;
test[M_1994_in_formal]study=[M_2000_in_formal]study;
test[M_1994_in_formal]civil_married=[M_2000_in_formal]civil_married;
test[M_1994_in_formal]civil_partnership=[M_2000_in_formal]civil_partnership;
test[M_1994_in_formal]domestic=[M_2000_in_formal]domestic;
test[M_1994_in_formal]firm_size_2_9=[M_2000_in_formal]firm_size_2_9;
test[M_1994_in_formal]firm_size_50_199=[M_2000_in_formal]firm_size_50_199;
test[M_1994_in_formal]firm_size_200=[M_2000_in_formal]firm_size_200;
test[M_1994_in_formal]branch_agri=[M_2000_in_formal]branch_agri;
test[M_1994_in_formal]branch_commgastro=[M_2000_in_formal]branch_commgastro;
test[M_1994_in_formal]branch_trans=[M_2000_in_formal]branch_trans;
test[M_1994_in_formal]branch_manu=[M_2000_in_formal]branch_manu;
test[M_1994_in_formal]branch_constr=[M_2000_in_formal]branch_constr;
test[M_1994_in_formal]branch_finance=[M_2000_in_formal]branch_finance;
test[M_1994_in_formal]branch_mining=[M_2000_in_formal]branch_mining;
test[M_1994_in_formal]branch_elec=[M_2000_in_formal]branch_elec;
test[M_1994_in_formal]occupation_1=[M_2000_in_formal]occupation_1;
test[M_1994_in_formal]occupation_3=[M_2000_in_formal]occupation_3;
test[M_1994_in_formal]occupation_4=[M_2000_in_formal]occupation_4;

```

suest M\_2000 M\_2011;

```

test[M_2000_in_formal]sex_f=[M_2011_in_formal]sex_f;
test[M_2000_in_formal]age_24=[M_2011_in_formal]age_24;
test[M_2000_in_formal]age_25_34=[M_2011_in_formal]age_25_34;
test[M_2000_in_formal]age_50_59=[M_2011_in_formal]age_50_59;
test[M_2000_in_formal]age_60=[M_2011_in_formal]age_60;
test[M_2000_in_formal]ed_compprim=[M_2011_in_formal]ed_compprim;
test[M_2000_in_formal]ed_somesec=[M_2011_in_formal]ed_somesec;
test[M_2000_in_formal]ed_sometert=[M_2011_in_formal]ed_sometert;
test[M_2000_in_formal]ed_comptert=[M_2011_in_formal]ed_comptert;
test[M_2000_in_formal]study=[M_2011_in_formal]study;
test[M_2000_in_formal]civil_married=[M_2011_in_formal]civil_married;
test[M_2000_in_formal]civil_partnership=[M_2011_in_formal]civil_partnership;
test[M_2000_in_formal]domestic=[M_2011_in_formal]domestic;
test[M_2000_in_formal]firm_size_2_9=[M_2011_in_formal]firm_size_2_9;
test[M_2000_in_formal]firm_size_50_199=[M_2011_in_formal]firm_size_50_199;
test[M_2000_in_formal]firm_size_200=[M_2011_in_formal]firm_size_200;
test[M_2000_in_formal]branch_agri=[M_2011_in_formal]branch_agri;
test[M_2000_in_formal]branch_commgastro=[M_2011_in_formal]branch_commgastro;
test[M_2000_in_formal]branch_trans=[M_2011_in_formal]branch_trans;
test[M_2000_in_formal]branch_manu=[M_2011_in_formal]branch_manu;
test[M_2000_in_formal]branch_constr=[M_2011_in_formal]branch_constr;
test[M_2000_in_formal]branch_finance=[M_2011_in_formal]branch_finance;
test[M_2000_in_formal]branch_mining=[M_2011_in_formal]branch_mining;

```

```
test[M_2000_in_formal]branch_elec=[M_2011_in_formal]branch_elec;
test[M_2000_in_formal]occupation_1=[M_2011_in_formal]occupation_1;
test[M_2000_in_formal]occupation_3=[M_2011_in_formal]occupation_3;
test[M_2000_in_formal]occupation_4=[M_2011_in_formal]occupation_4;
```

```
//TIME COMPARISON 2003-2011
```

```
use "C:\CASEN\2003\Casen2003klein.dta";
use "C:\CASEN\2006\Casen2006klein.dta";
use "C:\CASEN\2009\Casen2009klein.dta";
use "C:\CASEN\2011\Casen2011klein.dta";
```

```
logistic in_formal
```

```
sex_f age_24 age_25_34 age_50_59 age_60 ed_compprim ed_somesec ed_sometert ed_comptert study
indigenous_mapuche indigenous_other civil_married civil_partnership branch_agri branch_commgastro
branch_trans branch_manu branch_constr branch_finance branch_mining branch_elec occupation_1
occupation_3 occupation_4 tenure_1 tenure_6_10 tenure_11_15 tenure_16 honorary domestic firmsize_2_9
firmsize_50_199 firmsize_200;
```

```
estimates store M_2003, title (2003);
estimates store M_2006, title (2006);
estimates store M_2009, title (2009);
estimates store M_2011, title (2011);
```

```
estimates dir;
```

```
estout M_2003 M_2006 M_2009 M_2011, cells (b(star fmt(3))) eform legend label varlabels(_cons Constant)
stats(r2, fmt(3) label (Nagelkerke-R2));
```

```
//SUEST
```

```
use "C:\CASEN\Casen2003_2011.dta";
```

```
logistic in_formal
```

```
sex_f age_24 age_25_34 age_50_59 age_60 ed_compprim ed_somesec ed_sometert ed_comptert study
indigenous_mapuche indigenous_other civil_married civil_partnership branch_agri branch_commgastro
branch_trans branch_manu branch_constr branch_finance branch_mining branch_elec occupation_1
occupation_3 occupation_4 domestic firmsize_2_9 firmsize_50_199 firmsize_200
tenure_1 tenure_6_10 tenure_11_15 tenure_16 honorary if year==2003;
estimates store M_2003, title (2003);
```

```
logistic in_formal
```

```
sex_f age_24 age_25_34 age_50_59 age_60 ed_compprim ed_somesec ed_sometert ed_comptert study
indigenous_mapuche indigenous_other civil_married civil_partnership branch_agri branch_commgastro
branch_trans branch_manu branch_constr branch_finance branch_mining branch_elec occupation_1
occupation_3 occupation_4 domestic firmsize_2_9 firmsize_50_199 firmsize_200 tenure_1 tenure_6_10
tenure_11_15 tenure_16 honorary if year==2011;
estimates store M_2011, title (2011);
```

```
suest M_2003 M_2011;
```

```
test[M_2003_in_formal]sex_f=[M_2011_in_formal]sex_f;
```

```
test[M_2003_in_formal]age_24=[M_2011_in_formal]age_24;
test[M_2003_in_formal]age_25_34=[M_2011_in_formal]age_25_34;
test[M_2003_in_formal]age_50_59=[M_2011_in_formal]age_50_59;
test[M_2003_in_formal]age_60=[M_2011_in_formal]age_60;
test[M_2003_in_formal]ed_compprim=[M_2011_in_formal]ed_compprim;
test[M_2003_in_formal]ed_somesec=[M_2011_in_formal]ed_somesec;
test[M_2003_in_formal]ed_sometert=[M_2011_in_formal]ed_sometert;
test[M_2003_in_formal]ed_comptert=[M_2011_in_formal]ed_comptert;
test[M_2003_in_formal]study=[M_2011_in_formal]study;
test[M_2003_in_formal]indigenous_mapuche=[M_2011_in_formal]indigenous_mapuche;
test[M_2003_in_formal]indigenous_other=[M_2011_in_formal]indigenous_other;
test[M_2003_in_formal]civil_married=[M_2011_in_formal]civil_married;
test[M_2003_in_formal]civil_partnership=[M_2011_in_formal]civil_partnership;
test[M_2003_in_formal]domestic=[M_2011_in_formal]domestic;
test[M_2003_in_formal]firm_size_2_9=[M_2011_in_formal]firm_size_2_9;
test[M_2003_in_formal]firm_size_50_199=[M_2011_in_formal]firm_size_50_199;
test[M_2003_in_formal]firm_size_200=[M_2011_in_formal]firm_size_200;
test[M_2003_in_formal]tenure_1=[M_2011_in_formal]tenure_1;
test[M_2003_in_formal]tenure_6_10=[M_2011_in_formal]tenure_6_10;
test[M_2003_in_formal]tenure_11_15=[M_2011_in_formal]tenure_11_15;
test[M_2003_in_formal]tenure_16=[M_2011_in_formal]tenure_16;
test[M_2003_in_formal]branch_agri=[M_2011_in_formal]branch_agri;
test[M_2003_in_formal]branch_commgastro=[M_2011_in_formal]branch_commgastro;
test[M_2003_in_formal]branch_trans=[M_2011_in_formal]branch_trans;
test[M_2003_in_formal]branch_manu=[M_2011_in_formal]branch_manu;
test[M_2003_in_formal]branch_constr=[M_2011_in_formal]branch_constr;
test[M_2003_in_formal]branch_finance=[M_2011_in_formal]branch_finance;
test[M_2003_in_formal]branch_mining=[M_2011_in_formal]branch_mining;
test[M_2003_in_formal]branch_elec=[M_2011_in_formal]branch_elec;
test[M_2003_in_formal]honorary=[M_2011_in_formal]honorary;
test[M_2003_in_formal]occupation_1=[M_2011_in_formal]occupation_1;
test[M_2003_in_formal]occupation_3=[M_2011_in_formal]occupation_3;
test[M_2003_in_formal]occupation_4=[M_2011_in_formal]occupation_4;
```

## 9.4. STATA Output for Logistic Regression Models

### 9.4.1. 1994

Log likelihood = -19839.095					N	39516
					LR chi2(27)	9374.74
					Prob > chi2	0.0000
					Pseudo R2	0.1911
	B	SE	z-Score	Exp(B)	Conf.intervall	
<i>Sex (Ref: Male)</i>						
Female	0.161***	.033	4.80	1.261***	.095	.227
<i>Age (Ref: 35-49 years)</i>						
<=24	0.675***	.038	17.70	1.986***	.600	.750
25-34	0.167***	.032	5.17	1.186***	.104	.230
50-59	-0.062	.045	-1.36	0.936	-.151	.027
=> 60	0.495***	.061	8.13	1.668***	.376	.615
<i>Education (Ref: Complete secondary education)</i>						
Complete primary	0.559***	.037	15.06	1.731***	.486	.632
Some secondary	0.267***	.041	6.56	1.270***	.187	.347
Some tertiary	0.069	.089	0.77	1.118	-.106	.243
Complete tertiary	-0.204**	.073	-2.80	0.857*	-.347	-.061
<i>Attending an educational establishment (Ref: No)</i>						
Yes	0.625***	.094	6.63	1.884***	.441	.810
<i>Family Status (Ref: Single)</i>						
Married	-0.291***	.029	-9.88	0.737***	-.348	-.233
Living in partnership	0.022	.048	0.46	1.007	-.072	.116
<i>Sector of economic activity (Ref: Public and social services)</i>						
Agriculture	0.812***	.047	17.15	2.465***	.719	.905
Commerce, gastronomy	0.242***	.053	4.57	1.287***	.138	.346
Transport	0.691***	.062	11.14	1.752***	.569	.813
Manufacture	0.132*	.055	2.41	0.988	.025	.240
Construction	0.740***	.058	12.64	1.959***	.625	.854
Finance	-0.098	.088	-1.11	1.008	-.272	.075
Mining	-0.093	.099	-0.93	0.833	-.287	.102
Electricity, gas	0.257	.147	1.75	1.218	-.0311	.546
<i>Occupational status (Ref: Skill level 2)</i>						
Skill level 1	0.467***	.032	14.58	0.676***	.404	.529
Skill level 3	-0.278***	.076	-3.68	0.723***	-.427	-.130
Skill level 4	-0.321***	.085	-3.78	0.716***	-.487	-.154
<i>Firm size (Ref: 10-49 workers)</i>						
Domestic workers	1.639***	.064	25.66	5.383***	1.514	1.764
2-9	1.034***	.030	34.42	2.778***	.976	1.093
50-199	-0.476***	.042	-11.31	0.620***	-.558	-.393
=> 200	-0.719***	.050	-14.24	0.480***	-.818	-.620
Constant	-2.191***	.060	-36.29	0.113***	-2.310	-2.073

## 9.4.2. 1998

Log likelihood = -19989.376					N	40225
					LR chi2(27)	8893.71
					Prob > chi2	0.0000
					Pseudo R2	0.1820
	B	SE	z-Score	Exp(B)	Conf.intervall	
<i>Sex (Ref: Male)</i>						
Female	0.261***	.031	8.31	1.298***	.200	.323
<i>Age (Ref: 35-49 years)</i>						
<=24	0.656***	.038	17.39	1.926***	.582	.729
25-34	0.142***	.031	4.53	1.152***	.080	.203
50-59	-0.215***	.049	-4.37	0.807***	-.311	-.118
=> 60	0.641***	.070	9.20	1.898***	.504	.777
<i>Education (Ref: Complete secondary education)</i>						
Complete primary	0.565***	.035	16.32	1.759***	.497	.632
Some secondary	0.344***	.037	9.21	1.410***	.271	.417
Some tertiary	0.010	.075	0.13	1.010	-.137	.157
Complete tertiary	-0.312***	.064	-4.89	0.732***	-.437	-.187
<i>Attending an educational establishment (Ref: No)</i>						
Yes	0.801***	.083	9.63	2.227***	.638	.964
<i>Family Status (Ref: Single)</i>						
Married	-0.250***	.030	-8.44	0.779***	-.308	-.192
Living in partnership	0.097*	.041	2.36	1.102*	.016	.178
<i>Branch (Ref: Public and social services)</i>						
Agriculture	0.836***	.046	18.12	2.308***	.746	.927
Commerce, gastronomy	0.211***	.048	4.38	1.235***	.117	.305
Transport	0.671***	.060	11.20	1.956***	.553	.788
Manufacture	0.092	.052	1.77	1.096	-.010	.194
Construction	0.708***	.056	12.73	2.030***	.599	.817
Finance	-0.091	.074	-1.24	0.913	-.236	.053
Mining	-0.250*	.113	-2.21	0.779*	-.471	-.028
Electricity, gas	0.100	.148	0.67	1.105	-.190	.389
<i>Occupational status (Ref: Skill level 2)</i>						
Skill level 1	0.367***	.032	11.48	1.444***	.305	.430
Skill level 3	-0.076	.065	-1.18	0.926	-.203	.050
Skill level 4	-0.161*	.077	-2.10	0.852*	-.311	-.011
<i>Firm size (Ref: 10-49 workers)</i>						
Domestic workers	1.623***	.061	26.44	5.069***	1.503	1.743
2-9	0.977***	.032	30.46	2.657***	.914	1.040
50-199	-0.482***	.041	-11.82	0.618***	-.561	-.402
=> 200	-0.598***	.041	-14.56	0.550***	-.678	-.517
Constant	-2.076***	.058	-35.60	0.125***	-2.191	-1.962



## 9.4.3. 2000

Log likelihood = -29072.898					N	54326
					LR chi2(27)	11448.34
					Prob > chi2	0.0000
					Pseudo R2	0.1645
	B	SE	z-Score	Exp(B)	Conf.intervall	
<i>Sex (Ref: Male)</i>						
Female	0.262***	.027	9.69	1.299***	.208	.314
<i>Age (Ref: 35-49 years)</i>					.637	.765
<=24	0.701***	.033	21.51	2.016***	.637	.765
25-34	0.185***	.026	7.8	1.203***	.134	.235
50-59	-0.094**	.035	-2.71	0.910**	-.163	-.025
=> 60	0.478***	.047	10.21	1.613***	.386	.569
<i>Education (Ref: Complete secondary education)</i>						
Complete primary	0.678***	.029	23.77	1.970***	.622	.734
Some secondary	0.427***	.033	13.4	1.532***	.363	.490
Some tertiary	0.045	.066	0.69	1.046	-.084	.174
Complete tertiary	-0.280***	.054	-5.15	0.756***	-.386	-.173
<i>Attending an educational establishment (Ref: No)</i>						
Yes	0.630***	.069	9.15	1.877***	.495	.765
<i>Family Status (Ref: Single)</i>						
Married	-0.342***	.024	-14.01	0.710***	-.390	-.294
Living in partnership	0.024	.033	0.74	1.025	-.040	.089
<i>Sector of economic activity (Ref: Public and social services)</i>						
Agriculture	0.940***	.036	26.34	2.559***	.870	1.010
Commerce, gastronomy	0.202***	.041	4.91	1.224***	.121	.282
Transport	0.884***	.054	16.38	2.421***	.779	.990
Manufacture	0.263***	.044	5.98	1.301***	.177	.350
Construction	0.779***	.047	16.72	2.179***	.688	.870
Finance	-0.054	.065	-0.83	0.948	-.180	.073
Mining	-0.138	.099	-1.39	0.871	-.331	.056
Electricity, gas	-0.114	.137	-0.84	0.892	-.382	.153
<i>Occupational status (Ref: Skill level 2)</i>						
Skill level 1	-0.381***	.040	-9.41	0.683***	-.460	-.302
Skill level 3	-0.275***	.069	-4.01	0.759***	-.410	-.141
Skill level 4	-0.206	.126	-1.64	0.813	-.453	.040
<i>Firm size (Ref: 10-49 workers)</i>						
Domestic workers	1.738***	.049	35.12	5.685***	1.641	1.835
2-9	0.841***	.026	32.73	2.318***	.790	.891
50-199	-0.394***	.034	-11.71	0.674***	-.460	-.328
=> 200	-0.656***	.035	-18.74	0.519***	-.725	-.587
Constant	-1.856***	.047	-39.58	0.156***	-1.947	-1.764

## 9.4.4. 2003

Log likelihood = -26923.207

N 57671  
 LR chi2(34) 17895.93  
 Prob > chi2 0.0000  
 Pseudo R2 0.2494

	B	SE	z-Score	Exp(B)	Conf.intervall	
<i>Sex (Ref:Male)</i>						
Female	.129***	.027	4.71	1.138***	.075	.183
<i>Age (Ref: 35-49 years)</i>						
<=24	0.314***	.035	9.01	1.369***	.246	.382
25-34	.063*	.028	2.23	1.065*	.008	.118
50-59	.016	.036	0.45	1.016	-.055	.088
=> 60	.702***	.051	13.90	2.018***	.603	.801
<i>Education (Ref: Complete secondary education)</i>						
Complete primary	0.565***	.030	18.83	1.760***	.507	.624
Some secondary	0.375***	.034	11.11	1.456***	.309	.442
Some tertiary	0.074*	.064	1.16	1.078	-.051	.200
Complete tertiary	-.264***	.059	-4.48	0.768***	-.380	-.148
<i>Attending an educational establishment (Ref: No)</i>						
Yes	.624***	.063	9.87	1.867***	.500	.748
<i>Ethnicity (Ref: No declared ethnicity)</i>						
Mapuche	-.015	.045	-0.33	0.985	-.103	.073
Other Ethnicity	.186*	.094	1.01	1.205*	.002	.370
<i>Family status (Ref: Single)</i>						
Married	-.308***	.026	-11.85	0.735***	-.359	-.257
Living in partnership	-.099**	.032	-3.04	0.906**	-.162	-.035
<i>Sector of economic activity (Ref: Public and social services)</i>						
Agriculture	.650***	.040	16.38	1.914***	.571	.727
Commerce, gastronomy	.194***	.044	4.38	1.214***	.107	.281
Transport	0.728***	.054	13.42	2.071***	.622	.834
Manufacture	0.275***	.047	5.80	1.316***	.182	.367
Construction	0.406***	.050	8.06	1.501***	.307	.505
Finance	-.242***	.069	-3.51	0.785***	-.377	-.107
Mining	-.412***	.115	-3.58	0.662***	-.638	-.187
Electricity, gas	-.778***	.186	-4.19	0.459***	-1.142	-.414
<i>Occupational status (Ref: Skill level 2)</i>						
Skill level 1	.292***	.027	10.83	1.340***	.239	.345
Skill level 3	.207***	.059	3.54	1.230***	.092	.322
Skill level 4	0.044	.074	0.59	1.045	-.101	.189
<i>Firm size (Ref: 10-49 workers)</i>						
Domestic workers	1.716***	.053	32.14	5.561***	1.611	1.820
2-9	1.151***	.028	40.46	3.162***	1.095	1.207
50-199	-.673***	.036	-18.80	0.510***	-.743	-.603
=> 200	-.838***	.035	-23.80	0.433***	-.907	-.769
<i>Tenure in years (Ref: 2-5)</i>						
<=1	1.163***	.027	42.39	3.200***	1.109	1.217
6-10	-.385***	.042	-9.14	0.681***	-.467	-.302
11-15	-.522***	.056	-9.26	0.593***	-.633	-.412
=>16	-.357***	.049	-7.26	0.700***	-.453	-.261
<i>Employed on honorary contracts (Ref.: No)</i>						
Yes	1.944***	.050	38.98	6.989***	1.847	2.042
Constant	-1.997***	.055	-44.51	0.136***	-2.533	-1.904

## 9.4.5. 2006

Log likelihood = -28833.683					N	63727
					LR chi2(34)	16245.41
					Prob > chi2	0.0000
					Pseudo R2	0.2198
	B	SE	z-Score	Exp(B)	Conf.intervall	
<i>Sex (Ref: Male)</i>						
Female	.136***	.026	5.17	1.145***	.084	.187
<i>Age (Ref: 35-49 years)</i>						
<=24	0.271***	.034	7.85	1.311***	.203	.338
25-34	-.016	.029	-0.55	0.984	-.072	.041
50-59	.029	.034	0.84	1.029	-.038	.095
=> 60	.746***	.044	16.84	2.109***	.660	.833
<i>Education (Ref: Complete secondary education)</i>						
Complete primary	0.491***	.029	16.80	1.634***	.434	.548
Some secondary	0.379***	.033	11.66	1.461***	.315	.443
Some tertiary	-.143*	.065	-2.22	0.867*	-.270	-.017
Complete tertiary	-.337***	.059	-5.72	0.714***	-.452	-.221
<i>Attending an educational establishment (Ref: No)</i>						
Yes	.870***	.072	12.10	2.386***	.729	1.010
<i>Ethnicity (Ref: No declared ethnicity)</i>						
Mapuche	-.027	.041	0.66	1.027	-.053	.106
Other Ethnicity	.008	.091	-0.09	0.992	-.186	.169
<i>Family status (Ref: Single)</i>						
Married	-.321***	.026	-12.44	0.725***	-.372	-.271
Living in partnership	-.164**	.030	-5.38	0.849***	-.223	-.104
<i>Sector of economic activity (Ref: Public and social services)</i>						
Agriculture	.466***	.040	11.76	1.594***	.389	.544
Commerce, gastronomy	.182***	.044	4.12	1.200***	.095	.268
Transport	.554***	.055	10.03	1.740***	.446	.662
Manufacture	.061***	.047	1.29	1.063	-.032	.153
Construction	.241***	.050	4.80	1.273***	.143	.340
Finance	-.297***	.065	-4.58	0.743***	-.424	-.170
Mining	-.467***	.102	-4.58	0.627***	-.667	-.268
Electricity, gas	-.631***	.168	-3.76	0.532***	-.960	-.302
<i>Occupational status (Ref: Skill level 2)</i>						
Skill level 1	.167***	.026	6.40	1.181***	.116	.218
Skill level 3	.219***	.059	3.73	1.245***	.104	.334
Skill level 4	.160*	.074	2.16	1.173*	.015	.305
<i>Firm size (Ref: 10-49 workers)</i>						
Domestic workers	1.993***	.051	38.81	7.337***	1.892	2.094
2-9	1.136***	.027	41.37	3.114***	1.082	1.190
50-199	-.549***	.034	-16.06	0.577***	-.616	-.482
=> 200	-.794***	.034	-23.43	0.452***	-.860	-.728
<i>Tenure in years (Ref: 2-5)</i>						
<=1	.908***	.028	32.77	2.479***	.854	.962
6-10	-.261***	.040	-6.59	0.770***	-.339	-.184
11-15	-.593***	.058	-10.15	0.553***	-.708	-.479
=>16	-.356***	.045	-7.92	0.700***	-.445	-.268
<i>Employed on honorary contracts (Ref.: No)</i>						
Yes	1.747***	.043	40.52	5.740***	1.663	1.832
Constant	-2.322***	.053	-43.34	0.098***	-2.423	-2.217

## 9.4.6. 2009

Log likelihood = -25526.518					N	52233
					LR chi2(34)	12253.82
					Prob > chi2	0.0000
					Pseudo R2	0.1936
	B	SE	z-Score	Exp(B)	Conf.intervall	
<i>Sex (Ref: Male)</i>						
Female	.251***	.027	9.37	1.285***	.198	.303
<i>Age (Ref: 35-49 years)</i>						
<=24	.300***	.037	8.16	1.350***	.228	.372
25-34	-.012	.031	-0.37	0.988	-.072	.049
50-59	-.066	.034	-1.95	0.936	-.132	.000
=> 60	.535***	.047	11.37	1.707***	.443	.627
<i>Education (Ref: Complete secondary education)</i>						
Complete primary	.465***	.030	15.46	1.592***	.406	.524
Some secondary	.330***	.034	9.59	1.391***	.262	.397
Some tertiary	-.158*	.063	-2.50	0.854*	-.282	-.034
Complete tertiary	-.242***	.056	-4.29	0.785***	-.353	-.131
<i>Attending an educational establishment (Ref: No)</i>						
Yes	.775***	.064	12.09	2.170***	.649	.901
<i>Ethnicity (Ref: No declared ethnicity)</i>						
Mapuche	.065	.044	1.48	1.067	-.021	.151
Other Ethnicity	-.048	.092	-0.52	0.953	-.227	.132
<i>Family status (Ref: Single)</i>						
Married	-.237***	.027	-8.68	0.789***	-.290	-.183
Living in partnership	-.129***	.032	-4.07	0.879***	-.191	-.067
<i>Sector of economic activity (Ref: Public and social services)</i>						
Agriculture	.405***	.040	10.19	1.500***	.327	.483
Commerce, gastronomy	.217***	.042	5.16	1.242***	.134	.299
Transport	.378***	.056	6.75	1.460***	.268	.488
Manufacture	-.040	.051	-0.78	0.961	-.139	.060
Construction	.214***	.052	4.14	1.239***	.113	.315
Finance	-.380***	.065	-5.81	0.684***	-.508	-.252
Mining	-.469***	.094	-4.99	0.626***	-.653	-.285
Electricity, gas	-.500***	.140	-3.58	0.607***	-.773	-.226
<i>Occupational status (Ref: Skill level 2)</i>						
Skill level 1	.397***	.029	13.65	1.487***	.340	.454
Skill level 3	-.098	.054	-1.82	0.907	-.204	.008
Skill level 4	-.267***	.069	-3.86	0.766***	-.403	-.132
<i>Firm size (Ref: 10-49 workers)</i>						
Domestic workers	1.633***	.055	29.90	5.120***	1.526	1.740
2-9	.939***	.029	31.87	2.557***	.881	.997
50-199	-.405***	.035	-11.63	0.667***	-.473	-.337
=> 200	-.549***	.034	-16.28	0.578***	-.614	-.482
<i>Tenure in years (Ref: 2-5)</i>						
<=1	.734***	.028	26.04	2.084***	.679	.789
6-10	-.150***	.042	-3.59	0.861***	-.232	-.068
11-15	-.336***	.057	-5.85	0.714***	-.449	-.224
=>16	-.231***	.047	-4.89	0.793***	-.324	-.139
<i>Employed on honorary contracts (Ref: No)</i>						
Yes	2.365***	.062	38.00	10.649***	2.243	2.487
Constant	-2.057***	.053	-38.76	0.128***	-2.161	-1.953

## 9.4.7. 2011

Log likelihood = -26923.207					N	57671
					LR chi2(35)	17895.93
					Prob > chi2	0.0000
					Pseudo R2	0.2494
	B	SE	z-Score	Exp(B)	Conf.intervall	
<i>Sex (Ref: Male)</i>						
Female	.099**	.030	3.32	1.104***	.041	.158
<i>Age (Ref: 35-49 years)</i>						
<=24	.350***	.041	8.64	1.419***	.271	.430
25-34	-.033	.036	-0.92	0.968	-.102	.037
50-59	-.090*	.038	-2.35	0.914*	-.165	-.015
=> 60	.644***	.050	12.92	1.904***	.546	.742
<i>Education (Ref: Complete secondary education)</i>						
Complete primary	.558***	.034	16.24	1.748***	.491	.626
Some secondary	.368***	.038	9.71	1.445***	.294	.442
Some tertiary	-.030	.066	-0.45	0.971	-.159	.099
Complete tertiary	-.186**	.057	-3.25	0.830**	-.298	-.074
<i>Attending an educational establishment (Ref: No)</i>						
Yes	.733***	.068	10.86	2.082***	.601	.866
<i>Ethnicity</i>						
Mapuche	-.039	.045	-0.87	0.962	-.126	.049
Other Ethnicity	.079	.079	1.00	1.082	-.075	.233
<i>Nationality (Ref: Chilean)</i>						
Non-Chilean	.214*	.090	14.28	1.238*	.038	.039
<i>Family status (Ref: Single)</i>						
Married	-.277***	.031	-8.85	0.758***	-.338	-.215
Living in partnership	-.082*	.033	-2.46	0.921*	-.147	-.017
<i>Sector of economic activity (Ref: Public and social services)</i>						
Agriculture	.840***	.048	17.51	2.316***	.746	.934
Commerce, gastronomy	.340***	.045	7.58	1.405***	.252	.428
Transport	.501***	.058	8.68	1.650***	.388	.614
Manufacture	.151*	.060	2.52	1.163*	.034	.268
Construction	.330***	.057	5.75	1.392***	.218	.443
Finance	-.272***	.071	-3.84	0.762***	-.410	-.133
Mining	-.591***	.097	-6.07	0.554***	-.782	-.400
Electricity, gas	-.409*	.175	-2.34	0.664*	-.751	-.067
<i>Occupational status (Ref: Skill level 2)</i>						
Skill level 1	.133***	.030	4.41	1.143***	.074	.193
Skill level 3	-.186**	.066	-2.82	0.830**	-.316	-.057
Skill level 4	-.167*	.068	-2.46	0.846*	-.300	-.034
<i>Firm size (Ref: 10-49 workers)</i>						
Domestic workers	2.224***	.057	38.90	0.817***	2.112	2.336
2-9	.799***	.031	25.38	0.790***	.738	.861
50-199	-.376***	.040	-9.45	0.767***	-.454	-.298
=> 200	-.565***	.045	-12.44	10.950***	-.654	-.476
<i>Tenure in years (Ref: 2-5)</i>						
<=1	.813***	.030	27.05	9.242***	.754	.872
6-10	-.202***	.045	-4.47	2.224***	-.290	-.113
11-15	-.236***	.053	-4.45	0.687***	-.340	-.132
=>16	-.266***	.048	-5.53	0.568***	-.360	-.172
<i>Employed on honorary contracts (Ref.: No)</i>						
Yes	2.393***	.059	40.64	2.254***	2.278	2.509
Constant	-2.565***	.060	-42.97	0.077***	-2.682	-2.448



## Abstract – English

This thesis addresses the development of factors for informal employment in the Chilean labor market between 1994 and 2011. In the light of current transformations taking place in Latin America and particularly in the Chilean labor market, to date existing conceptualizations of informality need to be examined regarding their relevance to the current situation.

In order to ensure an appropriate approach to the topic, a first step includes an introduction to the Chilean labor market, consisting of an overview on relevant developments in the past century that have influenced the situation of Chilean workers and the discussion of key data referring to the Chilean labor market structure at the beginning of the 21<sup>st</sup> century. Consequently, the thesis is focused on the following main questions:

- *What are defining elements of informal employment relationships?*

A review of the literature on informal employment with a particular focus on Latin America aims to depict relevant issues of the debate, making reference to different perspectives that determine conceptualizations and corresponding forms of measurement of informality. Of particular importance in this context is the differentiation between the concepts of “informal sector” and “informal employment” as coined by the International Labour Organization. This thesis concentrates on a particular aspect of informality, which is informal wage employment, approximated by two different dimensions: contribution to the pension system and tenure of a written contract.

- *Which are the factors that lead to an informal employment relationship? How have these factors developed? Are there factors that have gained/lost importance for informal employment relationships over the observed time span?*

Past studies give hints on groups that are particularly affected by informality in the labor market and underline the importance to differentiate between wage earners and self-employed workers in this respect. Results so far show that besides personal characteristics of workers, certain characteristics of the workplace are of particular relevance in the context of informal employment.

The statistical analyses were calculated using the CASEN survey, a dataset provided by the Chilean Ministry of Social Development. The results of detailed multivariate logistic regression models highlight the pronounced disparities in the risks of informality experienced by workers according to various criteria. Far from constituting a homogeneous workforce, Chilean workers are exposed to a highly variable risk of informality, depending on their age, the economic sector they are employed in, or the years they have spent in their job. However, the risk structure as observed for 2011 is consequently put into perspective when the development over time is taken into account. The development of the odds ratios over time demonstrates that, while some influences are of remarkable continuity, other factors exhibit significant differences between the observed years.

The thesis confirms patterns of informality that have been identified on the regional level, such as the higher risk of women, younger and older workers, and workers with lower educational levels to be employed informally. Particularly elevated risks of informality are also experienced by workers with short job tenure, domestic workers, workers in low-productivity sectors, and workers in small enterprises. However, the results of the analysis also show that differences in the risk structure become smaller over time, as higher qualified workers seem to “lose” part of their advantage. A relevant phenomenon in this context constitutes “subordinate self-employment”, a form of employment in which limits between employment and self-employment are increasingly blurred. In Chile, this form of employment is mainly constituted by employment on honorary contracts which are predominantly found among higher qualified workers. From this point of view, it is to be questioned if a “transformation of informality” – towards groups of workers with different characteristics than those traditionally linked to informal employment – is taking place.





## Abstract – Deutsch

Die vorliegende Arbeit befasst sich mit der Entwicklung von Faktoren informeller Beschäftigung am chilenischen Arbeitsmarkt zwischen 1994 und 2011. Im Hinblick auf Veränderungen die derzeit an lateinamerikanischen und vor allem am chilenischen Arbeitsmarkt stattfinden ist es notwendig, bisherige Konzeptualisierungen von Informalität auf ihre aktuelle Relevanz hin zu untersuchen.

Um einen adäquaten Zugang zu diesem Thema zu gewährleisten, wird zunächst eine Einführung zum chilenischen Arbeitsmarkt geboten. Diese besteht einerseits aus einer Übersicht der wichtigsten Entwicklungen im 20. Jahrhundert die die Situation der chilenischen Arbeiter bestimmt haben und andererseits aus einer Diskussion der wichtigsten Arbeitsmarktindikatoren zu Beginn des 21. Jahrhunderts.

In weiterer Folge beschäftigt sich diese Arbeit mit folgenden Fragen:

- *Welche Elemente können zur Definition informeller Beschäftigung herangezogen werden?*

Besonders ist auf die vom internationalen Arbeitsamt entwickelte Unterscheidung zwischen „informellem Sektor“ und „informeller Beschäftigung“ hinzuweisen. Die Arbeit behandelt einen spezifischen Aspekt der Informalität der sich auf unselbstständig Beschäftigte bezieht und durch zwei Dimensionen angenähert wird: einerseits durch Beiträge zur Pensionsversicherung und andererseits durch Besitz eines schriftlichen Arbeitsvertrages.

- *Welche Faktoren führen zu informeller Beschäftigung? Wie haben sich diese Faktoren entwickelt? Gibt es bestimmte Faktoren die über den Beobachtungszeitraum an Relevanz gewonnen/verloren haben?*

Bisherige Studien geben Hinweise auf Gruppen am Arbeitsmarkt, die besonders von Informalität betroffen sind, und verdeutlichen auch die Notwendigkeit, in dieser Hinsicht zwischen selbstständiger und unselbstständiger Beschäftigung zu unterscheiden. Es wird gezeigt, dass neben persönlichen Eigenschaften der Beschäftigten auch Merkmale des Arbeitsplatzes von besonderer Relevanz sind.

Die statistischen Analysen wurden mithilfe eines Datensatzes des chilenischen Sozialministeriums, der CASEN-Umfrage, durchgeführt. Die Ergebnisse der multivariaten logistischen Regressionsmodelle veranschaulichen die ausgeprägten Unterschiede in den Risiken der Informalität der Beschäftigten nach unterschiedlichen Kriterien. Weit von einer Homogenität der berufstätigen Bevölkerung entfernt, weisen chilenische Beschäftigte starke Unterschiede in den Risiken der Informalität auf, abhängig von der jeweiligen Altersgruppe, der Branche oder der Beschäftigungsdauer. Die Risikostruktur wie sie für 2011 beobachtet wurde, wird darüber hinaus relativiert wenn der Zeitvergleich in Betracht gezogen wird. Die Entwicklung der Exponenten über den Beobachtungszeitraum zeigt, dass, während einige Faktoren durchaus Konstanz aufweisen, andere wiederum signifikante Veränderungen erkennen lassen.

Die Arbeit bestätigt in gewissen Punkten Ergebnisse anderer Studien in der Region zu Strukturen informeller Beschäftigung, wie etwa das höhere Risiko für Frauen, für ältere und jüngere Beschäftigte und für Beschäftigte mit niedrigerem Bildungsniveau. Erhöhte Risiken zeigen sich auch für Beschäftigte mit kürzerer Beschäftigungsdauer, Haushaltshilfen, Beschäftigte in Branchen mit niedriger Produktivität und Beschäftigte in kleinen und Kleinstbetrieben. Allerdings zeigen die Ergebnisse auch, dass sich bestimmte Unterschiede mit der Zeit tendenziell verringern, dass etwa höher qualifizierte Beschäftigte ihren Vorteil an geringerem Risiko informeller Beschäftigung „verlieren“. Von Relevanz ist in diesem Kontext das Phänomen der Scheinselbstständigkeit, wobei die Grenze zwischen selbstständiger und unselbstständiger Beschäftigung zunehmend verblasst. In Chile ist dieses Phänomen vor allem anhand der Beschäftigung über Honorarnoten, die vor allem höher qualifizierte Beschäftigte betrifft, beobachtbar. Aus dieser Perspektive ist die Frage zu stellen, ob hier eine „Transformation der Informalität“ stattfindet, da diese „neue Informalität“ bestimmte Gruppen am Arbeitsmarkt betrifft, die sich in einer sehr unterschiedlichen Position zu traditionell informell Beschäftigten befinden.

# CURRICULUM VITAE

## Personal Information

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## Education

- 09/1998 – 06/2006: Bundesgymnasium/Bundesrealgymnasium Hollabrunn  
Matura (high school equivalent) with honors
- 09/2006 – 06/2009: BA, Management Center Innsbruck  
Nonprofit, Social and Health Care Management, with distinction  
Subjects of Specialization: social, labor and commercial law;  
quantitative research methods  
Bachelor thesis: Social Inclusion through Micro Credit in  
Montevideo, Uruguay
- Since 10/2010 MA, University of Vienna  
Sociology  
Subjects of Specialization: Social structure research, migration,  
sociology of work  
Master thesis: Informality in Transformation? Factors for  
Informal Employment in the Chilean Labor Market 1994-2011
- BA, University of Vienna  
Transcultural Communication  
Language Combination: Spanish, Portuguese

## Work Experience

- 02/2008 – 04/2008 Internship at Hilfswerk Austria (creation of databases and  
presentations, preparation of grant proposals for the European  
Union and other donors, translation services from and to  
English, French and Portuguese, preparation of interim and final  
reports)
- 09/2009 – 04/2010 Coordination of Business Center at INFOCAP Foundation Chile  
(support of low-income workers in the development of their own  
businesses)

## **Research Experience**

10/2012 – 08/2013      Teaching assistant at the Institute of Sociology, Prof. Reinprecht  
(Organization of events, research assistance for publications)

## **International Experience**

08/2004 – 01/2005      High school exchange semester at St. Ursula's College,  
Yeppoon, Australia

08/2008 – 04/2009      Academic exchange semester at the Catholic University of  
Uruguay

12/2010 & 05/2011      Academic exchange within the course „Applied Urban  
Sociology“ (Prof. Reinprecht) with Université Paris 8  
Vincennes - St. Denis

07/2011 – 01/2012      Academic exchange semester at the University of Chile (within  
the Joint Study Program of the University of Vienna)

07/2012      12th Austrian-Portuguese Summer School in Colares/Lisbon,  
Portugal

07/2012 – 09/2012      Research stay at the University of Chile, Santiago de Chile  
(financed by a short-term research grant by the University of  
Vienna)

08/2013      Summer School in Social Science Data Analysis  
Maximum Likelihood and Limited Dependent Variable Models  
Randy Stevenson, Rice University

## **Languages**

German (native speaker)  
English, Spanish (fluent)  
Italian, Portuguese (good)  
French (basic)

## **Awards**

2012      Performance Scholarship of the University of Vienna  
Short-term research grant of the University of Vienna

2011      Performance Scholarship of the University of Vienna  
Joint Study Scholarship of the University of Vienna