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Stuck in a bad job? The dynamics of poor-quality employment in Chile, 2004–2019

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ABSTRACT

This paper studies whether workers become "stuck" in poor-quality employment, or whether poor-quality employment can serve as a "stepping stone" towards better job opportunities in the Chilean labor market. It does this from a multidimensional and longitudinal perspective, taking into account the intensity of the deprivation that workers face. In particular, it examines how workers move between good and bad jobs, and between these jobs, unemployment and inactivity and also discusses the respective determinants of these changes. The results of this analysis show that the deprivation levels among women in the labour market are persistently higher those of men, and that workers do indeed become stuck in bad jobs.

Thus, the paper presents a methodology for measuring chronic deprivation in the labor market, an issue on which neither the literature on job quality nor the literature on poor-quality employment (or bad jobs) has focused. It concludes by discussing the policy implications of this research.

In recent decades, the combined effects of globalization and labor market deregulation have focused academic and policy-making attention on precarious jobs (Kalleberg, 2012) and has led to an increased debate on the conceptualization and measurement of job quality (Burchell et al., 2014; Osterman, 2013). There is now broad agreement among experts that employment is a multidimensional concept (Muñoz de Bustillo et al., 2011), and on how job quality could be measured (OECD, 2017; Arranz et al., 2018; Green, 2021).[1] Within this literature on job quality, several authors have now focused on defining and measuring *poor-quality employment,*[2] which can

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[1] Different institutions refer to job quality by different names. While the EU and the OECD have put forward a framework for measuring job quality, the ILO refers to the subject as "Decent Work" (See for example, OECD (2014); European Parliament (2009) and ILO (2012)).

[2] In this paper, we refer to jobs with a defined set of poor employment characteristics as poor-quality employment, or sometimes as "bad" jobs for short. See Table 2 for a precise definition.

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be conceptualized as a subset of jobs with employment conditions that negatively affect the wellbeing of workers (Sehnbruch et al., 2020; Apablaza et al., 2023; Florisson, 2022; Green and Lee, 2024).

These studies of poor-quality employment are notable because they examine the negative impact that poor multidimensional employment conditions, such as low wages, unstable jobs, precarious contracts or irregular working hours, can have on the well-being of workers. Following the Alkire/Foster methodology (2011), Sehnbruch et al. (2020), González et al. (2021), Apablaza et al. (2023) and Apablaza et al. (2024) also take account of the *joint distributions* of poor employment conditions. This means that they consider a worker to be more intensely deprived if they have two or more poor employment conditions (also referred to as "deprivations") than if they have only one. Thus, the methodology not only calculates *how many* workers are in poor-quality employment in a labor market, but also *how intensely* they are deprived.

While this methodology has now become established and widely used,[3] neither the literature on job quality nor the literature on poor-quality employment have looked at whether workers become "stuck" in poor-quality employment, or whether poor-quality employment can serve as a "stepping stone" towards better job opportunities.[4] To the best of the authors' knowledge, this is therefore the first paper that uses a multidimensional index of poor-quality employment (based on Sehnbruch et al., 2020) to analyze the dynamics associated with good and poor-quality jobs.[5] The paper examines *both* how workers move between good and bad quality jobs, as well as their movements from these two categories of jobs into and out of the labor market (unemployment and inactivity) and the changing dynamics and interdependencies of the index's contributing dimensions, which ultimately drive fluctuations in the index. The latter is particularly challenging, as identifying the key dimensions driving these changes is far from straightforward (Alkire et al., 2015). Our methodological approach addresses this limitation by allowing for a longitudinal analysis that tracks the transitions of both the composite index and its individual dimensions simultaneously.

The paper proceeds by first reviewing the literature on the dynamics of employment trajectories, which shows that non-standard employment contracts can either be stepping stones into better jobs or become or "traps" in which workers become stuck, moving from one precarious job to another (e.g. Mattijssen et al., 2020; Berton et al., 2011; Booth et al., 2002). It then reviews the literature on job quality and discusses how it has introduced a multidimensional approach to the subject of employment conditions before examining the methodological contribution that the Alkire-Foster (AF) method can make in the context of the job quality literature, especially with regard to a discussion of how workers can become trapped in a vicious cycle of transitions between "bad jobs" (multidimensionally defined), unemployment, and inactivity.[6] The contribution of this section is that it connects these two approaches conceptually before presenting an empirical application of this approach.

Following the presentation and discussion of the AF methodology (Alkire and Foster, 2011), the paper presents its empirical findings, which show that it is extremely difficult for workers with bad jobs to find good ones; that the likelihood of finding a good job after being unemployed or inactive is especially low; that workers were negatively affected by the Great Recession. All these findings apply to the labor force as a whole, but show that women are even more likely than men to be caught in a vicious circle where they rotate between "bad jobs," inactivity, and unemployment. The paper concludes by discussing the policy implications of these findings.

It is important to note that Chile is an interesting case study for analyzing the dynamics of poor-quality employment because the country combines characteristics typical of emerging economies with those of some advanced ones.[7] Its institutional and legislative framework is comparable to Southern European countries (Esping-Andersen and Regini, 2000) and mirrors their widespread use of short-term employment contracts (Bellani and Bosio, 2019). Yet it also shares traits with other developing and transition economies, such as relatively high levels of informal employment (Williams, 2014) and extremely high levels of job rotation (Sehnbruch et al., 2019). In emerging economies, we still know very little about labor market dynamics, mostly due to a paucity of longitudinal data. Unusually, data quality and accessibility in Chile are particularly good, even by the standards of advanced economies.

1. Poor-quality employment: background and existing literature

The bodies of literature on the dynamics of employment and on job quality are closely related but often not explicitly connected as the latter has not incorporated a dynamic perspective. In this section, we explore how they can complement each other to contribute to our understanding of labor markets.

[3] See Apablaza et al. (2024) and Hovhannisyan et al. (2022) for examples of how institutions have adapted this approach and (Huneeus et al., 2015; Eberhard et al., 2023; Stephens, 2023) for examples of academic applications.

[4] See for example, Stier (2015), Rose and Stier (2019) or Arranz et al. (2019).

[5] For the purposes of this paper, we use the term poor-quality employment when conceptualising a combination of employment characteristics defined in section 4. However, as this term can become linguistically cumbersome, we sometimes use it interchangeably with the term "bad jobs", especially in the empirical section of this paper.

[6] A potential endogeneity issue in this study arises from the possibility that individuals who start their working lives in multidimensionally defined bad jobs may not remain in such positions solely because of their initial job choice. Rather, their continued presence in bad jobs, unemployment or inactivity may be influenced by underlying factors such as low educational attainment, which could serve as a proxy for unobserved skills. These unobservable characteristics may, in turn, hinder upward mobility, making it more difficult for workers to move into better jobs and maintain positive career trajectories.

[7] Chile was classified as high income by the World Bank in 2013, and was taken off the OECD's Development Assistance Committee list in 2017.

1.1. Stepping-stone versus trap?

As discussed above, one of the most relevant changes in labor markets in recent decades has been the expansion of different types of non-standard forms of employment (NSE) as opposed to permanent employment (Fudge and Strauss, 2014). According to Eurofound,[8] NSE is used as an umbrella term for different "employment arrangements that deviate from standard employment. They include temporary employment; part-time and on-call work; temporary agency work and other multiparty employment relationships; as well as disguised employment and dependent self-employment." They are also often described as flexible employment (Lind, 1999). Recent literature has also included platform work in the category of NSE and largely deemed it to be precarious (Muldoon, Graham and Cant, 2024; Woodcock and Graham, 2020).[9] NSE often responds to a desire for flexible employment relationships so that employers and companies can better adapt their labor force to patterns of labor demand (Kalleberg, 2018). Although these jobs are not by definition "bad" jobs, many experts consider that, overall, they have generated high levels of precariousness in labor markets (Kalleberg, 2018; Standing, 2011).

This change has led to dual labor markets and new forms of inequality as NSE is often associated with other employment conditions, which are considered to be substandard, such as job instability, lower pay, or reduced access to employment protection legislation. These developments may be exacerbated by the incorporation of artificial intelligence and technology in the productive processes of companies (e.g. Acemoglu and Restrepo, 2020). The economic security, working conditions and training opportunities of NSE tend to be more precarious than in traditional employment (Giesecke and Groβ, 2003; Kalleberg et al., 2000). Several authors have argued that this contractual flexibility has also increased wage inequalities, particularly in countries with liberal forms of capitalism (DiPrete et al., 2006; Kenworthy, 2008). Scholars still debate whether NSE contracts act as a preliminary step on the road to permanent employment, or whether it forms a trap as workers rotate between one non-standard job and another (e.g. McVicar et al., 2019), a question which this paper addresses from a multidimensional perspective.

The optimistic view is that they can be a stepping-stone to stable employment. In labor markets in which educational and vocational training systems are not well coordinated, employers do not always have complete information on the workers they are hiring and may be able to resolve this problem through NSE contracts, which allow them to evaluate the abilities of the worker before making a long-term hire. This essentially amounts to using these contracts as a kind of probation period to evaluate the productivity of new workers and is known in the socio-economic literature as a screening function (Spence, 1973; Booth et al., 2002).

Human capital theory argues that NSE is better than unemployment because workers gain work experience, new skills and social capital in these jobs (Andersson et al., 2005; Autor and Houseman, 2010; de Graaf-Zijl et al., 2011). Workers with NSE contracts can then find a permanent job, either with the same employer, who has now had a chance to witness how they perform on the job (Kalleberg et al., 2000) or with another company. A positive interpretation of this phenomenon suggests that both mechanisms function as a "bridge" between precarious and permanent employment (Fuller and Stecy-Hildebrandt, 2015). This is particularly relevant for those workers, who enter the labor market with limited work experience or are first-time entrants (Scherer, 2004; Gebel, 2010).

By contrast, other researchers view NSE contracts more negatively as a "trap" that workers become stuck in. This approach is based on the theory of dualistic and segmented labor markets (Doeringer y Piore, 1971), which argues that employers use NSE contracts to fill short-term labor demand and reduce the cost of employment in the long-term. In these cases, employers do not have an incentive to invest in the human capital of their workers who have an NSE contract. They also lack incentives to hire workers in NSE relationships permanently, even if they have proven their ability and productivity required for the job. In other words, NSE contracts are *not* used as a screening function but as a tool for employers to adjust their labor force in line with economic and business fluctuations (Esping-Andersen and Regini, 2000; Olsen and Kalleberg, 2004) or to circumnavigate employment protection legislation. The latter is more evident in countries where dismissals and severance pay entitlements for workers with standard employment may generate a high cost for companies (Gangl, 2003). As a result, it is assumed that NSE contracts can generate cycles of precarious employment interspersed with periods of unemployment, thus trapping workers in poor-quality jobs.

It is important to highlight that gender plays a significant role in influencing the stepping-stone effect on career mobility. Casual employment, while potentially serving as a stepping stone for both men and women, is more likely to have a positive impact on men's career progression, particularly in labor markets with a high proportion of casual employment (e.g. see Buddelmeyer and Wooden (2011)). Similarly, temporary employment, though affecting both genders, has more detrimental consequences for younger workers and, in certain welfare state regimes, may have very different gender-specific impacts on career mobility (Kalleberg, 2009). Moreover, the transition from casual to permanent employment is lengthier for women than for men, and women are more likely to experience persistent or recurring casual employment (McVicar et al., 2019).

Dual labor market theory thus argues that well-paid jobs with strong employment protection mechanisms constitute a "primary" sector in the labor market, while poorly paid, insecure jobs without effective employment protection predominate in a "secondary sector" (Hudson, 2007). The literature discusses several mechanisms that constitute obstacles to the progress of a worker from a

[8] See https://www.eurofound.europa.eu/en/topic/non-standard-employment. Accessed 12th February 2025.

[9] It should be noted that not all such work is precarious and often employs highly skilled workers and/or generates new employment opportunities in both advanced and developing countries, as these authors note. However, although precise statistics are difficult to obtain and vary widely depending on the source, most jobs in the gig economy are deemed to be precarious by experts, who point to their unpredictable income flows and frequently underspecified employment conditions, which disguise what would traditionally having been considered as a relationship of dependency (i.e. salaried workers) as self-employment (Piasna, 2022).

precarious job to a good quality one in a segmented labor market: first, employment in the secondary sector suffers from low wages because workers there have a low level of bargaining power compared to workers with good jobs in the primary sector (Lindbeck and Snower, 1989). Second, the secondary labor market offers lower levels of training and fewer opportunities for acquiring skills than the primary one (Booth et al., 2002; Connell and Burgess, 2006). Third, workers with NSE contracts participate less in meetings or events with colleagues, which makes it harder for them to network and acquire necessary social capital (e.g. Bendapudi et al., 2003).

In addition, workers who are employed in the secondary labor market on a succession of NSE contracts may become stigmatized as future employers may regard both their NSE contracts and possible periods of unemployment as a sign of a lower level of qualification, productivity or commitment with a job (Berton et al., 2011). This is compounded by psychological factors as workers employed in the secondary sector often suffer from lower self-esteem as they remain unable to find a good stable job (Booth et al., 2002; Korpi and Levin, 2001; Scherer, 2004). This combination of factors can make it difficult for workers to switch from the secondary into the primary labor market (Hertog, 2020; Schneider and Karcher, 2010).

However, this literature on dual labor markets generally does not consider the idea that *different employment conditions may compound the impact of NSE contracts on the ability of workers to find good quality, stable jobs.* Connecting these literatures and concepts therefore shows how other potentially precarious employment conditions (e.g. tenure, a lack of social security contributions, or excessive working hours) may combine with NSE contracts to impact job transitions negatively in the labor market. As the methodological section below explains, this paper uses a combination of variables (wages, occupational status, job tenure and social security contributions) to capture a multidimensional definition of non-standard employment.

1.2. The job quality literature

In recent decades, labor markets have undergone profound transformations due to globalization, deindustrialization, and technological change (Kalleberg, 2018; Hausermann and Palier, 2008). These changes have led to increased concerns about the negative impact of increasingly flexible and often precarious employment conditions in both developed and developing countries. In the former, a large proportion of workers were being hired on a short-term, freelance, subcontracted or even "zero hour" basis (Kalleberg, 2018). Meanwhile in the latter, formal employment has become more precarious even as skill levels improved (Apablaza et al., 2024), while widespread "informal employment" has not always diminished (Ohnsorge and Yu, 2021). In this context, debates about precarious employment have multiplied (Standing, 2011), leading Findlay et al. (2017:4) to conclude that "Job quality and the recognition that it needs to be improved has gone mainstream among policymakers".

Several issues have been key to achieving this progress. Academic research clearly demonstrates that the negative externalities associated with bad jobs extend beyond the workplace to healthcare, social protection and taxation systems, and therefore must be of concern to policymakers in governments and international institutions (Chandola, 2010; Cottini and Lucifora, 2013; Findlay et al., 2017).

Yet job quality is a complex "multidimensional and elusive concept" (Muñoz et al., 2011: 450), which has not been clearly defined, conceptualized or measured.[10] In fact, even the terminology on the subject is confusing as terms such as job quality, decent work, quality of work and quality of employment are often used interchangeably (Burchell et al., 2014). In addition, most of the work on job quality is characterized by two distinguishing features: first, the literature on the subject generally studies particular aspects of job quality separately. For example, Fuller (2008) examines wages; Gasparini and Marchionni (2017) and Högberg et al. (2019) contracts; Bosch and Maloney (2010) social protection in jobs; and Borowczyk-Martins (2017) part-time employment. And many studies discuss the impact of particular working conditions on other indicators relevant to workers, such as mental health outcomes (Cottini and Lucifora, 2013).

Second, many initial measures of job quality are based on dashboard indicators, which do not provide an effective mechanism for tracking how job quality has developed overall (e.g. ILO, 2012; Green and Mostafa, 2012; or OECD, 2014). Such dashboard indicators are very useful in terms of presenting information on complex multidimensional phenomena, especially when different data sources must be used, or when there is a lack of agreement on both the components and methodology for aggregating data (Piasna et al., 2019). In addition, the component indicators can be presented alongside each other, without having to take potentially normative decisions about which attributes of jobs are more important than others.[11] The enormous contribution of these bodies of literature has been to highlight the importance of job quality and the relevance of particular job characteristics, especially to the wellbeing of workers.

However, dashboard indicators have several shortcomings, which are summarized by Muñoz et al. (2011) and Sehnbruch et al. (2020): First, they do not take account of cumulative disadvantage to establish who the most vulnerable in a labor market are. This also means that they do not allow for the comparison of individual workers. As Leschke and Watt (2014) have argued, this makes it difficult to inform policy makers, who require information on whether worker A or worker B is more vulnerable to target policy support efficiently. Second, they do not allow for tracking trends over time, across regions, or across different social groups, such as men and

[10] Burchell et al. 2014 and Green (2021) have extensively reviewed the job quality literature. Their arguments will therefore only be summarized here.

[11] In this journal, Osterman (2013), for example, suggested examining compensation, diversity in the substance of work, control, stress and intensification, and employment contracts, while also discussing why job satisfaction cannot serve as a summary indicator of job quality.

women. For example, Green et al. (2013) analyze work quality, work intensity, good physical environment and working time quality separately across countries and then compare gender gaps across these separate indicators.[12] Third, they make cross-country comparisons difficult: for example, if country A has more workers employed on short-term contracts and country B has more workers with extremely low wages, which country has the bigger problem with poor-quality jobs? Fourth, measuring job quality as a composite indicator would allow for the analysis of trade-offs between job quantity and quality, and a study could be undertaken of which employment regimes produce better results overall (Muñoz et al., 2011: 449). The same goes for potential relationships between poor-quality employment and other variables, such as unionization rates, productivity, the development of particular economic sectors or industries, or indicators related to worker wellbeing.[13] Lastly, and as this paper will show, dashboard indices cannot be used to examine the dynamics of deprivation in the labor market.

The more recent job quality literature has recognized these shortcomings and has proposed synthetic indicators that summarize employment conditions and allow for cross-country comparisons as well as studying individual countries. (Somarriba and Pena, 2009; Florisson, 2022; Green and Lee, 2024; Piasna, 2017, 2019). The establishment of the European Working Conditions Survey (EWCS) by the European Foundation for the Improvement of Living and Working Conditions (Eurofound for short) has significantly contributed to our understanding of how working conditions in Europe have developed as well as to the process of cross-country comparisons (Burchell et al., 2014; Piasna et al., 2019; Green, 2025). However, given the small sample sizes of the survey in each country and the lack of a panel component, the EWCS cannot be used for a dynamic analysis. In addition, the principle component methodology used by these papers cannot easily be applied to a dynamic analysis of panel data.

In this context, the Alkire and Foster (2011) method for constructing synthetic indices of deprivation used in this paper presents significant advantages as it produces a multidimensional measure at the level of the *individual* worker, that allows for the analysis of analyze *dynamic subgroups* (e.g., those who remain, enter or exit bad jobs) as well as changes in the partial indices of these measures (e.g. changes in the dimensions of the index).[14] In addition, the approach emphasizes the importance of *clustered disadvantages* in the labor market (e.g. having a short-term job, working long hours *and* a low salary) following Wolff and de-Shalit (2007).

This point is especially important when it comes to analyzing differences between male and female workers. Many authors have pointed out that women face greater challenges in terms of labor force participation, wage gaps formal employment opportunities, access to higher-quality jobs, and representation in higher-paying sectors (e.g. Antón et al., 2023; Berniell et al., 2021; Blau and Kahn, 2017; Gasparini and Marchionni, 2017; Villanueva and Lin, 2020; Eberhard et al., 2023). A key question therefore arises as to how these gender gaps develop from a dynamic perspective.

1.3. The Chilean case

As explained in the introduction, Chile is an interesting case study for analyzing employment deprivation dynamics because its results are relevant to both advanced and emerging economies. Its labor market is considered to have performed well in recent years with increasing real wages and participation, and decreasing unemployment rates, a stable proportion of informal employment (described as vulnerable employment by the World Bank's Development indicators (see Table 1a). At the same time, the country has absorbed a significant number of migrants from other countries in the region into the labor market.[15] However, average GDP levels disguise significant earnings inequalities and a Gini coefficient of 46.6 in 2019. The institutional and legislative framework (such as unemployment insurance, minimum wage regulation or employment protection legislation) that governs Chile's formal sector is similar to that found in southern Europe and has generated a dual labor market with mechanisms similar to those described above as employers seek to avoid permanent contracts and their associated rights and potential costs, particularly severance pay (Sehnbruch, 2006).

Yet Chile also shares traits with other developing economies where high levels of informal employment persist (Joubert, 2015; Sehnbruch et al., 2020). Recent studies have shown that Chile and other Latin American countries are now suffering from the combination of persistent informality and precarious employment conditions in the formal sector, which in turn undermines the sustainability of social protection systems (CEPAL, 2024). Table 1b illustrates this for the case of Chile by using administrative data from the country's unemployment insurance system to show how permanent and fixed term contracts differ. In 2018, 69.8 % of formal contracts were open-ended, while 30.2 % were fixed term contracts. The latter, on average, pay half of what open-ended ones do and last only 8.5 months. Moreover, a very high proportion of fixed term contracts last less than 3 months (42.8 %) (Sehnbruch et al., 2022; Carranza et al., 2025).

It is therefore particularly necessary to examine whether workers become stuck in poor-quality employment. As data quality and accessibility in Chile is particularly good, even by the standards of developed countries, it presents the perfect case study for examining

[12] For example, Green's data show that while work quality in the EU remained unchanged between 1995 and 2010, work intensity increased and both the physical environment and working time quality improved (2013: 765). This raises the question whether improvements in the latter, for instance, make up for a deterioration of work intensity?.

[13] Often, analysts use wages as a summary indicator of job quality. See for example Benton and Kim (2022).

[14] As discussed above, the AF method has become a widely established methodology for this purpose (Eberhard et al., 2023; Hovhannisyan et al., 2022; Stephens, 2023). Yet so far, no study has been used to examine poor-quality employment from a dynamic perspective with the purpose of measuring chronic deprivation in the labor force.

[15] Data from Chile's labour force survey shows that between 2010 and 2019, the country incorporated close to 1 million migrants into its workforce (Autor et al., 2023).

Table 1a
Descriptive statistics on the Chilean labour force.

	2004	2006	2009	2012	2015	2019
Gini	0.507	0.488	0.482	0.476	0.462	0.488
Poverty	40.0	35.6	28.5	15.8	13.2	13.9
Labor force participation rate (aged 15–64)	60.6	62.1	64.0	67.6	63.3	69.8
Unemployment rate	10.2	9.0	11.3	6.6	6.3	7.5
Vulnerable employment rate	21.3	20.2	20.4	19.9	20.5	21.8
Average annual wage (Constant US$)	22,605	23,074	26,543	33,014	34,072	34,509

Sources: Gini and Poverty indicators from CEPALSTAT. Participation, unemployment, and vulnerable employment rates from the World Bank's World Development Indicators. The World Bank defines vulnerable employment as family workers and own-account workers as a percentage of total employment. Wages from OECD Data.

Table 1b
Characteristics of formally employed workers in Chile.

Type of Contract	% of Formal Employment	Income (USD)	Average Age	Duration	% Duration of less than 3 months
Open-ended	69.80 %	1460.9	39.3	41.1	5.70 %
Fixed term	30.20 %	738.7	35.8	8.5	42.80 %
Total	100 %	1243.3	38.2	31.3	16.90 %

Source: From Sehnbruch et al., 2022). Own calculations using administrative data from the Chilean Unemployment insurance system. January 2018 exchange rate (602.3 CLP).

labor market dynamics, which have not been widely studied in emerging economies, mainly due to the scarcity of reliable panel data.

2. Data and methodology

We base our empirical analysis on six waves of the Chilean Encuesta de Protección Social (EPS) gathered between 2004 and 2020, which incorporating individuals older than 15.[16] During each round, the EPS registers information on the employment situation and working conditions of the individual. Table A1 in the Supplementary Material summarizes the size of the cross-sectional samples and the size of the balanced panel samples (individuals interviewed during both waves $t - s$ and t).[17] Cross-sectional samples are used to analyze changes in employment deprivations over time (e.g. the wave 2006/07 has 16,442 and 2009/10 has 14,463 individuals), and balanced subsamples were selected to analyze these data from a longitudinal perspective (e.g. the two-wave panel 2006/07–2009/10 has 9670 individuals in both waves). In total, a pooled panel sample of 35,923 observations can be generated.[18]

The EPS is the largest and oldest longitudinal survey running in Latin America and therefore unique in emerging economies. It has a large sample size and includes information on earnings, the contractual status of workers, self-employment, tenure, social security contributions and hours worked.[19] It does not, however, include questions on autonomy, work intensity, health risks or other subjective indicators that are typically considered to be part of working conditions or labor force surveys in advanced economies.

This section presents the methodological strategy used to analyze the dynamics of poor-quality employment. We first present how the poor-quality employment measure specified by Sehnbruch et al. (2020) has been adapted to the EPS panel data before discussing the two models used for dynamic analysis: first, transitions between good and poor-quality employment, unemployment or inactivity and their respective determinants. Second, the dynamics within the measure of poor-quality employment and their interdependencies that ultimately drive changes in deprivation.

2.1. The specification of the cumulative deprivation measure

The measure of poor-quality employment used in this paper is based on the approach developed by Sehnbruch et al. (2020), which follows recommendations made by the existing literature on job quality (Green and Mostafa, 2012; OECD, 2014) and uses the Alkire

[16] The EPS was initiated in 2002/03 with a sample from the pension system. Informally employed workers were subsequently included in 2004/05, making the survey representative of the adult population as a whole. This paper therefore excludes data from 2002/03.

[17] The cross-sectional samples size are larger than panel subsamples because they contain refresh samples. Each wave's sample expansion to the national population uses different cross-sectional weights. In the case of balanced panel subsamples, longitudinal weights are used that consider the effects of sample attrition in its expansion.

[18] The Undersecretary of Social Protection explicitly mentions that the 2012 EPS is not representative of the Chilean population over 15 years of age (https://previsionsocial.gob.cl/datos-estadisticos/condiciones-bases-de-datos-eps/). However, this paper does us 2012 data because it focuses on the dynamics of employment from one round to the next among the individuals participating in the EPS. The representativeness of the Chilean population is therefore a secondary concern.

[19] Typically, these are the only variables on employment conditions included in Latin American labor force or household surveys (Sehnbruch et al., 2020).

and Foster (2011) (AF) method to summarize the three component dimensions of the index: labor income, employment stability, and employment conditions (see Table 2). The AF method is a well-known axiomatic strategy used for multidimensional indices that recognize that individuals can be deprived in several dimensions or indicators *at the same time,* a concept that this paper refers to as cumulative deprivations.[20]

The AF method dichotomizes each of the five indicators of achievement vectors into deprivations by means of the cut-off lines specified in Table 2. A counting vector computes the sum of the weighted number of deprivations suffered by an individual, denoted as c_I. Next, this vector is compared to a threshold k, below which a person is identified to be deprived if $c_I < k$. This produces a Headcount ratio *H,* which denotes the sum of individuals who are deprived (i.e. having at least k deprived dimensions) compared to the total population of workers under consideration. An intensity score (A) is then computed to calculate the average number of deprived dimensions (c_I) among those considered to be deprived. The final deprivation measure (M_0) is the product of the percentage of individuals identified as being deprived and their average level of deprivation (M_0 = H x A). M_0 is what this paper refers to as the deprivation measure. Note that a precise formulation of this methodology can be found in the Methodological Appendix.

Put simply, H denotes the proportion of workers, who are deprived in some shape or form. The average intensity A addresses the question of whether a worker is deprived in only one or more components of the overall index, and thus addresses the question of cumulative deprivations presented in the introduction of this paper. The M_0 measure summarizes information about the occurrence and extent of the deprivation by multiplying headcount (H) and intensity (A). In other words, it is the weighted sum of deprived dimensions among those who hold poor-quality employment in relation to the total number of possible deprived dimensions for all individuals. *A higher index denotes a higher level of deprivation.* This measurement is decomposable into subgroups and contributions from each dimension and indicator to the overall result (Alkire and Foster, 2011; Sehnbruch et al., 2020). This decomposability permits the identification of which groups in the labor force are more likely to be deprived and which employment characteristics contribute more to this result. This property can be useful in defining policy priorities for improving employment conditions.

Table 2 summarizes the dimensions, indicators, weights and cut-offs used, as well as the justifications for the latter. Again, this method follows standardized methods employed in Latin America that incorporate all available comparable data on job quality (Huneeus et al. (2015), Sehnbruch et al. (2020) and Hovhannisyan et al. (2022). In particular, the deprivation cut-offs and the justifications for these cut-offs are gleaned from these papers.

2.2. Measurement of poor-quality employment dynamics

Conventional labor market transition models permit the analysis of transition probabilities between different states for different population groups. However, they do not provide information on the interactions of changes in multiple dimensions and their contributions to being deprived. In this paper, we therefore use two dynamic approaches to analyze this: first, the transitions between indicators *within* the poor-quality employment measure and *changes of the measure* itself (ΔM_0) explained by the interaction between its five component indicators shown in Table 2; and second, the transitions between poor-quality employment (H), good jobs, unemployment, and inactivity, as well as the drivers of these transitions. For linguistic ease and to simplify the specification of the models presented below, workers in poor-quality employment are referred to in this section as having "bad jobs" while workers with good quality employment are referred to as having "good jobs".

2.2.1. Analyzing changes of the poor-quality employment measure

The analysis of any multidimensional measure over time also needs to identify the dynamics of each dimension within the composite index' transitions (Alkire et al., 2015). This takes advantage of the decomposable property that characterizes the AF family of measures to propose a dynamic approach that examines the interdependence between dimensions and measure changes from a longitudinal perspective. Thus, *changes* in the deprivation measure over time can be calculated and decomposed into dynamic subgroups of workers following the recent literature on multidimensional poverty dynamics (Apablaza et al., 2023; Alkire et al., 2017; Prieto et al., 2022; Suppa, 2018).

Of the six dynamic subgroups described above, two are easy to analyze from a dynamic perspective. These transitions correspond to dynamic subgroups 1 and 2, which correspond to individuals who are not working and take a job and those who are working and exit a job. The deprivation measure changes for the dynamic subgroup 1 is M_0 in period t ($M^t_{0,Enter\ job}$) and for the dynamic subgroup 2 is M_0 in period $t-s$ ($M^{t-s}_{0,Exit\ job}$). The other transitions must consider the interactions between the dimensions and their relationship with the dynamics of the measure, and therefore require further elaboration.

The disaggregation of the poor-quality employment measure into population-specific changes for dynamic subgroups 3, 4 and 5 (*ongoing* bad jobs, *enter* bad jobs and *exit* bad jobs) are specified as follows:

$$\Delta M_0 = \Delta M_{O,Ong\ BJ} + \Delta M_{0,Enter\ BJ} + \Delta M_{0,Exit\ BJ} \tag{2}$$

The first component of Equation (2) is due to the change in the intensity of those who remain in bad jobs in both periods – the *ongoing* BJ – weighted by the size of this dynamic subgroup. The second component reveals the change in the intensity of those who enter bad jobs also weighted by the size of this dynamic subgroup and the third component reflects the population-weighted change in

[20] This concept was first introduced with reference to the quality of employment by Sehnbruch et al. (2020) and has since been widely applied by other papers, such as Eberhard et al. (2023) and CEPAL (2024).

Table 2
Dimensions, indicators, cut-offs and weights of the QoE Deprivation Index.

Dimensions (weight)	Labour Income (1/3)	Employment Stability (1/3)		Employment Conditions (1/3)	
Indicator (weight)	Income (1/3)	Occupational Status (1/6)	Tenure (1/6)	Social Security (1/6)	Excessive Working Hours (1/6)
Deprivation Cut-off	Less than 6 basic food baskets (monthly calculation)	No contract, Self- employed without a professional invoice	Less than 2 years employed in current occupation and less than 1 year for Individuals between the ages of 18 and 24	No contributions to the pension system	More than 45 h per week
Population	All occupied individuals between the age of 18–65, who reply to the relevant survey questions				
Justification for Cut-offs	6 food baskets were chosen because they allow for one worker and one dependent (which is the Chilean average) to live above the poverty line with a small amount of extra income, which is necessary to function in the labour market.	Informal workers are not protected by employment legislation and they have no employment rights or collective representation, and would find it difficult to sustain any kind of legal recourse in relation to their employment situation.	2 years of job tenure are necessary for a worker to accumulate rights to severance pay and unemployment insurance that would provide minimal coverage of unemployment in Chile.	Individuals not contributing to the pension system are unlikely to achieve sustainable income over the life-cycle.	This cut-off is based on statutory working hour limits in Chile.

Note that the official definition and value of food baskets changed in Chile in 2013 to reflect changing standards of living and associated needs. In 2019 the Ministry of Social Development and Family (MDSF) published a series of poverty rates that use this new methodology, adjusting past data accordingly. This paper uses these updated food basket data. (MDSF & UNDP, 2019).

the intensity of those who exit bad jobs.

Also, absolute changes of ΔM_0 can be decomposed into changes in dimensional partial indices of the deprivation measure $\Delta M_0 = \sum_{j=1}^{D} w_j \Delta h_j(k)$, where j is a dimension of employment deprivation, w_j is the weight assigned to each dimension and D is the total number of deprivations analyzed. The challenge to identify changes in dimensional partial indices of this deprivation is that these can result from workers in bad jobs exiting deprivation j or from workers leaving bad jobs due to improvements in other dimensions. Changes in dimensional partial indices of QoE can also be decomposed into dynamic subgroups as follows:

$$\Delta h_j(k) = \Delta h_{j,Ong\ BJ}(k) + \Delta h_{j,Enter\ BJ}(k) - \Delta h_{j,Exit\ BJ}(k) \tag{3}$$

Each component is related to a pair of transitions. The first component of Equation (3) is due to transitions in dimension j without a change of deprivation status ($BD_{t-s} \rightarrow BN_t + BN_{t-s} \rightarrow BD_t$), the black arrows in Fig. 1. The second component reveals those who enter bad jobs either changing to non-j-deprived or maintaining j-deprived ($GN_{t-s} \rightarrow BD_t + GD_{t-s} \rightarrow BD_t$), the dark grey arrows in Fig. 1. The third component shows those who exit PE changing j-deprived or maintaining j-deprived ($BD_{t-s} \rightarrow GN_t + BD_{t-s} \rightarrow GD_t$), the light grey arrows in Fig. 1.

These two approaches focus on nine distinct labor market dynamics from t - s to t or one wave of the EPS to the next: 1) individuals who move from a bad job to a good job; 2) individuals who move from a bad job to unemployment; 3) individuals who move from a bad job to being out of the labor force; 4) individuals who move from unemployment to a good job; 5) individuals who move from unemployment to a bad job; 6) individuals who move from unemployment to being out of the labor force; 7) individuals who move from being out of the labor force to a good job; 8) individuals who move from being out of the labor force to a bad job; 9) individuals who remain out of the labor force. These mutually exclusive and exhaustive groups are referred to as dynamic subgroups of workers in this analysis.

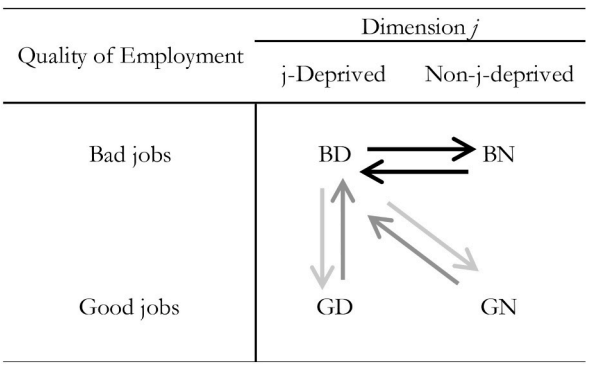

Fig. 1. Transitions that change any dimensional partial indices. Note: A worker can have: i) a bad job and be deprived in j (BD); ii) a good job but be deprived in j (GD); iii) a bad job but not be deprived in j (BN); or iv) a good job and not be deprived in j (GN).

2.2.2. Modelling labor market transitions

The second modelling strategy below assumes that the future employment state depends solely on the current state. Thus, these movements are modelled by a first-order Markov process (e.g. Constant and Zimmermann, 2014). Specifically, the transition probabilities of an individual i from one state to the other or remaining in the same state depend only on his or her current state, and the socioeconomic characteristics of the individual, X_i.

Depending on the individual's current state, three multinomial logits are used to estimate transition probabilities. For example, one model estimates the probabilities of moving from a bad job to a good job, unemployment, or inactivity. The other two models estimate the chances of transitioning from the other three labor states to the four different outcomes. Formally, the probability that an individual moves from one state to another between $t-s$ and t is:

$$P(Y=l|Y_{(t-s)}=m,X)=\frac{e^{(\beta_{lm}X_i)}}{1+\sum_{k=0}^{K-1}e^{(\beta_{km}X_i)}} \quad (1)$$

where l represents the transition alternatives: $l = 0, 1, 2, 4$ which are four unordered nominal results (good job, a bad job, unemployment, or being out of the labor force), and where m represents the individual's labor market state at the previous time period t-s, where the individual was either in a bad job, unemployment, or out of the labor force. For the identification of the model, the normalization $\beta_0 = 0$ is used.

Specifically, the econometric approach focuses on nine different labor market dynamics from t - s to t or from one wave of the EPS to the next: 1) individuals moving from a bad job to a good job; 2) individuals moving from a bad job to unemployment; 3) individuals moving from a bad job to being out of the labor force; 4) individuals moving from unemployment to a good job; 5) individuals moving from unemployment to a bad job; 6) individuals moving from unemployment to being out of the labor force; 7) individuals moving from being out of the labor force to a good job; 8) individuals moving from being out of the labor force to a bad job; 9) individuals remaining out of the labor force. These mutually exclusive and exhaustive groups are referred to in this analysis as dynamic subgroups of the labor force. In summary, modelling the steady-state transition allows for estimating the probability that an individual is in a specific labor market state, and explains how socioeconomic characteristics X_i contribute to moving from one particular state to another, and how this choice influences the next transition.

The exclusion of transitions where individuals remain in the same employment state (e.g., good-job to good-job, bad-job to bad-job, etc.) is motivated by the summing-up restriction of conditional probabilities. Since the transition probabilities must sum to one for each initial state, including self-transitions would introduce additional probabilities that are algebraically redundant. Their omission simplifies the estimation process without loss of information, as their values can be inferred from the sum of the observed transitions. This methodological choice allows us to concentrate on transitions between different types of employment, which are the primary focus of the analysis.

3. Results and findings

3.1. The dynamics of cumulative employment deprivations

In this section the poor-quality employment measure is established from cross-sectional data between 2004/05/2019/20, to provide an overview of the period analyzed. Table 3 presents the Headcount Ratio (H), the average intensity of deprivation (A), and the Adjusted Headcount Ratio (M_0), which constitutes the actual measure of poor-quality employment. The results show that H improved substantially overall between 2004/06 (47.5 %) and 2019/20 (34.6 %), although it deteriorated due to the 2008 subprime crisis (49.2 % in 2009/10) before recovering again. The intensity of deprivations A, however, remained relatively stable over the period, meaning that on average, Chilean workers were deprived in approximately half of the indicators included in the measure. M_0 therefore mirrors the trend observed in the headcount ratio H, but to a lesser extent.

Fig. 2 plots the evolution of the deprivation dynamics by gender. Panel a, illustrates that the proportion of individuals in bad jobs is persistently and increasingly higher among women than men. This is because the percentage of deprived men has decreased more quickly than among women. In 2020, the percentage of women with bad jobs was 39.7 % and 30.8 % for men. Thus, the gender gap shows an upward trend during the 15 years studied. Panel b, shows the changes in the deprivation measures used for those who worked between two consecutive waves: the entries to bad jobs are shown in green and the exits from bad jobs in orange. Here, two results stand out: First, in all years analyzed there are workers who enter bad jobs and others who exit bad jobs. Second, for both men and women, the period of economic crisis (2007–2009) was the period where the proportion of workers who entered bad jobs was greater than those who exited bad jobs. This is the reason why the black line that corresponds to the sum of both transitions appears positive only for that period. From the perspective of labor market dynamics, the question arises: where do those who enter or exit bad jobs come from? We provide empirical evidence on the transitions between good and bad jobs, as well as movements between different states of activity (unemployment or inactivity) into or out of good or bad jobs in the next section.

3.2. Dimensional dynamics of the poor-quality employment measure

Beyond looking at the total levels of deprivation in each survey period, it is also important to examine the changes *within* the measure. For example, deprivation levels could show no changes between one wave and the next of the survey data, but this net result may disguise significant movements into and out of bad jobs. Net deprivation levels must therefore be disaggregated between entries

Table 3
Evolution of the quality of employment index (2004)/05–2019/20.

	2004/05	2006/07	2009/10	2012/13	2015/16	2019/20
Headcount Ratio (H)	47.5 (0.598)	41.5 (0.849)	49.2 (0.986)	47.5 (1.166)	36.5 (0.818)	34.6 (1.221)
Average Intensity Share (A)	53.9 (0.335)	52.5 (0.541)	52.8 (0.468)	52.0 (0.505)	52.5 (0.493)	52.2 (0.786)
Adjusted Headcount Ratio (M_0)	0.256 (0.0036)	0.218 (0.0048)	0.259 (0.0056)	0.247 (0.0065)	0.191 (0.0047)	0.181 (0.0068)

Notes: Cut-off K = 33 %. Standard error in parentheses.
Source: Authors' calculations based on the Social Protection Survey.

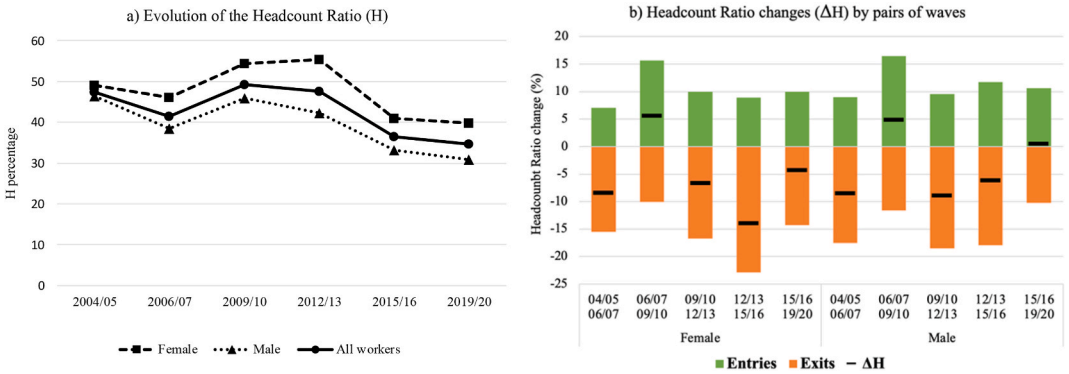

Fig. 2. Evolution of the QoE deprivation headcount ratio (H) and its dynamics by gender.
Source: Authors' calculations based on the Social Protection Survey. *Notes:* Cut-off K = 33 % is used to build the QoE deprivation index (*H)*. In Panel b), results obtained from panel for workers, who were interviewed in pairs of waves, and who, if employed, had no missing variables in the indicators that compose *H*.

and exits from bad jobs. To carry out this analysis, the decomposition benefits offered by the cumulative deprivation measure (M_0) are used.

As the results presented above show, M_0 declines over the period, significantly reducing deprivation levels. Fig. 3 (Panel a) illustrates this trend also by showing that women have a worse quality of employment than men throughout the period studied. A similar story can be observed in panel b) of Fig. 3. It presents a dynamic analysis of the Adjusted Headcount Ratio (ΔM_0). This again shows that Chile's poor-quality employment measure reduced over time, except for the crisis years 2006 and 2009, when the measure increased by 0,028 points for men and 0,02 for women. An increase in the entrance rate into bad jobs by 0,07of women explains this increase, which was not compensated for by an exit rate of −0,042, or a −0.008 level of maintenance (female workers who stayed in the same job). Among men, the deterioration of the measure in 2009 is explained by an increase of (0.072) into bad jobs, while those who exit bad jobs amounted to (−0.048), and those who remained in a bad job became slightly more intensely deprived leading to a slight increase of M_0 for this group of (0.004).

Between the last two rounds of the survey, M_0 decreased by 0.019 in the case of women, which is explained by the higher proportion of women who exit bad jobs M_0 (−0.067) compared with those who become deprived (0.052), and improvements among those who remain deprived (−0.004). For male workers, M_0 decreased by 0.004 between the 2015 and 2020 surveys, explained only by the decrease in M_0 of those who remain deprived between both periods (−0.004), as the decrease in M_0 for those who exit deprivation (-0.048) is equivalent to the increase of those workers, who become deprived (0.048). In summary, the longitudinal data show a significant proportion of entries and exits to poor-quality jobs that appear hidden in the cross-sectional analyses of the cumulative deprivation measure.

Fig. 4 goes one step further by presenting the variation of each dimension of the index (ΔHj) for two different economic cycles: 2006–2009 and 2012–2015. As explained in the methodological section, breaking down the data in this way and adding up the changes in dimensional partial indices by weighting each indicator in the measure generates the variation in M_0. In other words, ΔHj sheds light on the *contribution* of each dimension on the variations of M_0 over time. In addition, the change in each dimension can be explained by transitions from a good to a bad job (entries); or, vice versa, from bad to good jobs (exits); or workers who remain in bad jobs (ongoing).

Fig. 4 (Panel a) presents variations in partial dimensional indicators experienced by workers between rounds 2006 and 2009 of the EPS survey, a period during which M_0 increased. As can be seen, ΔHj decreased for all indicators except the dimension of income. This means that the worsening of employment conditions during this time can be explained directly by the decrease in the income of the employed, which is consistent with what was observed using cross sectional data to analyze the impact of the 2009 Great Recession (Ffrench -Davis and Heresi, 2014).

Specifically, the variation of partial indicators for women increased by 13,4 % in the income dimension, which is explained in this case by a larger increase of workers who enter a bad job (12,9 %) and those who remain in a bad job (3,3 %) compared to the decrease

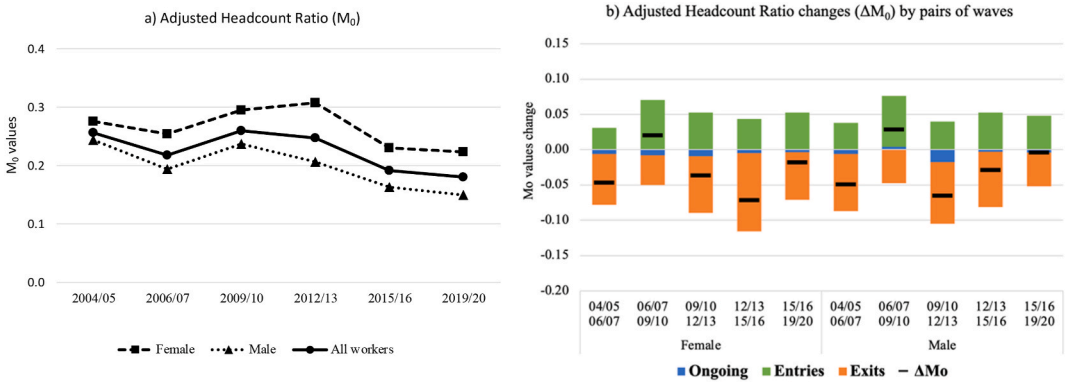

Fig. 3. Evolution of the Quality of Employment Index (M_0) and its changes by gender.
Source: Authors' calculations based on the Social Protection Survey. *Note:* Cut-off K = 33 %.

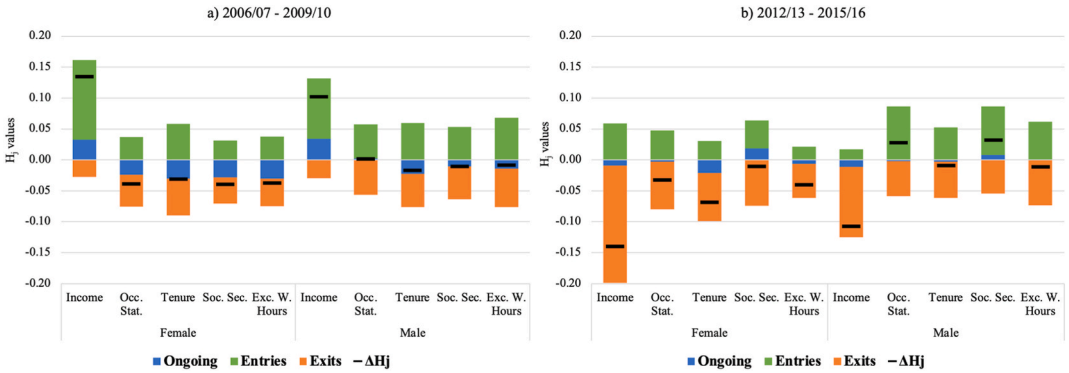

Fig. 4. Changes in dimensional partial indices of QoE (ΔHj) by gender.
Source: Authors' calculations based on the Social Protection Survey.

of those who exit a bad job (−2,7 %). By contrast, the partial indicator change for men in income increases by 10,2 %, which can also be explained by the higher number of those who enter a bad job (9,8 %) and those who stay in a bad job (3,4 %). Both percentages are higher than the proportion of workers who exit a bad job (−3,0 %). For women, the dimension that improves the most is social security contributions, which decreases by 4,0 %. At the same time, job tenure among men is the indicator that improves the most, reduced by 1,7 %.

Panel b) of Fig. 4 presents the variations in dimensional partial indicators between rounds 2015 and 2020 of the EPS survey. Among women, the most significant variation occurred in the income dimension, which fell by 4,4 %, principally as a result of a worsening of the partial indicators as workers exited poor-quality jobs (−10,9 %) compared to the increase in the entries into bad jobs (6,2 %). A slight deterioration can be observed for the indicator of excessive hours worked for women whose partial indicator increased by 0,8 %, which can be explained by the increase between those who stay in bad jobs (2,1 %) and those who enter one (1,5 %). Together, this combined result decreases the number of workers who exit bad jobs (−2,8 %). A similar result can be observed among men, where a decrease in the partial indicator of income by 2,2 % occurs as a result of more workers exiting a bad job (−4,7 %) compared to those who enter one (2,4 %), and an increase of the indicator excessive hours worked of 1,8 %, due to the increase in workers entering a bad job (5,8 %) compared to those who exit one (−3,5 %) or remain in a bad job (−0,06 %).

3.3. *Labor market transitions from poor-quality employment*

Table 4 presents the proportion of individuals who move from each of the different labor states analyzed towards another, or who maintain their status between one period and the next. First, the table shows that for both men and women who have good jobs, the probability of remaining in good jobs in the following period is high (69.1 % and 72.2 %, respectively). Second, transitions from bad jobs show that the Chilean labor market offers two different paths for men and women. While 32 % of men move from a bad job to a good job, the same percentage of women change their status, but move into unemployment or inactivity. Third, there are essential differences between unemployed men and women in the labor market: unemployed men are more likely to transition into employment in the next period, while unemployed women are much more likely to exit the labor force (42.4 %). Similar results are observed among inactive workers. The probability of remaining inactive is also significantly higher among women (65.9 %) than men (45.2 %), who

Table 4
Average wave-to-wave labor market transitions (%).

Labour market state at t-s	Labour market state at t			
	Good job	Bad job	Unemployment	Not in the labour force
Female				
Good job	69.1	16.4	6.4	8.1
Bad job	22.1	45.2	11.5	21.3
Unemployment	14.3	26.1	17.3	42.4
Not in the labour force	6.4	16.2	11.5	65.9
Male				
Good job	72.0	17.7	7.9	2.4
Bad job	32.0	50.1	9.5	8.5
Unemployment	31.0	34.3	18.6	16.1
Not in the labour force	21.0	21.8	12.0	45.2

Notes: Figures are the average of weighted estimates of wave-to-wave rates of transition (using paired longitudinal weights). Rows sum to 100.
Source: Authors' calculations based on the Social Protection Survey.

have a much higher likelihood of finding employment. These results, therefore, show that the proportion of poor-quality employment among Chilean women is not only higher overall than among men but also that they are less than half as likely than men to find a good job if they are unemployed or not in the labor force.

Figs. 5 and 6 show labor transitions for workers and non-workers for five pairs of waves between 2006/07 and 2019/20. The results also compare job transitions for men and women. Panel a) of Fig. 3 shows that a significant – and similar - proportion of men and women (22 %) with good jobs end up in bad jobs between 2006/07 and 2009/10: 22.3 % of women and 23 % of men. Indeed, the economic crisis increased the proportion of bad jobs among those who were employed during that period. This shift is less pronounced during the period of economic recovery, reaching transition probabilities similar to the period prior to the financial crisis. Also, panel a) shows that the proportion of women with good jobs who became unemployed or left the labor force increased during the period analyzed (5.4 % in 2006/07 to 9.5 % in 2019/20), while male workers exhibited a similar trend but at lower levels.

Panel b) of Fig. 5 shows that workers who transitioned from bad jobs to good ones show opposite trends and different levels of probabilities for men and women. As expected, between 2006 and 2009, there was a reduced percentage of workers who moved to good jobs: 16.3 % for men and 24.3 % for women. Again, this trend reverts as economic growth resumes between 2009 and 2015. Another difference can be observed in the transitions between workers with bad jobs and inactivity. On average, women were twice as likely as men to leave the labor force (15.4 % versus 7.8 %). Moving out of a bad job is thus more difficult for women in that they are less likely to find a good job and more likely to become unemployed or inactive.

Fig. 6 presents transitions from unemployment and inactivity into bad and good jobs. Again, we find differences between men and women. First, panel a) shows that while women are generally more likely to move from unemployment to bad jobs between 2002 and 2019, men are more likely to find good jobs than bad ones during the economic recovery. For example, in 2019/20, while women had a probability of moving from a bad job of 25.8 %, the likelihood of moving to a good one was 16.7 %. In the case of men, it was 40.0 % for the former and 30 % for the latter. Second, while for inactive men (Panel b), there are years when the probability of moving into a good job was higher than the probability of moving into a bad job (e.g. 2015). For women, during the entire period studied, the likelihood of finding a good job is half that of finding a bad one.

So far, this analysis has been developed without controlling for observable variables. Tables 5 and 6 present parameter estimates and robust standard errors for this analysis.[21] These tables report the results of women in relation to men, the presence of children in households and periods that represent different economic cycles between 2004 and 2020. A negative coefficient suggests a low probability of individuals moving from one state to another relative to a reference state. In contrast, a positive coefficient represents a high probability of moving to another state. Block (a) shows transitions from workers in good jobs to bad jobs, unemployment, and inactivity. Staying in good employment in both periods is the reference state. Block (b) shows transitions from workers in bad jobs to good jobs, unemployment, and inactivity. Staying in bad employment in both periods is the baseline state. Block (c) shows the changes to good jobs, bad jobs, and inactivity from unemployment, while remaining unemployed is the reference state. Block (d) presents the probabilities of going from inactivity to good employment, bad employment, and unemployment; staying inactive from one period to another is the reference state.

Again, three conclusions stand out: First, women are more likely to move from a bad job to inactivity or unemployment than men. At the same time, women are less likely than men to find a good job when they are unemployed or inactive. Second, in households with at least one child under the age of 5, those who work in a good job are less likely to move to other states. Those with a bad job in the same household are more likely to transition to a good job. However, the interaction variable between gender and children in the household reveals that working women have a high probability of becoming unemployed or inactive or having a bad job. These findings are consistent with those of Berniell et al. (2021) and Eberhard et al. (2023). Both studies use similar data for Chile and find that motherhood is associated with a significant reduction in hours worked, women's earnings and an increase in informal jobs, thus affecting the quality of employment of women with children. Third, as expected, the results show that the transitions from good jobs to

[21] Marginal effects are also estimated for each variable. These tables can be found in appendix as A2 and A3.

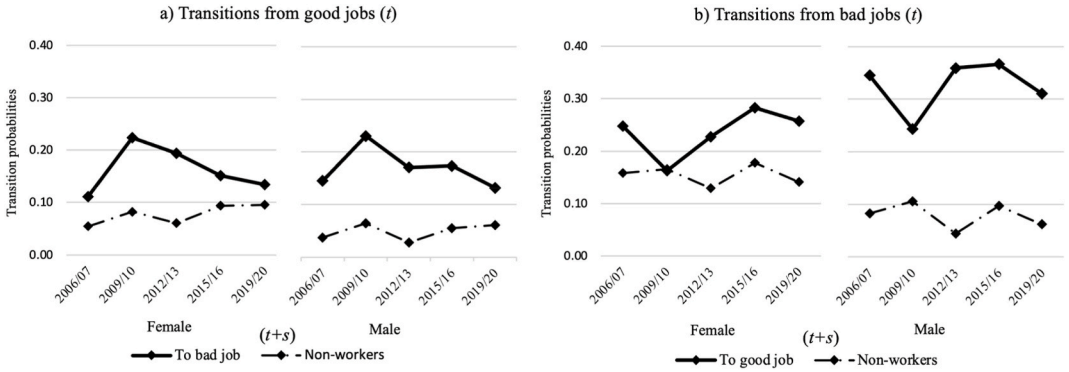

Fig. 5. Workers' transition probabilities by gender, (Headcount ratio, H).
Source: Authors' calculations based on the Social Protection Survey.

Fig. 6. Non-workers' transition probabilities by gender, (Headcount ratio, H).
Source: Authors' calculations based on the Social Protection Survey.

Table 5
Workers' transition: Multinominal logit results.

Covariates in t-s	Block (a): From good jobs in *t-s* to			Block (b): From bad jobs in *t-s* to		
	Bad jobs in t	Unemployment in *t*	Not in the labour force in *t*	Good jobs in *t*	Unemployment in *t*	Not in the labour force in *t*
Women	−0.0726***	0.591***	1.794***	0.0717***	0.628***	1.855***
	(0.00408)	(0.00437)	(0.00901)	(0.00417)	(0.00590)	(0.00906)
Children <5 in household	−0.138***	−0.309***	−0.725***	0.160***	−0.204***	−0.952***
	(0.00286)	(0.00432)	(0.0106)	(0.00292)	(0.00489)	(0.00799)
Women x Children <5 in household interaction	0.298***	0.480***	1.090***	−0.153***	0.255***	1.232***
	(0.00453)	(0.00627)	(0.0115)	(0.00458)	(0.00656)	(0.00877)
Period 2004/05–2006/07	−0.262***	−0.564***	0.390***	0.0317***	0.214***	0.942***
	(0.00343)	(0.00449)	(0.00994)	(0.00348)	(0.00519)	(0.00902)
Period 2006/07–2009/10	0.489***	0.0279***	0.827***	−0.419***	0.0808***	1.449***
	(0.00301)	(0.00391)	(0.00909)	(0.00369)	(0.00537)	(0.00879)
Period 2009/10–2012/13	−0.0479***	−1.330***	0.606***	0.0882***	−0.418***	0.770***
	(0.00336)	(0.00595)	(0.00938)	(0.00353)	(0.00588)	(0.00929)
Period 2012/13–2015/16	−0.0575***	−0.432***	0.650***	0.481***	−0.322***	1.353***
	(0.00401)	(0.00560)	(0.0108)	(0.00421)	(0.00762)	(0.00975)
Observations	12,632			12,632		

Notes: ***p < 0.01, **p < 0.05. The models control for age, education, household income, marital status, children, region and wave-year.
Source: Authors' calculations based on the Social Protection Survey.

bad jobs, unemployment and inactivity are sensitive to business cycles, with the period 2006/07–2009/10 showing the most significant impact.

The multivariate analysis confirms the findings of the descriptive analyses. First, it is extremely difficult for workers with bad jobs to find good ones; second, women are much more likely than men to move into unemployment or inactivity from a bad job; third the

Table 6
Non-workers' transition: Multinominal logit results.

Covariates in *t-s*	Block (c): Transitions from the unemployment in *t-s* to			Block (d): Transitions from not in the labour force in *t-s* to		
	Good jobs in *t*	Bad job in *t*	Not in the labour force in *t*	Good jobs in *t*	Bad job in *t*	Unemployment in *t*
Women	−0.995*** (0.00671)	−0.456*** (0.00672)	0.742*** (0.0101)	−0.535*** (0.00457)	−0.00203 (0.00438)	−0.281*** (0.00448)
Children <5 in household	−0.0795*** (0.00777)	−0.119*** (0.00763)	−3.539*** (0.0433)	1.403*** (0.0133)	0.563*** (0.0132)	−1.883*** (0.0373)
Women x Children <5 in household interaction	−0.403*** (0.00935)	−0.0426*** (0.00887)	3.636*** (0.0436)	−1.391*** (0.0137)	−0.715*** (0.0134)	1.798*** (0.0374)
Period 2004/05–2006/07	0.0857*** (0.00662)	0.293*** (0.00686)	0.995*** (0.0107)	−1.087*** (0.00481)	−0.439*** (0.00468)	−0.323*** (0.00464)
Period 2006/07–2009/10	−0.520*** (0.00634)	0.154*** (0.00639)	1.339*** (0.00997)	−0.184*** (0.00575)	0.0705*** (0.00558)	−0.448*** (0.00615)
Period 2009/10–2012/13	1.315*** (0.00771)	1.595*** (0.00783)	1.264*** (0.0121)	0.885*** (0.00537)	0.848*** (0.00528)	−1.613*** (0.00976)
Period 2012/13–2015/16	0.801*** (0.0133)	0.326*** (0.0142)	1.451*** (0.0169)	0.718*** (0.0120)	−0.0189 (0.0111)	−0.926*** (0.0145)
Observations	3904			8724		

Notes: ***p < 0.01, **p < 0.05. The models control for age, education, household income, marital status, children, region and wave-year.
Source: Authors' calculations based on the Social Protection Survey.

likelihood of finding a good job after being unemployed or inactive is especially low, but especially so for women; fourth, both women and men were negatively affected by the Great Recession, but women more so than men. Overall, these findings show that workers, particularly women, become "stuck" not only in bad jobs but also in a cycle of changes between bad jobs, unemployment and/or inactivity and vice versa.

While our study primarily takes a descriptive approach, we acknowledge potential estimation challenges, particularly endogeneity concerns that may arise due to unobserved heterogeneity and selection biases. Workers with different unmeasured characteristics—such as motivation, job search intensity, or access to informal networks—may systematically sort into different labor market trajectories, potentially biasing our estimates. Additionally, reverse causality could be an issue, as prior labor market experiences may shape both current job quality and future transitions. Although our findings align with previous literature on labor market segmentation and employment traps, we recognize that establishing causality requires specific methods designed to address endogeneity.

4. Conclusions

In this paper, we propose a method for analyzing the dynamics of poor-quality employment over time that goes beyond what the job quality literature has proposed (discussed in section 2). By examining the transition probabilities of female and male workers for moving from one state of activity (inactivity, unemployment) or employment status (good or bad job) into another, the paper demonstrates, first, how difficult it is for workers with bad jobs to find good ones; second, that women are much more likely than men to move into unemployment or inactivity from a bad job; third that the likelihood of finding a good job after being unemployed or inactive is low, but especially so for women; and fourth, that both women and men were negatively affected by the Great Recession, but again this affected women more negatively than men. Overall, these findings show that workers, particularly women, become "stuck" not only in bad jobs, but also in a cycle of transitions between bad jobs, unemployment and/or inactivity.

These findings draw attention to the issue of chronic deprivation in the labor market. Both developed and developing countries can learn from the Chilean case, which according to traditional labor market indicators (participation and unemployment rates as well as wages) is considered to have performed very well. This paper therefore contributes a Latin American perspective to a growing body of literature that argues that indicators of the quantity of employment or of wages do not capture the full extent of deprivation in the labor force (Florisson, 2022; Green, 2025; Maestas et al., 2023; Stephens, 2023).

Despite an incipient recognition that both the quantity and the quality of jobs matter, policymakers have neglected the issue of chronic deprivation in the labor force generated by the combination of low earnings, informality, unstable jobs and other poor working conditions, which requires dedicated and targeted public policy responses directed at workers, who become *stuck* in poor-quality jobs as opposed to those who are in a *transitory* situation of deprivation.

Three different types of policy responses can be identified that would help address these problems: regulatory reform, institutional reform, and targeted policy support for chronically deprived workers. Chile has the data infrastructure and administrative capacity to undertake all three and is making progress in this direction. Other countries can learn from Chile given that their data infrastructure for implementing relevant policies in this area is not fit for purpose, especially considering future changes that experts expect technological and AI developments to accelerate (Autor et al., 2023; Frey, 2019; Simms, 2019; Susskind, 2020; Woodcock and Graham, 2020).

First, on the issue of regulation, previous work on this topic has shown that regulatory reforms which increased minimum wage levels and reduced the maximum hours of a working week led to significant improvements in the indicators income and hours (Autor et al., 2023). However, less attention has focused on stabilizing the Chilean labor market, which is characterized by a high level of short-term contracts (30 % of the formal labor force) and short tenures. Using administrative data, Sehnbruch et al. (2019) showed that the average duration of short-term contracts was 8.5 months, while permanent contracts lasted only 41 months. Such high levels of job rotation have a negative effect on the wellbeing of workers as well as on the economy as a whole, by dragging down productivity. In addition, they undermine the welfare state as contributions to health, unemployment and pension systems are interrupted. Other countries have counteracted this effect by increasing the level of contributions that short-term contracts have to make to these systems, a mechanism, which disincentives the abuse of flexible contracts while helping to sustain welfare states. However such regulation is structured, it would likely improve the job stability of formal employment in Chile and in other countries (e.g. in Southern Europe), which suffer from similar problems.[22]

Second, from the institutional perspective, urgent attention needs to be paid to the question of how informal self-employment can be formalized. At present, informal workers in Latin America do not pay income taxes and are not obliged to contribute to social security systems, but can still draw on the health service and also on minimum pension levels. Inequalities resulting from this structure in the pension system especially affect women, who are less likely to be in stable, formal employment over their life-cycle. Governments therefore need to think more about how they can make contributions to social security attractive to workers, and convince them that contributing is worth their while. This is politically delicate as most informal workers maintain that their earnings are too low to

[22] At present, the contributions of short-term and permanent workers to the Chilean unemployment insurance system are already structured somewhat differently. In both cases, a total of 3 % of a worker's wage is paid into the system. But in the case of short-term contracts, this contribution is made only by employers contribute, whereas for permanent contracts it is split between workers and employers (0.6 % and 2.4 % respectively). However, the difference between these contributions is minimal. Levelling the playing field would require providing short-term workers with rights to insurance at least equivalent to the severance pay entitlements of permanent workers. See (Sehnbruch et al., 2022; Sehnbruch et al., 2019) for a more detailed discussion.

be able to afford taxes or contributions (Sehnbruch, 2006; Kanbur and Levy, 2022). Yet workers in formal jobs with similar levels of earnings do have to contribute to social security systems.

Drawing workers into the formal system, for example through earned income tax credits, in exchange for requiring them to formalize their activities would potentially constitute a solution to this dilemma. Similarly, Discussions are currently under way in Chile as to how informal workers can be attracted into the formal sector through a combination of personal and business incentives, such as a single contribution mechanism ("Monocotizacion") that would provide access to accident and disability insurance as well as business development, vocational training and financial services.[23]

Another institutional policy option is to establish life-long learning and training systems in the same way that unemployment insurance has been institutionalized. A proportion of contributions (potentially from workers and employers) could be paid into such a system, which would help fund continuous education and training. The commission currently discussing the future of work in Chile has, for example, suggested using a proportion of currently existing tax credits for vocational training for this purpose.[24]

Establishing such a system is especially relevant given the changes that AI and technology are likely to bring to labor markets. At present, the Chilean unemployment insurance system does require workers to engage in a process of finding a new job or undertake vocational training, but the training offered through the system is minimal and does not lead to certified or higher levels of qualification. Moreover, there is little point in such training if workers are merely rotating between one bad job and another. Improving such mechanisms is especially important for women with small children (Berniell et al., 2021; Eberhard et al., 2023) or who have taken a break from participating in the labor market following childbirth or care responsibilities.

Making life-long learning systems work, however, requires a third policy response, which consists not only of improving the training and education offered, but also targeting these measures as effectively as possible. Chile's existing administrative data infrastructure can be used for this purpose as different administrative databases are already linked up in the Register of Social Information.[25] Yet, while the government carefully tracks the performance and outcomes of Chile's education systems (which are generally publicly funded), once young adults graduate into employment, market mechanisms take over. However, administrative systems could easily distinguish between workers, who are merely changing jobs or who are literally "stuck" in a cycle of poor-quality employment, inactivity and unemployment. In the latter case, workers could be offered targeted support and effective training, including access to higher education through the established institutions, such as the National Service of Training and Employment (SENCE).

To conclude, the results presented in this paper illustrate the need for further research on chronic deprivation in the labor market. In fact, given its administrative data infrastructure, Chile is in a better position to target policy support effectively compared to other countries with similarly high levels of non-standard employment contracts or self-employment. The granular nature of this data will also permit future research on the negative externalities associated with deprivation in social protection systems, which first receive fewer contributions from precarious employment and then have to shoulder the increased fiscal costs associated with these jobs.

CRediT authorship contribution statement

Kirsten Sehnbruch: Writing – review & editing, Writing – original draft, Investigation, Funding acquisition, Data curation, Conceptualization. **Joaquín Prieto:** Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Methodology, Investigation, Formal analysis, Funding acquisition, Data curation, Conceptualization. **Diego Vidal:** Visualization, Validation, Software, Methodology, Investigation, Formal analysis.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.ssresearch.2025.103206.

[23] Interview with officials from Ministry of Labor, 24th August 2024.

[24] The existing institutional framework in Chile can be used for such a mechanism. The National Service for Training and Employment (SENCE), its tax credit system (Franquicia Tributaria) as well as other institutions related to the certification of skills (e.g. Chile Valora) can be used to establish such mechanisms. See https://www.subtrab.gob.cl/division-politicas-de-empleo/prospeccion-laboral/campl/for details (accessed 24th August 2024).

[25] See https://risinvestigacion.ministeriodesarrollosocial.gob.cl/for detail.

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