



How Labour Market Institutions in European Welfare Capitalisms Affect Labour Market Transitions

Alkistis ZavaKou

Thesis submitted for assessment with a view to
obtaining the degree of Doctor of Political and Social Sciences
of the European University Institute

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European University Institute
Department of Political and Social Sciences

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ABSTRACT

Despite the large body of literature on labour market institutions and their effects on employment and unemployment, large gaps remain. This thesis sheds a new light to the old problem of labour market institutional design and labour market performance. It examines how labour market institutions in different European models of capitalism affect labour market transitions. It does so by employing an advanced econometric method: an event history analysis, estimating a piecewise constant exponential model. Longitudinal data are employed from three different national datasets (the German Socioeconomic Panel (GSOEP), the British Household Panel Survey (BHPS) and the Italian Survey “Famiglia e soggetti sociali”) for the period 1990–2009. The effects of labour market institutions are estimated both at a country-level and at a comparative, pooled-country-level to increase the degrees of freedom and the variability in the independent variables. The empirical evidence suggests that institutions indeed have a significant effect on labour market transitions and this effect differs largely among different models of capitalisms, corroborating the Varieties of Capitalism approach. In accordance with the latter, the importance of non-pecuniary institutions such as trade union power, trade union fragmentation and wage bargaining is re-affirmed and substantial labour market institutional complementarities are found. This thesis advocates for an optimal, strictly positive and intermediate level of EPL in all countries; an unemployment insurance contingent on strict conditionality and high activation; while the optimal level and system of wage bargaining are found to depend crucially on the trade union power as well as trade union coordination and fragmentation. Trade union fragmentation is found to reduce all labour market transitions and have a negative effect on labour market performance.

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Introduction

“Barely a day goes by without some expert telling us how the continental European economies are about to disintegrate unless their labor markets become more flexible. Basically, we are told, Europe has the wrong sort of labor market institutions for the modern global economy. These outdated institutions both raise unemployment and lower growth rates. The truth of propositions such as these depends on which labor market institutions really are bad for unemployment and growth, and which are not.”

—Stephen Nickell and Richard Layard, 1999

“In the 1970s, European unemployment started increasing. It increased further in the 1980s, to reach a plateau in the 1990s and 2000s. It is still high today, although the average unemployment rate hides a high degree of heterogeneity across countries ... that cannot be explained by the different economic conditions and shocks.”

—Olivier Blanchard, 2005

1.1 Theoretical and Empirical Puzzle

Ten years later, these 2005 words of the former Director of the International Monetary Fund and undeniably one of the experts globally on unemployment, seem more pertinent than ever. According to the latest available data, 17,978 million people were unemployed in the EU28 in December 2017, of whom 14,153 million were in the euro area (Eurostat). This translates in an unemployment rate of 8,7% in contrast to the much lower unemployment rate of 4,1 in the United States and 2,8% in Japan in the same period.

According to the same data, at the beginning of 2000, more than 20,5 million persons were unemployed in the EU28, corresponding to an average unemployment rate of 8,9%. At the end of 2004 this number reached 21,2 million, while the unemployment rate stood at 9,2 %. At the beginning of 2005 a

period of steadily declining unemployment started, lasting until the first quarter of 2008, when the crisis hit. At that time, the unemployment rate in the EU28 had reached a low of 6,8% before rising again sharply as a result of the economic crisis. At the end of the crisis, the rate reached a record high of 11% but has been decreasing steadily since 2016 following the economic recovery.

The unemployment rate in the euro area (EA19) followed a similar pattern to that in the EU28, although at a higher level (i.e. unemployment was lower in the Member States which do not yet have the euro). What is more interesting, is the large divergencies among EU Member States: the lowest unemployment rates in December 2017 were recorded in the Czech Republic (2,3%), and Malta and Germany (both 3,6 %) whereas the highest unemployment rates were observed in Greece (20,7%) and Spain (16,4%). Furthermore, Figure 1.1 depicts the evolution of the unemployment rates of the four largest European economies (Germany, France, UK, Italy).

As can be seen from the Figure, although the unemployment rates were converging in all countries (with the exception of the UK) in the early 2000s, since then they have followed very different patterns and today the UK and German rates are close again but highly divergent to the ones of France and Italy. In particular, although the unemployment rate in Germany increased substantially reaching a peak of 11% in 2005 as a result of the reunification and its associated costs (Ragnitz 2007; Lechner et al. 2004), it managed to converge to the much lower French unemployment rate of 7,4% in 2008 and has since then surprisingly continued to decrease, even in the immediate aftermath of the crisis when most European countries experienced an unprecedented increase in unemployment. Moreover, although the UK had a higher unemployment rate compared to Italy in the beginning of the 1990s, the UK rate fell below the Italian one already in the mid-1990s and the two countries have since then followed very different trajectories, despite the same economic conditions and shocks they faced. In 2017, the UK unemployment rate of 4,8% stood almost 7 percentage points below the Italian one of 11,7%.

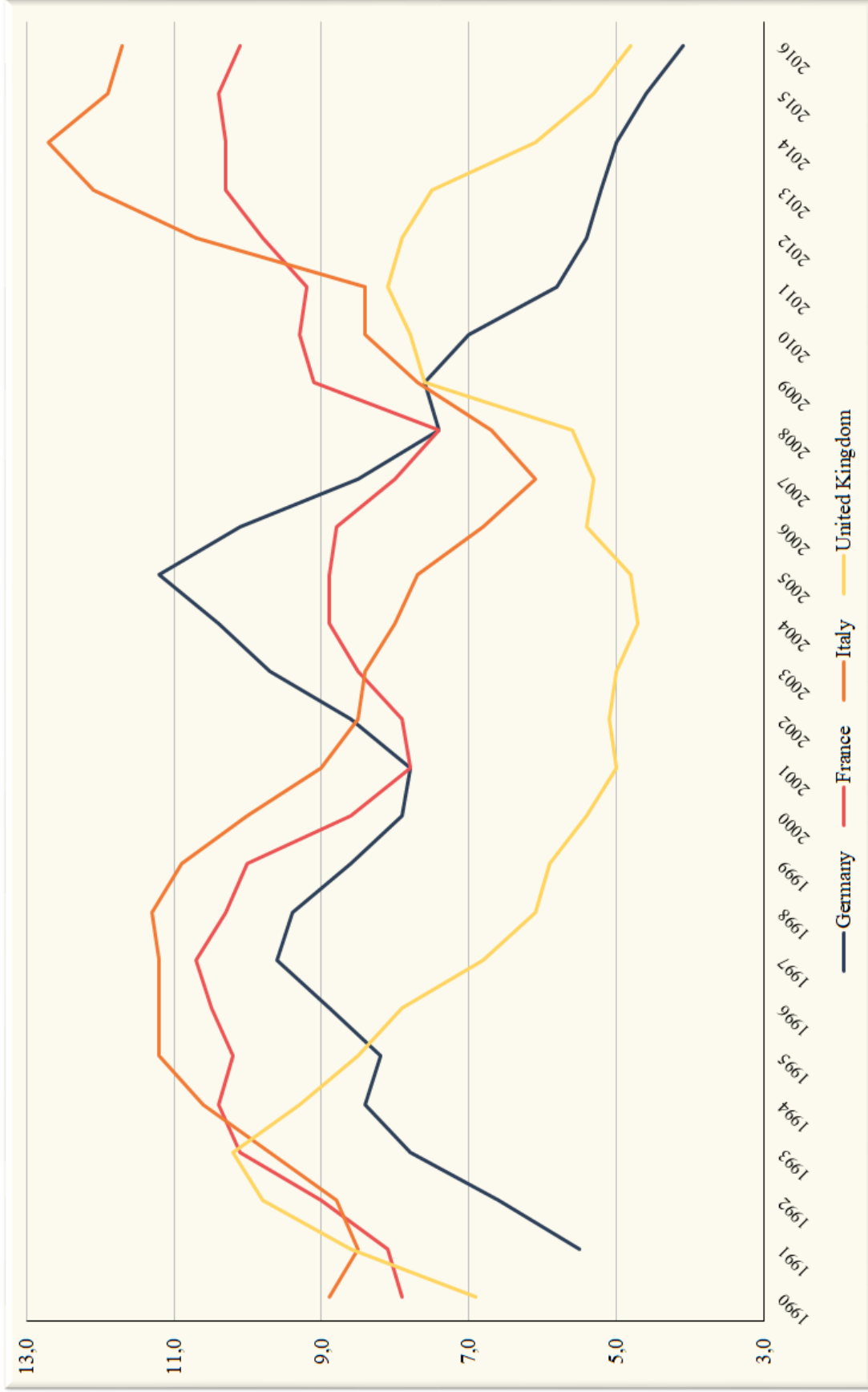


FIGURE 1.1. The evolution of unemployment rates (%) in Germany, France, Italy, and the UK between 1990 and 2016

Source: Eurostat (une_rt_a).

It is worth noting that lower unemployment does not translate necessarily to higher employment and a better functioning labour market. It might simply “mask” higher inactivity rates. Economically inactive people are defined as those not having a job and not actively looking for a job, i.e. they are neither employed nor unemployed. In 2017, inactivity rates ranged from just over one fifth in Sweden to 60 % in Slovenia (Eurostat). Retirement is now the explanation for less than half of the inactivity observed in the EU28 (European Commission 2017a). Figure 1.2 presents the evolution of inactivity rates as a percentage (%) of the total population of working age again in the four biggest European economies (Germany, France, UK and Italy) between 1990 and 2016. Although standing at different levels, the inactivity rates of France, Italy and the UK have followed similar patterns over time, thus preserving the gap between them. Only Germany followed a different pattern with the inactivity rate decreasing steadily since the 2000s, from 29% in 2000 to 22,1% in 2016. Today it is even lower than the UK inactivity rate which had constantly been the lowest among the four countries as well as both the EU28 and the Euro area (19) averages.

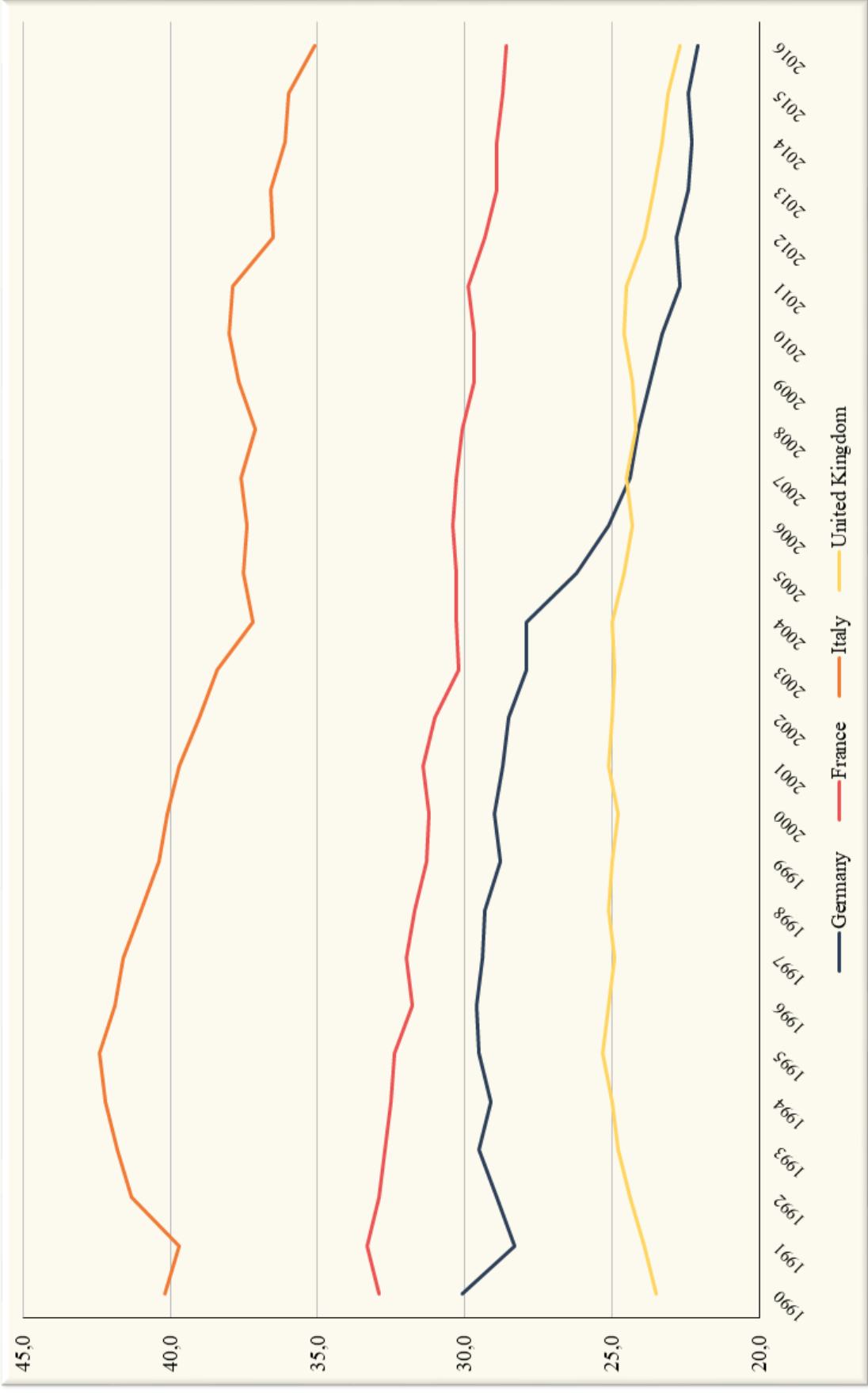


FIGURE 1.2. The evolution of inactivity rates as a percentage (%) of the total population in Germany, France, Italy, and the UK between 1990 and 2016
 Source: Eurostat (Ifsa_igan).

Finally, apart from unemployed and inactive people one also needs to consider those in precarious employment. Eurostat and the EU-Labour Force Surveys define as precariously employed those having a work contract of only up to 3 months. Figure 1.3 below depicts the evolution of precarious employment again in the four largest European economies between 2000 and 2016. Large divergencies and discrepancies are observed among them. With the exception of the early 2000s, Germany and the UK have very similar rates and since the mid-2000s have fully converged and coincide as well with the Euro area (19) average. On the contrary France and Italy have followed different patterns, highly divergent.

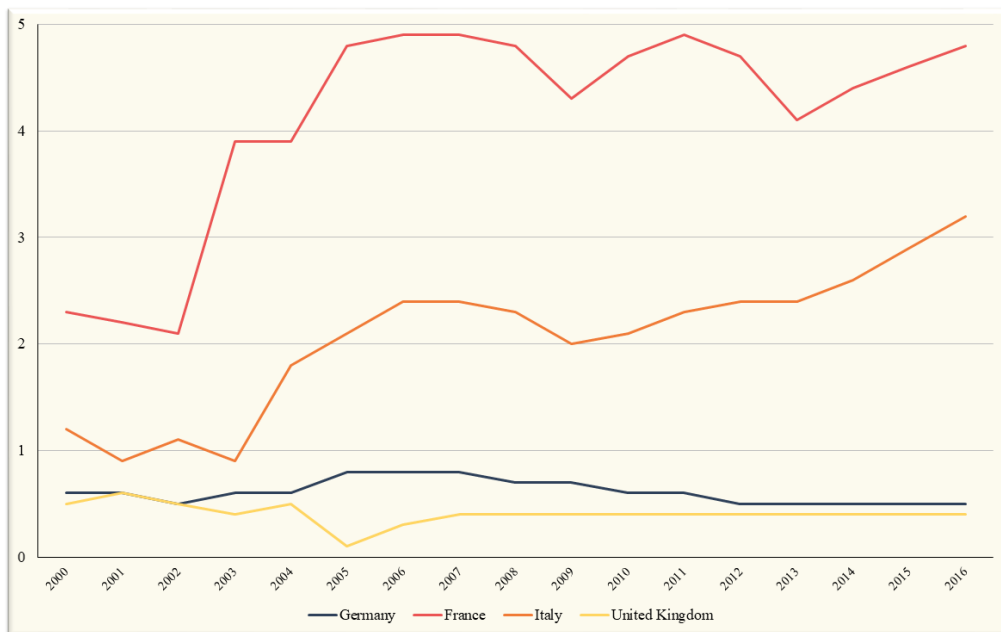


FIGURE 1.3. The evolution of precarious employment (work for no more than 3 months) in Germany, France, Italy, and the UK between 2000 and 2016

Source: Eurostat (lfsa_qoe_4ax1r1).

The 3 figures demonstrate clearly that there is no such thing as “European unemployment” or “European employment” and even for the largest European economies which in the last 20 years have common currency and monetary policy (with the exception of the UK), large differences exist. As Nunziata aptly argued, the general consensus has been that “European labour

markets were characterised by excess rigidity and low performance”. Economists attributed this to the “perverse labour market rigidities, embedded in the incentive structure of the welfare state, impeding flexible adjustment, blocking technological innovation, and hampering employment and economic growth in an integrating world economy” (Hemerijck, 2013). However, “a more careful observation of labour markets regulations and outcomes in Europe over the last two decades suggests how diverse the experience of European countries has been and that the picture of a homogeneously rigid and underperforming Europe does not fit the data” (Nunziata 2008, 21).

Thus, the main question arising is: What are the factors accounting for these observed differences in both the levels and the patterns of employment, unemployment and inactivity, as well as their respective durations? The differences in the economic conditions and the economic policies adopted cannot account for these observed differences and one major strand of the literature has emphasized instead the pivotal role of labour market institutions, defined as the rules, practices and structures related to the labour markets and their participants (Crouch 1985; Blanchard and Wolfers 2000; Baccaro and Rei 2005). The importance of labour market institutions has also been repeatedly put forward by international organisations (ILO 2004; OECD 2010, 2012; IMF 2014; World Bank 2013) who have considered as the main, formal labour market institutions the following: (1) employment protection legislation (EPL), (2) minimum wages, (3) unemployment benefits, (4) trade union density, (5) the level of wage bargaining and (6) active labour market policies (ALMPs).

In their study on the impact of labour market institutions on economic performance, Nickell and Layard admit that “it is difficult to define precisely what we mean by labour market institutions” (Nickell and Layard 1999, 3037). Nevertheless, it is broadly accepted that institutions in general comprise the “rules of the game” (North 1990, 5) and labour market institutions in particular comprise “the laws, norms and conventions resulting from a collective

choice and providing constraints or incentives that alter individual choices over labour, leisure and pay” (Boeri and van Ours 2013; Betcherman 2012). They determine inter alia what types of contracts are permissible; they set minimum wages, benefits, working hours and working conditions; they define the rules and conditions for trade union organisation, collective bargaining and striking activity; and finally they provide employment and social protection for workers. Workers and firms take these institutions as given when making their own individual decisions. For example, collective wage agreements constrain individual choices by making the wage exogenous for the single worker or the employer. As Streeck and Thelen (2005, 12) write: “their existence and operations (of labour market institutions) are in a specific way publicly guaranteed and privileged, by becoming backed up by societal norms and the enforcement capacities related to them”.

The endurance of institutions depends not only on their aggregate welfare effects but also on the distributive benefits that they provide to the different social and political subgroups i.e. how well they serve the interests of the relevant actors. But actors’ calculations about whether an institution in place continues or not to serve their interests cannot lead to a change in the institution that easily. Because institutions are collective constructs with a longstanding history, it can be difficult to replace one with another (Esping-Andersen et al. 2001; Hall and Thelen 2009). As Culpepper (2003) shows, it can be difficult to persuade actors to coordinate on new ways of doing things, even when there are reasons to think they might be Pareto-improving. Before a new institution is established, one cannot prove it will deliver benefits, and the relevant actors cannot be sure of the behaviour of others on whom its efficacy may depend. The presence of such uncertainties is a crucial factor underpinning institutional stability.

The rationale for the existence of these institutions can be attributed to efficiency and equity reasons. With regards to the former, there are market and policy failures that impede the competitive market equilibrium of a frictionless

market. With regards to the latter, in the absence of better measures such as non-distortionary taxes and transfers, labour market institutions can lead to the desired social redistribution and equity. A characteristic example is unemployment benefits. No private insurer will ever want to provide insurance against unemployment due to moral hazard and adverse selection. Moral hazard occurs because workers who would be covered by private unemployment insurance would not have any incentive to exert high effort and productivity and avoid employment loss. Adverse selection would occur under the presence of a heterogeneous pool of individuals since only those who would be more likely to become unemployed would buy unemployment insurance, thus rendering the scheme fully unprofitable. Public provision deals effectively with these two issues.

Nevertheless, under no circumstances one can contend that the labour market institutions currently in place were originally created to serve the interests they advance at much later periods of time. German employers, for instance, expressed vociferous opposition to the 1950s legislation that enhanced labour's rights on the shop floor (Höpner 2003). However, once those institutions were in place, employers organized production strategies and a range of ancillary practices around them, aiming at high-priced, high-quality production (Streeck 1992). As a result, most large manufacturing firms support works councils, because their market and production strategies rely on them. In this as in many other such instances, labour market institutions are instruments that actors gradually adapt to their goals and practices (Thelen 2004).

There are good theoretical reasons for labour market institutions to have simultaneously both positive and adverse effects on unemployment. All evidence from the last two decades has shown for example that both flexicurity—as an integrated strategy to simultaneously achieve and enhance flexibility and security in the labour market—and active labour market policies (ALMPs)—aiming at the improvement of the beneficiaries' prospect of finding employment—have been outstandingly effective (see for example Visser

and Hemerijck 1998; Jørgensen and Madsen 2007; Card, Kluve and Weber 2010).

This thesis stems predominantly from the seminal Varieties of Capitalism (VoC) approach (Hall and Soskice 2001; Amable 2003; Hancké et al. 2008) which has accentuated the importance of four additional labour market institutions: coordination among social partners, the extent and coverage of collective agreements, trade union fragmentation and benefit conditionality. Although there are solid theoretical underpinnings for their effects on employment and unemployment and despite the extensive empirical literature on labour market institutions, there are still significant gaps in our knowledge of how the latter affect employment and unemployment transitions both separately and interactively. Can both decentralised, company-level wage bargaining and sectoral-level one lead to low transitions to unemployment and high transitions to employment? How detrimental can union fragmentation be? There have been some studies on industrial relations analysing the reasons/factors for trade union fragmentation/concertation/coordination (see for example Hamann and Lucio 2003; Pulignano 2002, 2003, 2015) as well as a few studies on their effects on collective bargaining (Burgess and Symon 2013) but to my knowledge there has been no study on employment and unemployment. Furthermore, the literature has always examined trade union density but this is clearly an insufficient measure for union power if we do not take into account the coverage of collective agreements (some countries for example have mandatory extension of collective agreements to non-unionised workers), striking activity and the involvement of trade unions in economic and social decisions. These are all important questions that have not been answered empirically.

Another important issue put forward by the VoC approach that has been neglected in the empirical scholarly literature evaluating labour market institutions is the one of institutional complementarities i.e. interactions among the institutions. A complementarity exists when “the presence (or efficiency) of one institution increases the returns from (or efficiency of) the oth-

er” (Hall and Soskice 2001, 17). For instance, in their own words, “long-term employment is more feasible where the financial system provides capital on terms that are not sensitive to current profitability. Conversely, fluid labour markets may be more effective at sustaining employment in the presence of financial markets that transfer resources readily among endeavors thereby maintaining a demand for labour” (Hall and Soskice 2001, 18). Because institutional complementarities generate beneficial returns, “countries with a particular type of coordination in one sphere of the economy should tend to develop complementary practices in other spheres as well” (Hall and Soskice 2001, 18). Hall and Soskice find that institutional complementarities are indeed highly present in the OECD economies.

Finally, the VoC argues that the model of capitalism/welfare regime plays a pivotal role. Models of capitalism/welfare regimes determine inter alia labour market institutions, institutional configurations and their complementarities. But also the latter interact with the model of capitalism/welfare state and therefore, the effect of the same labour market institution is expected to differ significantly in different models of capitalism. Lange and Garrett (1987) for example examine the interaction between trade unions, wage bargaining and government partisanship. They argue that strong unions and wage centralisation generate rapid economic growth when coupled with left-wing governments, and that weak unions and decentralised wage setting also generate fast growth when coupled with right-wing governments.

Furthermore, as Blossfeld and Hofmeister (2006) demonstrate, national contexts and labour market institutions affect largely women’s labour force participation and employment. Full-time employment is discouraged in Germany in particular by the tax structure which taxes heavily a second full-time income in the household in stark contrast with a part-time one and by the lack of full-time childcare facilities. On the contrary, Southern European welfare regimes provide among the longest maternity leaves and very few options of combining motherhood and paid work (even part-time) with their limited pub-

lic childcare facilities (ibid). These are some reasons why—as opposed to the UK and Germany where part-time work is mostly a female phenomenon—in Italy it is not and most women prefer to instead become unemployed or even exit the labour force and occupy solely with their families. In that sense, the different welfare regimes and institutional settings may produce very diverse and heterogeneous labour market patterns and we cannot examine the latter in isolation of the former.

This thesis focuses on the three largest European economies belonging to a different welfare regime/model of capitalism: Germany, Italy and the UK. These three countries are representative cases of three completely different welfare regimes: the Continental, the Liberal and the Southern European, respectively and they are characterised by very different labour market institutional configurations. To what extent can this account for their diverse unemployment and employment patterns and levels? To answer this question, the study employs an event history analysis for a 20 year period (1990–2010) and examines the effect of five labour market institutions (as well as their interactions) on labour market flows at the individual level.

1.2 The State of the Field

Labour market institutions have been the focus of the theoretical and the empirical literature in the last 30 years, since the earlier research on macroeconomic conditions and the shocks experienced by most industrialized countries in the 70s and the 80s, could not account for the large observed differences in employment and unemployment among countries (Blanchard 2007). All the empirical studies conducted can be distinguished into two broad categories: macro studies and micro studies.

1.2.1 Macro studies

Table 1.1 presents the findings of some of the most influential macro studies. The aim here is not to present an exhaustive review of the scholarly literature but some of the main findings of this research and to highlight the main theoretical and methodological issues that have arisen as well as the gap in the literature that this study aspires to fill.

The first cross-country study examining the effect of labour market institutions on unemployment has been the work by Layard et al. (1992). This has been motivated by the broad content that European labour markets are rigid and inflexible and have adverse effects on employment. Although ingenious, it has received a lot of criticism mainly for the institutional variables used and their incomparability among the case studies examined, as well as for employing only a simple efficiency-wage model. Scarpetta (1996) uses the more appropriate institutional indicators developed in the meantime by the OECD as well as a more sophisticated model. He considers 17 OECD countries over the period 1983–1993 and examines the effect of institutions on their annual unemployment rates. His estimate of the effect of the level of wage bargaining is positive and statistically significant, while, the coefficients for EPL and ALMPs are statistically insignificant. It is interesting that the estimate for the coefficient of the square of the level of wage bargaining centralisation is negative, supporting the Calmfors and Driffill hump-shaped hypothesis.

In 1997, Nickell extends his earlier work with Layard and Jackman (1991) and examines the effect of seven labour market institutions on unemployment in twenty OECD countries for the period 1983–1994. The independent variables included are employment protection legislation, the replacement rate, the unemployment benefit duration, active labour market policies (spending per unemployed worker as a percentage of GDP per employed worker), union density, the level of wage bargaining and the labour tax rate. He finds a relatively large and statistically significant effect for all labour market institu-

tional variables with the exception of employment protection legislation whose estimated effect is close to zero and not statistically significant. From Table 1.1 we can see for example that an increase of 1 unit in the level of wage bargaining would lead to a 3,7 percentage point drop in the unemployment rate. The estimated impact of ALMPs is also substantial, with an increase of 10 percentage points in ALMPs spending leading to a 2,4 percentage point fall in the unemployment rate.

Another landmark study has been the one conducted by Elmeskov et al. (1998). It draws heavily on Scarpetta (1996) and Nickell (1997) but goes a step further by controlling for interactions among EPL, unemployment benefits and wage centralisation. Their sample is almost identical to the one by Nickell (1997) and they use annual data covering the time span from 1983 up to 1995. An important difference with Scarpetta (1996) and Nickell (1997) is that Elmeskov et al. (1998) find a positive and statistically significant effect for EPL. However, the regression after the inclusion of the interaction terms results in mostly insignificant coefficients.

Belot et al. (2002) extend the period of analysis to 1960–1996 and find that EPL leads to lower unemployment when wage bargaining takes place at the firm level. Like Belot et al. (2002), Nickell et al. (2002) try to explain trends in unemployment rates in the OECD on the basis of labour market institutions and macroeconomic shocks over a similar 35-year period (1961–1995). They find that most of the institutional variables and the macroeconomic shocks are statistically significant with the expected sign. The replacement ratio and the duration of the unemployment benefit have a positive significant effect, the level of wage bargaining has a negative significant effect whereas EPL and union density have insignificant effects. However, these coefficients are far too large to be plausible, raising serious concerns on bias.

Nickell et al (2005) extend the analysis by examining the effect on unemployment rates not only of labour market institutional changes but also of interactions between macroeconomic shocks and these institutions. They find

that time varying institutions provide a satisfactory explanation of long-term unemployment shifts in the OECD countries (about 55% of the 6,8 percentage points increase in the OECD European countries unemployment rate between 1960 and 1995) while their interactions with shocks, captured as in Blanchard and Wolfers (2000) with time dummies, do not explain the changes in unemployment rates.

Finally, in 2006 Bassanini and Duval replace the institutional variables used by Nickell (1997) with new and more robust institutional measures and find a negative effect on the unemployment rate for the level of wage bargaining and a positive effect of the union density, the replacement ratio and the unemployment benefit duration. The effect of EPL is statistically insignificant. The authors attribute this to the existence of two opposing effects: EPL on regular contracts exerts upward pressure on unemployment while EPL on temporary contracts pushes towards the opposite direction (Bassanini and Duval 2006, 14). In order to capture this effect, the analysis must be performed separately for workers into typical and atypical employment.

To my knowledge, the only macroeconomic study examining the effect of labour market institutions on unemployment inflows and outflows is the one of Murtin and de Serres (2014). Their institutional variables comprise: (i) the replacement rate of unemployment benefits, (ii) the duration of unemployment benefits, as measured by the ratio of the average replacement rate during the first 5 years of reception to the initial replacement rate; (iii) real spending on ALMPs per unemployed and (iv) a measure of the tax wedge constructed by the OECD. They use a sample of 11 OECD countries over the period 1985–2007. The only variable found to have a statistically significant (and negative) effect on the unemployment outflow rate is employment protection on regular contracts. However, the latter effect is small in terms of magnitude.

TABLE 1.1. Summary of the main findings of the macro studies on the effects of labour market institutions

	Scarpetta (1996)	Nickell (1997)	Elmeskov et al. (1998)	Blanchard and Wolfers (2000)	Belot et al. (2002)	Nickell et al. (2002)	Bassanini and Duval (2006)
<i>Institutions</i>							
EPL	No sse	No sse	0,38	0,045	-0,87	4,45	No sse
Union density	0,12	0,96	No sse	0,009	No sse	No sse	0,03
Unemployment replacement rate	0,13	0,88	0,10	0,017	0,1	1,24	0,09
UB duration	-	0,7	-	0,206	-	0,88	2,64
ALMPs	No sse	-1,92	No sse	0,017	-	-	-
Wage bargaining	2,19	-3,68	-1,39	-	-0,7	-11,64	-1,09
<i>Sample</i>							
Period	1983-93	1983-94	1983-1995	1960-2000	1960-1995	1961-1995	1982-2003
Countries	17 OECD	OECD	19 OECD	20 OECD	18	20	21 OECD

Note: No sse = not statistically significant effect.

From the above we can conclude that the empirical macro research although extensive, has led to highly inconclusive and ambivalent results on the effects of labour market institutions.

1.2.2 Criticism on macro studies

Nevertheless, there are four main problems associated with the macro studies of labour market institutions: (1) the bias due to reverse causality, (2) the bias due to unobserved cultural and institutional characteristics and the neglect of the welfare state/model of capitalism, (3) the use of problematic indicators for the institutions and (4) the neglect of the underlying causal mechanism linking labour market institutions to employment and unemployment (combination of time series with longitudinal data).

The first problem is the bias due to reverse causality. Reverse causality arises since not only labour market institutions affect the employment and unemployment levels, but they are also affected by them. Bassanini and Duval (2006) acknowledge explicitly this problem in their macro study and note that “there is no straightforward way to address reverse causality with a macro-analysis” (Bassanini and Duval 2006, 11). Heckman and Pagés (2004) show that accounting for the economic environment in which reforms are launched highly affects both the magnitude and the statistical significance of the estimated effects of policy reforms in the case of Chile. The latter passed a more restrictive labour legislation after it democratized and entered a period of economic growth. Heckman (2007) also draws attention to reverse causality as one of the “major weaknesses in the European unemployment and labour market institutions literature. The institutions that are used to explain outcomes are often caused, in part, by macroeconomic crises that affect the dependent variables used by European unemployment analysts” (Heckman 2007, 1).

Another type of bias arising from a macro analysis is the omitted variables bias due to the omission of crucial institutional and cultural characteristics as well as the overall welfare regime/model of capitalism. Differences

which seem to arise from different institutional settings, in reality might be driven by different cultural attitudes or other economic fundamentals (e.g., macroeconomic conditions, natural resources, etc.). Economic outcomes can also lead to changes in labour market institutions. If a country is experiencing a fall in union power or in the coverage of collective bargaining, the government might decide to strengthen collective bargaining or even introduce a statutory minimum wage floor. This is for instance what happened in Germany and led to the introduction of a national minimum wage of 8,50 euros in 2015. More generally, labour market institutions do not operate in a vacuum but are part of a welfare regime/model of capitalism and thus cannot be studied in isolation of those. As explained above, the latter determine labour market institutions and affect largely their performance and impact. The effects of the same labour market institution are likely to differ significantly in a Liberal compared to a Continental or a Southern European welfare regime and this needs to be controlled for. This has been also acknowledged in the seminal study by Richard Freeman (2005), who expresses scepticism about all macro evaluations of labour market institutions because of the variety and complexity of institutional configurations and welfare regimes. He concludes that progress will require a more sophisticated understanding of how workers and firms respond to institutional settings and how the latter are influenced by the welfare state.

The third problem in the existing macro studies has been the poor operationalisation of labour market institutions. Heckman (2007) draws particular attention to the intertemporally incomparable measures of labour market institutions often used, reflecting improvements in the basic data collection over time. But more generally, even with recent indicators some institutions such as laws, regulations or trade union power are difficult to operationalise. Studies have traditionally measured trade union power through trade union fragmentation for instance but, as will be shown in Chapter 3, this is not a robust measure.

Finally, the last problem in all macro studies has been the fact that they do not provide a causal mechanism and theoretical framework on how labour market institutions affect the unemployment rate/level. This is a crucial point. Labour market institutions provide incentives and affect significantly the interests, preferences and thus the positions of the actors (firms and workers) involved (Palier 2010). As macro variables, they do not have a direct impact on the unemployment and employment levels, which are also macro variables, but they affect them through their impact on actors' incentives which in turn affects inflows into employment and unemployment (Coleman 1981; Freeman 2000). The latter determine the employment and unemployment levels in the economy, the final level depending on the magnitude of the two opposing effects as well as on the duration of the unemployment and employment spells. The underlying mechanism of this interaction between macro and micro variables is depicted in Figure 1.4.

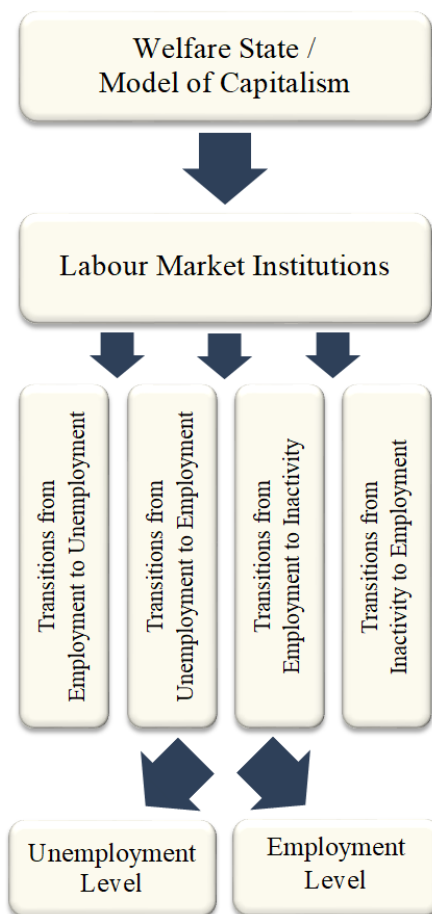


FIGURE 1.4. The mechanism through which labour market institutions affect employment and unemployment levels

As Heckman (2007) writes, another major weakness in the European unemployment literature is the “use of ad hoc measures of incentives (a variety of crude proxy measures for a diverse array of policies are used)”. And he continues that there is “a lack of explicit econometric measurement models where the effects of the institutional variables on outcomes are carefully delineated, and dynamics and asymmetries produced by different regulations are carefully articulated. The empirical models used in this literature are statistical that do not recognize policy feedback and they do not model general equilibrium effects. For example, payroll taxes may have little effect on employment if firms can pass on the tax costs to consumers in the form of higher prices. At both an intuitive level and at the level of formal economic theory, incentives

matter. If a person is paid not to work, the person will likely not work. If the costs of hiring a worker rise, fewer workers are likely to be hired ... Progress in this field requires a lot more empirical effort than has been exerted to date. It requires deriving comparable measures of outcomes and incentives across countries and over time for the same country. It also requires developing better measures of the incentives generated by institutions and capturing the full array of institutions at work, instead of just a few selected institutions with easily measured characteristics. Integrating macro data with micro data; macro theory with micro theory. Until sharper versions of the models are estimated and tested, ambiguity about the appropriate explanation for the evolution of European labor markets will remain. The next step forward is to expand the data base, pooling time series and cross section evidence. Regulation and policy effects on costs should be quantified.” (Heckman 2007, 1–2).

1.2.3 Micro studies

In that respect, micro studies of labour market institutions can be both more robust and more insightful as they deal effectively with reverse causality and they also provide detailed causal mechanisms for the effects of labour market institutions on unemployment. They can deal effectively with reverse causality since unemployment and employment at the individual level cannot affect labour market institutions. They can also deal effectively with omitted variables bias, provided that the study manages to recover the missing counterfactual. Nevertheless, constructing an appropriate counterfactual i.e. what would be the labour market status of an individual in the absence of a specific labour market institution, is inherently difficult. Randomized control trials are nowadays broadly applied in empirical economic research but cannot be easily applied to evaluations of labour market institutions. The most notable exception is ALMPs where the design of a treatment and a control group are relatively easier. However, this kind of studies is often limited to a very specific policy change in a specific place. To my knowledge, the only large experiment

on labour market institutions is the one conducted in France by a team of J-PAL researchers (Crépon et al. 2013) in coordination with Pôle Emploi, the national employment agency. Their random treatment comprised an activation program for 30.000 young people covered by 235 public employment agencies, across 10 administrative regions during 3 years (1 year of treatment and 2 years of follow-up surveys). The assignment of jobseekers to treatment was totally random for each of the 235 public employment agencies participating in the experiment. After 8 months, the young unemployed who were assigned to treatment were significantly more likely to have found a stable job than those who were not. But the authors conclude that “these gains were transitory, and they appear to have come partly at the expense of eligible workers who did not benefit from the program, particularly in labour markets where they compete mainly with other educated workers, and in weak labour markets. Overall, the program seems to have had very little net benefits” (Crepon et al. 2012).

Another experiment, still in France, aimed to estimate the effect of a reform of a minimum income scheme (the Revenu de Solidarité Active). However, the evaluation did not manage to be in the end a randomized control trial as the random assignment of cities into treatment and control groups turned to be politically very difficult. In general, randomized control trials, although very appealing, are not easily applicable in the case of labour market institutions because they are very costly and politically difficult due to moral and legal principles of equality (it is not straightforward to justify to policymakers and public opinion why minimum wages, dismissal protection regulations and unemployment benefits should differ randomly between groups of citizens).

The second-best evaluation tool in a micro analysis is a natural experiment, usually a reform taking place in a country where researchers compare the outcomes between individuals/firms/sectors/regions within the country if the reform does not apply to all. In this case, not only the researcher can com-

pare the outcomes before and after the reform but also between treated groups and controls, leading to the methods of difference-in-differences or propensity score matching. Both methods, if properly implemented, can yield as robust results as a randomized control trial. Nevertheless, although their internal validity is high, their external validity, i.e. the extent to which the results can be extrapolated to other situations and to other people, is low. Moreover, labour market reforms are often preceded by long and wide public debate for political purposes which reduces their random effect and might affect workers' or firms' behaviour before their implementation. In these cases, the key identification assumptions for these methods to be robust will be violated and the internal validity will also be low.

Thus, researchers resorted to other identification tools such as instrumental variables and regression discontinuity. A voluminous empirical literature exists that attempts to estimate labour market institutional effects using these methods. A famous paper by DiNardo and Lee (2004) studies the effect of union presence on wages comparing outcomes for employers where unions barely won the election (e.g., by one vote) with those where the unions barely lost. Leonardi and Pica (2013) use a regression discontinuity to study the effect of employment protection legislation (EPL) on workers' wages exploiting a reform that introduced unjust-dismissal costs in Italy for firms below 15 employees and left firing costs unchanged for bigger firms. Yannelis (2014) analyses the employment effects of the minimum wage using an age-based reform in Greece where the minimum wage was reduced differentially for workers above and below the age of 25. Farber and Valletta (2013) exploit variation in the unemployment benefit duration across US states over time to estimate the overall impact of these extensions on unemployment transitions and duration. They find that it takes about 14 weeks of benefit duration to increase unemployment duration by one week.

All these studies estimated the effects of labour market institutions on the employment/unemployment status at a specific point of time and thus are

not very insightful. Labour markets are not a static framework, they are characterised by a continuous reallocation of labour resources. New firms are created; existing firms expand, contract or shut down. During this process, a large number of jobs is created and destroyed. Furthermore, unemployed people can move to employment or inactivity, while employed people can become unemployed. As demonstrated in Figure 1.4, it is precisely through these transitions that labour market institutions impact on unemployment and employment levels.

Figure 1.5 gives an overview of all possible labour market transitions and shows the aggregate transitions between the second quarter 2017 and the third quarter of 2017 for all 27 EU Member States (data not available for Germany). Data is shown in absolute numbers to allow a comparison of the actual size of the different flows. The levels indicated for employment, unemployment and inactivity refer to those remaining in each status between the two quarters. The blue arrows indicate the direction of the net flows between two statuses i.e. the flow that is larger in magnitude.

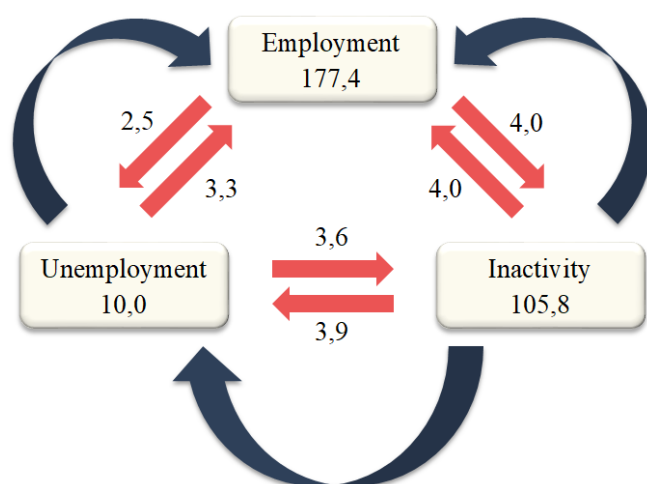


FIGURE 1.5. Schematic overview of labour market flows 2017Q2–2017Q3, EU-28 excluding Germany (millions of persons)

Source: Eurostat (lfsi_long_q).

Thus, flow statistics not only augment the analysis of the net changes in the stocks of unemployment, employment and inactivity but are crucial in understanding the underlying mechanisms. Petrongolo and Pissarides (2008) identify the relative role of inflow and outflow rate from unemployment in explaining labour market dynamics and conclude that the relative contribution of each depends on labour market institutions. Thus, a number of studies on labour market institutions focused instead on labour market transitions instead of labour market statuses.

The examination of transitions to unemployment and different types of employment as well as their durations can be achieved methodologically through an event history analysis. The closest study to this thesis is the study of Steiner (1994), who employs a microeconometric model of individual transitions from unemployment into employment and non-participation for the West German labour market for the period 1983–1992, using the same data source (GSOEP event history files). He finds that the survival rates of women in unemployment are substantially higher than those of men and gender differences in survival rates increase up to the eighth month and start converging only after the strong increase in the female transition rate into non-participation is compensating for their relatively low “average” transition rate into employment. Long tenure in the previous job increases females’ survival rates in unemployment substantially, but has only a relatively modest effect on males’ unemployment behaviour. In contrast to this study however, he estimates a discrete hazard rate model for labour market transitions (employment, unemployment, non-participation) rather than a continuous-time one. As will be explained in Chapter 3, it is important to use continuous and not discrete models. If individuals can both find and lose a job within a month, discrete data will yield biased measures of underlying instantaneous transition rates.

Lalive (2008) examines an Austrian policy, a large, simultaneous increase in both the unemployment benefit duration and the replacement ratio for some types of workers in certain regions. This offered, as the authors ar-

gue, an ideal natural experiment in order to deal with the selection bias encountered in the macro analyses. They find that a longer duration has much larger disincentive effects than a higher replacement rate. The effect of the latter was very small (0,055). They find that the policy change leads to a significant increase in the steady-state unemployment rate and, surprisingly, most of this increase is due to an increase in the inflow into rather than the outflow from unemployment. Adamchik (1999) examines the factors affecting the probability of exiting unemployment as well as the duration of unemployment spells in Poland. The author finds that some features of the Polish unemployment benefit system effective in 1994–1997 discouraged exits from unemployment status. The estimated overall effect of unemployment benefits on the probability of exiting to a job is negative, and the hazard rate to employment increases dramatically as the benefit expiration moment approaches. Puhani (2000) on the contrary, does not find such an effect for Poland. He concludes that the change from unlimited unemployment benefits to a one year benefit period that was introduced in 1991 did not affect the exit rates from unemployment to employment. Nevertheless, all these micro studies examined one of these transitions but none of them examined them all together. In addition, they all examined only one labour market institutional change within a specific country and estimated its effects in a short time horizon.

Micro studies have never estimated the effects of labour market institutions on employment and unemployment over a long time span both separately and interactively, from a cross country perspective, taking into account the overall welfare state and model of capitalism. Thus, although compared to macro studies the internal validity of micro studies is much higher, their external validity and contribution at the labour market institutional discourse remains limited. Therefore, there is still limited knowledge on the effects of institutions on job flows and no clear pattern emerges by looking at the cross-country labour market flow developments.

1.3 Research Questions and Thesis Scope

This study aims to deal with this gap in knowledge and address the major deficiencies of the two strands of the literature in order to answer empirically the following questions: **How do labour market institutions in different European welfare capitalisms affect labour market transitions and their respective durations? To what extent can they account for the differences observed? How these effects differ by welfare regime/model of capitalism? And finally, what is the role of labour market institutional complementarities and how can they affect the performance of institutions?**

Following Heckman's recommendation above, I integrate the micro with the macro theory and pool together time series with longitudinal data. This is achieved through the use of an event history analysis which provides a deeper understanding of the driving forces of labour market transitions at the individual level. This is the main contribution of this thesis with regards to the existing macro literature. With regards to the existing micro literature the main contribution of this thesis is that it controls as well for macro variables—labour market institutions and economic conditions—and it does not confine to only one institutional change on a specific point in time but it undertakes an overall empirical examination of the effects of labour market institutions on individual unemployment and employment inflows and outflows as well as on their durations in different European models of capitalism over a 20-year time horizon (1990–2010). Thus, this thesis tests empirically some important theoretical insights of the VoC approach and for this reason the case studies comprise three countries representative of a different model of capitalism: Germany, Italy and the UK. The reasons for that will be explained in Chapter 2. The study also tests for institutional complementarities given that as the scholarly literature has repeatedly contended, the institutional framework is not a set of independent elements but the latter are interrelated through a com-

plex network of complementarities and interact with each other (Coe and Snower 1997; Belot and van Ours 2004; Hall and Soskice 2001; Amable 2003).

Furthermore, it is worth noting that apart from labour market transitions, this thesis will also examine job-to-job transitions, where the labour market status of the individual remains the same (i.e. employed) but the job changes. Workers switch jobs for a variety of reasons, but typically job-to-job transitions occur when the employee receives a more appealing job offer from another employer. Usually, job-to-job transitions are associated with an increase in earnings and/or an increase in occupational status and/or a better type of contract. The benefits for the workers surpass the costs of looking for vacancies, undergoing interviews, working on something new and even relocating in some cases. Thus, job-to-job transitions are expected to lead to higher productivity and output and higher wages in the economy as a whole. Labour market institutions are also expected to affect this type of transition.

To address the criticism on the existing measures of labour market institutions, I construct own indicators. My independent variables of interest are the following labour market institutions:

1. employment protection legislation (EPL)
2. the wage bargaining system comprising (a) the level of wage bargaining centralisation and (b) the coverage of collective agreements
3. the unemployment benefits system (level, duration, conditionality and activation)
4. trade union power as captured by (a) trade union density, (b) the involvement of trade unions in economic decisions and social policy and (c) industrial action
5. trade union fragmentation as captured by (a) the Number of Union Confederations (NUCs), (b) demarcations between union confederations, (c) demarcations within union confederations in the country and (d) the power that the confederation has over its affiliates

Finally, when stating the scope and the goals of a research project, it is always important to clarify as well which are the issues and research questions not covered and addressed by the study. In that respect, this study does not examine and estimate the effects of the welfare state and social policies such as pensions, family policies, education policies and vocational training as this would broaden extremely the scope of the analysis. Furthermore, due mainly to insufficient data, I do not examine different types of employment (part-time and full-time employment) as well as different types of contracts (open-ended, fixed-term, temporary).

1.4 Plan of the Thesis

The remaining of the thesis is organized as follows: Chapter 2 provides the analytical framework: the case selection rationale, a brief description and comparison of the three case studies as well as the main research hypotheses. Chapter 3 describes the methodology and estimation strategy, the operationalisation of the labour market institutions of interest as well as the datasets employed. Chapters 4, 5 and 6 examine separately each of the three case studies (Italy, Germany and the UK) and perform the analysis separately for each of them. Given the few statistically significant effects at the country level, potentially due to insufficient variation in the data at the country level, in Chapter 7 I pool all three countries together and re-do the estimation including country dummies. Chapter 8 presents the findings from both the country-level and pooled estimations and discusses the results. Finally, the thesis concludes with a general discussion/conclusion in Chapter 9, presenting the main policy lessons and raising some questions and avenues for future research.

Do Labour Market Institutions Matter?

2.1 Varieties of Capitalism and Case Selection Rationale

As stated in Chapter 1, this research project stems from the hypothesis that one crucial factor that could account for the very different unemployment and employment rates and patterns in large European economies who experience similar economic shocks is the fact that they belong to different welfare regimes/models of capitalism and are thus, characterized by very different labour market institutional settings. This hypothesis inevitably leads us to the literature on welfare regimes/models of capitalism.

There have been several typologies of European welfare models/capitalisms (Esping-Andersen 1990; Ferrera 1996; Kitschelt et al. 1999; Hall and Soskice 2001), however my case selection has been based on the seminal Varieties of Capitalism approach (Hall and Soskice 2001; Amable 2003; Hancké et al. 2007) which distinguishes between two main distinct types of capitalist economies: Liberal Market Economies (LMEs) and Coordinated Market Economies (CMEs). The reasons for that are manifold.

More than any other individual scholar, Esping-Andersen was the first to classify and distinguish European welfare regimes and his typology (the three worlds of welfare capitalism) formed the basis for all the debates and classifications that followed afterwards. His analysis has been primarily based on the degree of de-commodification, defined as the set of “social policies and institutions that guarantee a person the maintenance of a livelihood without reliance on the market and labour” (Esping-Andersen 1990, 22). He demonstrates that there is high de-commodification and strong universalism in the

Scandinavian, social-democratic welfare states whereas the liberal Anglo-Saxon nations are characterized by low de-commodification and a strong emphasis on targeted and means-tested benefits. The Continental European countries group closely together as corporatist and etatist, and are modestly de-commodifying.

Although ingenious, this typology has received severe criticism and has been amended by several scholars (Ferrera 1996; Castles and Mitchell 1993; Bonoli 2007; Scruggs and Allan 2006). I will not delve into all the points of criticism but I will focus only on the three that are pertinent to the scope of this study and led me to choose the VoC classification instead. Firstly, Esping-Andersen with its focus on decommodification has underplayed the role of firms and industrial relations. Decommodification and the size of welfare spending programmes is not a sufficient indicator in general because it fails to capture many aspects of the labour market and its institutions such as the industrial relations and other non-pecuniary (non-decommodifying) labour market institutions. One of the research hypotheses of this thesis, as will be demonstrated below, is that non-pecuniary institutions such as trade union power and trade union fragmentation as well as activation play a pivotal role, a factor that has been totally neglected in the three worlds of welfare capitalism.

Secondly, Esping-Andersen's contribution has completely neglected the role of institutional complementarities. Institutions across several spheres of the economy complement each other thereby maximising efficiency and solving various coordination problems that firms face. Generous unemployment benefits and high EPL may be required to protect the investments in specific skills that workers make in Continental European countries. Also, because workers may lose the wage premium associated with firm-specific skills when they lose their job, they will only make such risky investments if they are unlikely to become unemployed and if they receive substantial benefits when that happens. By contrast, workers with more general skills in An-

glo-Saxon countries may not require such a high level of social insurance and employment protection (Hall and Soskice 2001; Estevez-Abe et al. 2001).

Finally, the third important point of criticism has been the misspecification of the Southern European welfare states as immature Continental ones. In particular, in the “Three Worlds of Welfare Capitalism” Italy is assigned to the conservative/continental welfare regime, whereas Spain, Portugal and Greece are not covered at all by his typology. Several authors criticized this trichotomy as arbitrary and called for the addition of at least a fourth category: the Southern (Mediterranean) regime to be examined separately (Ferrera 1996; Bonoli 1997; Amable 2003; Castles and Obinger 2008) since this differs in many important aspects from the continental regime.

All these three points have been addressed by the VoC approach (Hall and Soskice 2001; Amable 2003; Hancké et al. 2007) which distinguishes between two broadly defined categories of modern capitalisms: Liberal Market Economies (LMEs) and Coordinated Market Economies (CMEs):

- **Liberal Market Economies (LMEs)** are socially less generous and in stark contrast to the CMEs, they are non-regulated with decentralised bargaining and low coverage, prevalence of company-level agreements, low union density and a market-oriented state. They are characterised by high labour mobility, low employment and unemployment durations, low employment protection legislation and benefits combined with strict eligibility criteria which are however means-tested. Because labour markets in these economies are fluid, both firms and workers have no incentives to invest in training and the acquisition of industry-specific skills. Instead they focus on general skills that can be easily transferred to other jobs and firms. However, in such states there are better chances of (re-) employment due to high levels of overall job turnover.
- **Coordinated Market Economies (CMEs)** on the other hand are characterized by a generous social insurance welfare state, high employ-

ment protection, intermediately centralised but highly coordinated wage bargaining and substantial union power despite the decline in the coverage of collective bargaining. The organisation of the political economies of CMEs gives their firms capacities for wage coordination, skill formation and continuous innovation. Firms develop production strategies based on incremental innovation that require workers with specific skills. For employers to invest in these specific skills, in turn, they need guarantees that firms do not poach high-skilled workers from their competitors. Similarly, workers need to know that they are unlikely to be dismissed after having invested in those non-transferable skills. As a result, CMEs are characterised by high EPL and more egalitarian wage bargaining. In contrast to LMEs, in CMEs a high EPL is seen as necessary to incentivise employees to invest in the specific skills on which their firms' production strategies rely (Estevez-Abe et al. 2001; Hall and Soskice 2001). As a result, employers and regular workers in large companies may have a common interest in deregulating temporary work. Employers may see in temporary workers the flexibility necessary to adjust to variations in economic activity while retaining the institutional complementarity necessary for their diversified production strategy (Hassel 2011). Thus, as Thelen (2012) and Palier and Thelen (2010) find, CMEs are characterised by high labour market segmentation, taking the form of a differential treatment of “insiders” and “outsiders” (dualisation). Deregulation of temporary work promotes employment creation while retaining the institutional complementarities of the system.

Neither of these two typologies, according to Hall and Soskice (2001), is inherently better at generating good macroeconomic and labour outcomes. Instead, the authors posit that superior macroeconomic performance is a product of institutional coherence. Both coordinated market economies (such as Germany and Japan) and liberal market economies (such as the US and the

UK) can be coherent. Both within and across the two types of economies, countries with more coherent sets of institutions (i.e. with consistently non-market-oriented or consistently market-oriented institutions) should perform better. Hall and Soskice examine five economic spheres: (a) industrial relations (bargaining over wages and working conditions); (b) vocational training and education; (c) corporate governance (relations between firms and their investors); (d) inter-firm relations (between firms and their suppliers, clients and competitors); (e) relations with employees (information-sharing, work effort incentives). A country's institutional mix is considered more coherent, to the extent that (a) its institutions within each sphere are closer to one or the other of the two poles (liberal market or coordinated market) rather than in between and (b) its institutions are consistent across spheres. Incoherence can be a product either of being in the middle within each sphere or of having liberal market institutions in some spheres and coordinated market institutions in others. Hall and Soskice (2001) indeed, refer to both Germany and the UK as examples of political economies that are highly coherent. Both non-market- and market-oriented institutions can work well, in this view, provided they are coupled with complementary institutions in other spheres: "Although each type of capitalism has its partisans, we are not arguing here that one is superior to another. Despite some variation over specific periods, both liberal and coordinated market economies seem capable of providing satisfactory levels of long-run economic performance. . ." (Hall and Soskice 2001, 21).

As Rodrik (2007) observes, "an approach that presumes the superiority of a particular model of capitalism is quite restrictive in terms of the range of institutional variation that market economies can (and do) admit" (Rodrik 2007, 182). In the same vein, Blanchard (2005) concludes that "what may be optimal for Sweden may not be optimal for Chile" (Blanchard 2005, 367). Therefore, this study does not attempt to find an "optimal recipe" of institutions but rather to examine and comprehend how the latter perform in different institutional frameworks. One of the main claims of the VoC approach is that

both LMEs and CMEs are capable of providing satisfactory levels of long-run economic performance (Hall and Soskice 2001, 21–22). Against those who attribute higher levels of unemployment to the labour market institutions in CMEs considering them as the source of many rigidities, the contributors to Hall and Soskice (2001, chap. I: 4–5) argue that these serve as crucial adjuncts to the firm strategies on which high levels of employment and high economic performance depend. This has been a highly controversial claim that has not been yet tested empirically. Section 2.3 provides some reasons why this may be the case.

With regards to the misspecification of the Southern European model as a “dysfunctional” and “not yet developed” variety of the continental model (Esping-Andersen 1990; Della Sala 2004), VoC classifies Italy (but also Greece, Portugal and Spain) as “in ambiguous position” (Hall and Soskice 2001, 21). Italy does not fit into either CMEs or LMEs. Although the VoC does not proceed explicitly to the classification of the Southern European countries, it does recognize that the latter “constitute a distinct type of capitalism described as Mediterranean” (Hall and Soskice 2001, 21). Despite some commonalities with CMEs, **Southern European Market Economies (SMEs)** are much more rigid and fragmented. The latter experienced much later the transition from an agricultural to an industrial economy, the Industrial Revolution and its large economic (but also social) benefits. As Blossfeld and Hakim argue: “This unprecedented economic growth in Northern Europe transformed the agricultural-industrial labour markets into service economies and the traditional family systems into highly differentiated and modernized ones” (Blossfeld and Hakim 1997, 15). SMEs are characterized by highly fragmented trade unions, lower coordination among social partners and limited capacities for concerted skill formation or continuous innovation (Ferrera and Gualmini 2004; Hall and Soskice 2001). Another notable feature of SMEs has been their “particularistic” and “clientelistic” nature (Ferrera 1996). Unlike in CMEs where welfare benefits are in principle being granted to the entire population,

social benefits in SMEs tend to be especially generous for some electorally important groups while being clearly less generous for the others. Moreover, another substantial difference between CMEs and SMEs is that in the former most unemployment and social benefits are based on strict conditionality and activation, whereas the latter focused almost exclusively on passive income support instead of activation. This could account for the higher and prolonged unemployment.

We can therefore see that there are some key differences among LMEs, CMEs and SMEs and as the VoC predicts, institutions, policies or shocks will have different effects in these three groups of countries. Nevertheless, only a few such tests have been conducted. Rueda and Pontusson (2000) find that the effect of wage-setting centralisation on earnings inequality is more pronounced in CMEs than in LMEs. Kenworthy (2003) finds that the effect of earnings inequality on private-sector service employment growth is stronger in liberal market economies than in coordinated market economies. To my knowledge however, there exists no such empirical study on labour market transitions and unemployment. This thesis does so by selecting as case studies the three largest European economies belonging to a different variety of capitalism: UK, Germany and Italy. My analysis will also demonstrate why Esping-Andersen (1990) was wrong to place Italy on the continental regime.

2.1.1 Why Germany, Italy, and the UK?

Several ex post justifications can be given for my country selection rationale, however the main reasons were two, a theoretical and a practical one. The theoretical one, as illustrated above, stems from the fact that the three countries constitute a typical/representative case of a LME, a CME and a SME, respectively. With regards to SMEs, Spain, Portugal or Greece could have theoretically been chosen instead of Italy. However, in that case there would have been a clear issue of bias and endogeneity since these three are not comparable to Germany and the UK. Furthermore, Germany is a very interest-

ing case for the purposes of this study because as a result of the reunification, East Germany has experienced large regional variation and exogenous institutional change. During the past two decades, no other western European country witnessed stronger variation in regional unemployment than Germany, with rates ranging from less than 3% in Baden-Wurttemberg and Bavaria to more than 20% in Saxony-Anhalt and Mecklenburg-West Pomerania. Therefore, it provides an ideal case to examine the performance and results of the implantation of western labour market institutions to a different until then model of capitalism.

The second reason for my case selection rationale is practical. As in every empirical study, the case study selection is unavoidably inextricably linked to the data availability. In my case I was additionally limited by the fact that event history data with detailed information on employment histories with a long time span are even more difficult to find than panel data. Germany, Italy and the UK were three countries for which such large longitudinal datasets were available.

2.2 Comparison of the Three Case Studies

Italy and Germany display indeed some labour market institutional similarities. However, they also differ significantly with regards to several institutional characteristics and my hypothesis—as will be presented below—is that these differences will be shown to be crucial for labour market transitions and their respective durations. As Hall and Soskice aptly contended, Italy constitutes a “hybrid” model of capitalism between the two coherent ones.

Firstly, with regards to the wage system, as opposed to the UK and Germany (where a statutory minimum wage was introduced in 2016), in Italy there is no statutory minimum wage. In the UK the national minimum wage as of April 2018 stands at £7,83 (€8,67) per hour, while as of April 2019 it will be increased to £8,21 (€9,09) per hour (the rates change every April). In Ger-

many the minimum wage as of January 2019 stands at €9,19 per hour. With regards to wage bargaining, both Italy and Germany are characterised by the same level of intermediate centralisation, i.e. bargaining predominantly takes place at the sectoral level, although Germany experienced a demise in the coverage of collective agreements, which accounted to a high extent for the introduction of the statutory minimum wage in 2016. Collective bargaining coverage continued to decline (by 2 pp from 2016 to 2017), to 46,5 %. There are significant differences in terms of coverage across sectors, with the public sector and industry better covered, while services have a much lower coverage. Also, across different wage groups, where only little more than one quarter (27%) of the two lowest wage quintiles are covered by a collective agreement; in contrast, bargaining coverage in the two highest wage quintiles is more than 60% (ILO 2018).

On the other hand, Italy although de jure has a two-tier wage bargaining system where sector- and firm-level agreements are combined, in practice, decentralised bargaining continues to play a limited role despite the fiscal incentives provided in the last years. In the period 2010–2016, the share of firms (with at least 20 employees) adopting firm-level bargaining was stable at around 20% (D`Amuri and Nizzi 2018). An important difference between Italy and Germany with regards to collective bargaining is that the former is characterized by low coordination and high fragmentation of trade unions, whereas the latter by high coordination and low fragmentation. This difference is likely to play a pivotal role with regards to employment and unemployment transitions and their durations. In the UK wage bargaining has always taken place at the company level and coordination among social partners has been low.

With regards to unemployment benefits, UK and Germany have both unemployment insurance (UI) as well as unemployment assistance (UA) for those who do not qualify for the former (e.g., not enough employment contributions or having exceeded the duration of the UI benefit). By contrast, in Ita-

ly, until now unemployment protection had been confined solely to unemployment insurance leading to large gaps in the coverage of the system.¹ Today the net replacement rate for a single person without children stands at 60% in Germany, 75% in Italy and 20% in the UK. Finally, as opposed to Italy, Germany is characterized by high activation for the unemployed, while the UK is characterized by intermediate activation. These differences in the provision can provide substantial disincentives for work search and could partly account for the observed higher and prolonged unemployment in Italy compared to Germany and the UK.

Although Germany has traditionally had higher coordination and lower union fragmentation than the other two countries, both Italy and the UK have had higher union density (similar patterns in the last two decades). Nevertheless, in comparison to the UK, Italy has had a much larger coverage of collective agreements in practice through its automatic extension to non-unionised workers. Italy has also higher union fragmentation which is further exacerbated by the fact that the number of union confederations is equal to seven, as opposed to the UK who has only one union confederation. This combination of high trade union power with high fragmentation in Italy is likely to be a key factor accounting for the observed higher unemployment. Thus, apart from union density several other indicators must also be considered to measure union power and corporatism: the degree of coordination, extension of collective agreements to non-unionised workers as well as union fragmentation and industrial action.

Finally, with regards to EPL, this is strictest in Italy and least strict in the UK. Germany is closer to Italy with relatively strict legal provisions. Nevertheless, this stringent EPL for standard contracts has been accused of increasing the use of different forms of atypical employment leading to dualisation (Blanchard and Landier 2002; Thelen 2012). In particular, alt-

¹ Until the introduction of the NASpI long-term unemployed, apprentices and youth entering the labour market with insufficient contributions were not entitled to unemployment benefits.

though there exist no limitations with regards to fixed-term contracts in the UK, their prevalence is lower: the percentage of the workforce under FTCs in 2017 was 11,8%, 10% and 4,3% in Italy, Germany, and the UK respectively (Eurostat).

2.3 Research Hypotheses

Section 2.2 presented briefly the three case studies and illustrated the main differences among them in terms of labour market institutional configurations. From this discussion research hypotheses are now posited. These are first stated separately for each of the five labour market institutions of interest. I expect that the type and characteristics of labour market transitions will vary across different welfare regimes/models of capitalism. Thus, country-specific research hypotheses are also formulated. Then, Section 2.3.5 proceeds to research hypotheses for institutional complementarities i.e. different interactions of these institutions.

2.3.1 Employment protection legislation (EPL)

EPL covers unfair dismissals, restrictions on the number of lay-offs, compulsory severance payments, minimum notice periods and social security for the newly-hired. By strengthening job security, reducing arbitrary dismissals, stipulating advance notice of dismissals, encouraging on-the-job training and human capital acquisition and thus increasing labour productivity, these regulations may reduce both transitions among jobs and transitions from employment to unemployment and increase the duration of employment spells. On the other hand, if EPL is too strict, firms will become cautious in hiring and more selective in the choices of workers to the particular detriment of disadvantaged workers (Bertola and Rogerson 1997). Furthermore, productivity could also decline. Finally, strict EPL may demotivate unemployed and inactive individuals and reduce the incentives to actively search for jobs. All these

will lead to fewer transitions from unemployment and inactivity to employment and longer unemployment durations. In that case, high EPL would also lead to higher long-term unemployment.

Most of the existing studies have focused on the impact of EPL on the stock of employment and unemployment and only few studies have examined its effects on labour market flows. Nevertheless, even the effects of EPL on the unemployment stock are unclear. Some authors find that EPL leads indeed to higher unemployment (Blanchard and Wolfers 2000; Scarpetta 1996; Lazear 1990; Grubb, Di Tella, and McCulloch 1998). Other studies however, have challenged this adverse (Esping-Andersen et al. 2000; Bentolila and Bertola 1990; Oesch 2009; Freeman 2005; Amable et al. 2011). In their seminal study, Blanchard and Portugal (2001) examine the effect of EPL on unemployment in Portugal and the US. They do not find any effect of EPL on the unemployment rate. However, as the authors argue, this might be due to the fact that EPL affects both inflows to and outflows from unemployment. If EPL reduces both by decreasing the incentives to both hire and to dismiss workers, and if these two effects cancel out each other, then EPL will appear to have no effect at all on the unemployment rate. This is why it is important to examine transitions among states and not simply states. Amable et al. (2011) conduct as well a macro analysis examining the effects of labour market institutions on 18 OECD countries between 1980 and 2004. They find that EPL has no significant effect on unemployment while it actually has a positive impact on employment performance by reducing inactivity.

Gómez-Salvador et al. (2004) use annual information on firm-level data from the Amadeus dataset produced by Bureau van Dijk (BvD) to study the effects of institutions on job flows in Europe, using a classical cross-country/time-series regression analysis. Their evidence suggests that EPL reduces job reallocation and job creation rates, while the effect on the job destruction rate is statistically insignificant. Using Italian firm-level data, Boeri and Jimeno (2005) exploit exemption clauses exonerating small firms from job

security provisions within a difference-in-differences approach. As opposed to Gómez-Salvador et al. (2004), their estimates confirm a significant effect of employment protection on job destruction. Marinescu (2009) exploits a 1999 British reform that reduced the trial period for new hires from 24 to 12 months of tenure, thereby directly affecting only employees within this window, and finds that the firing hazard for these employees significantly decreased with respect to that of workers with longer job tenure. Kugler et al. (2003) study the effects of a 1997 Spanish reform, which lowered dismissal costs for older and younger workers, and find that it was associated with a relative increase in worker flows for these groups. By contrast, insignificant effects are found by Bauer et al. (2007), Martins (2009) and von Below and Thoursie (2010) who look at the impact of small-firm exemptions on worker turnover in Germany, Portugal and Sweden, respectively. Furthermore, there is now a plethora of studies demonstrating that *ceteris paribus*, stringent regulation on regular contracts encourages the use of temporary and fixed-term contracts (see for example OECD 2004; Pierre and Scarpetta 2004; Boockmann and Hagen 2001).² Deregulation of employment protection at the margin has accentuated the existing segmentation or dualisation of labour markets (Piore 1983; Lindbeck and Snower 2002).

In this context, the following research hypotheses are posited: on average stricter EPL *per se* will lead to lower job-to-job transitions and longer employment durations but also lower transitions from unemployment and inactivity to employment and longer unemployment durations (H1). Empirical studies so far have assumed a linear relationship between EPL and unemployment, something unrealistic. I do not expect this relationship to be linear but positive and monotonically increasing (e.g., a logarithmic function). This implies that the effect will be smaller for low overall levels of EPL as the ones

² For an overview of employment protection legislation and the insider/outsider problematic see, e.g., Cazes and Nesporova (2003) and Emmenegger (2007). For the complexities involved in evaluating the impact of dismissal protection see Büchtemann and Walwei (1996).

found in the UK but larger for higher overall levels of EPL as the ones found in Germany and even more, in Italy. The effects of EPL on different sub-groups are beyond the scope of this thesis.

2.3.2 The unemployment benefits system

Despite a substantial literature on the impact of unemployment insurance (UI) on the duration of unemployment and re-employment rates, its effect on unemployment is also contested (Layard et al. 2005; Howell et al. 2006; Howell 2005; Baccaro and Rei 2007). It may be argued that more generous UI raises the reservation wage and gives workers the opportunity of not simply accepting the first job offer but wait for a suitable/better matching. In that case, a higher replacement rate/longer benefit duration will increase the duration of unemployment spells but also the duration of future employment spells and may ultimately lead to lower transitions from employment to unemployment. However, it is also true that higher replacement rates and/or longer durations of the benefit provide disincentives for job search and thus transitions from unemployment to employment.

A number of theoretical studies have pointed out that UI may have beneficial effects, mainly by encouraging workers to wait for high-productivity jobs in an environment with search frictions and heterogeneous jobs (Diamond 1981; Acemoglu 2001; Acemoglu and Shimer 1999; and Marimon and Zilibotti 1999). There has been a voluminous strand of the empirical literature trying to estimate these effects and there is now evidence of a negative effect of the replacement rate on unemployment (Scarpetta 1996; Elmeskov et al. 1998; Nickell 1997; Blanchard and Wolfers 2000; Nickell et al. 2005; IMF 2003; Bertola et al. 2001; Katz and Meyer 1990; Card and Levine 2000; Farber and Valletta 2013). Furthermore, several studies have found that lower unemployment benefit duration will increase significantly transitions to employment (Katz and Meyer 1990; Card and Levine 2000) and will lead to longer unemployment durations (Katz and Meyer 1990; OECD 2000; Fredrik-

sson and Holmlund 2006). However, there exists no evidence on the effect on transitions to unemployment (Krueger and Meyer 2002; Card et al. 2010; Lalive 2008; Addison and Portugal 2004). Finally, UI may provide incentive to inactive workers for job search and thus may increase transitions from inactivity to unemployment.

However, the effect of the UI is likely to vary with the design of the unemployment system i.e. not only with the replacement rate and the duration of the benefit but also with conditionality on job searching, participation in ALMPs (activation) as well as spending on Public Employment Services (PES), which include placement and related services. The impact of higher search requirements and activation measures is theoretically ambiguous. By default, the purpose of activation is to increase transitions from unemployment to employment and lead to better job matching. Nevertheless, in the presence of higher activation some unemployed may become demotivated and give up the benefit. In that case, a tightening of conditionality and activation may raise the number of claimants who leave unemployment without finding a job and enter inactivity. Such transitions from unemployment to inactivity may have severe repercussions on re-employment outcomes and prospects, as they typically lead to human capital deterioration and detachment from the labour market. Petrongolo (2007) uses a difference in differences approach to estimate the effects of unemployment compensation on subsequent careers. She compares the long-term outcomes for cohorts of unemployment entrants before and after the JSA introduction in the UK in October 1996. JSA had a strong, positive effect on the outflow from claimant benefits to employment, but a null or even negative impact being employed one year later. This led the author to conclude that while the reform successfully managed to move claimants off benefits, it had a much more limited impact in getting them onto new, lasting jobs. With regards to PES, there is limited evidence on whether it really benefits the unemployed or whether PES is used to monitor benefit recipients more closely. Estevão (2003) for instance finds that spending on PES leads to lower

employment rates. There are also mixed findings concerning the impact of ALMPs on unemployment and employment (Card et al. 2010; Martin and Grubb 2001; Nickell and Layard 1999; Oesch 2009; Boone and van Ours 2009; Estevão 2003; Heckman et al. 1999). Some studies have argued that the effectiveness of ALMPs is contingent on macroeconomic conditions. More specifically, to be effective these programmes require “a reasonably buoyant supply of job vacancies in order to be effective” (Martin and Grubb 2001, 107).

Following this discussion the following research hypotheses are posited: for a given level of conditionality/activation, an increase in the level and/or the duration of the unemployment benefit per se will not affect job-to-job transitions and transitions from employment to unemployment. However, it will lead to longer unemployment durations and lower transitions from unemployment to employment by increasing the reservation wage as well as the quality of job matching allowing beneficiaries to not accept any, non-suitable job (H2a). Strict conditionality and higher activation are expected to have the opposite effect and increase transitions from unemployment to employment (H2b). They could also reduce workers’ incentives to quit their jobs and rely on benefits because of the increased risk that they will have to take up a job that is inferior to their current job. Notwithstanding a common trend across European countries towards activation, large differences can still be delineated. In particular, although countries have similar replacement rates and durations, both the amount spent on activation and the type of activation measures undertaken will depend largely on the welfare regime/variety of capitalism. There are two good reasons why welfare regimes affect spending on labour market policies. First, there are enduring historical differences in the sorts of problems different regimes have faced. Long-term unemployment was traditionally much higher in CMEs than in LMEs. The second reason is that the ability to undertake policies may also be regime-dependent. Political parties choose policies in the context of existing policy tools which may differ signif-

icantly in different regimes. For instance, there are historical reasons why most political parties in CMEs supported training measures for the unemployed (Hancké et al 2007). Thus, a similar UI will have different effects in countries with high activation like Germany as opposed to countries with low activation like Italy (H2c). Finally, there is no theoretical justification and thus no expectation for the unemployment benefit to have any effect on the transitions from inactivity to employment.

2.3.3 Trade union power and trade union fragmentation

Trade unions provide a framework for the articulation and aggregation of social demands, strategies for action, the communication and leadership networks in and across industries, and the mobilization of workers (Taylor 1989). Nevertheless, trade union power is inherently difficult to define. In the scholarly literature it has been traditionally operationalised through trade union density i.e. the percentage of the workforce who are trade union members. However, high union density does not necessarily translate into large and powerful unions. It depends as well on the extent of industrial action, the coverage of collective agreements as well as on the involvement of trade unions in economic and social decisions made by the government. The (legal) extension of collective bargaining and institutionalisation of social dialogue among governments and peak organizations of employers and workers boost labour union power (McGuire 1999). While a high rate of unionisation leads, by definition, to a high coverage rate, a low rate of unionisation does not lead to a low coverage of collective agreements. In many countries, for example, workers who are not trade union members are in fact, through the automatic extension of collective agreements, covered by the terms and conditions of union contracts. Furthermore, although both Italy and Germany have experienced a sharp decline in trade union density over time, the former has a much higher bargaining coverage than the latter, which translates into higher union power. Trade

union power also depends on industrial action as this is a means of pressure to the number of layoffs and agreed minimum wages.

To formalise trade union power, four different components are distinguished: *structural*, *organisational*, *institutional* and *societal* trade union power. *Structural power* is inextricably linked to trade union density and is straight-forward: the more the trade union members, the more powerful the unions are. Given the fact that their core constituencies are mainly labour market insiders i.e. workers in regular contracts (Ebbinghaus 2006; Rueda 2005, 2006; Palier and Thelen 2010), structural power can account for unions' interest in full employment, strong EPL for regular, open-ended contracts and the development of skills. *Organisational power* on the other hand is not based on the numerical strength but it refers to the ability to successfully mobilise the membership into industrial action. In that respect a higher industrial activity will translate into higher organisational power. *Institutional power* captures the fact that trade union power does not depend only on the capacity of unions to organise and mobilise workers but also on their position in collective bargaining and corporatist arrangements. Thus, *institutional power* refers to the coverage of collective agreements and it is very sensitive to legislative intervention e.g., an abolition of automatic extension of collective agreements to all workers in an industry/sector. Structural, organisational and institutional power are complemented by what Schmalz and Dörre (2014) define as *societal power*. *Societal power* refers to the capacity of trade unions to build coalitions, to link with political parties, to influence the public discourse and agenda setting and to ultimately affect economic and social policy decisions.

The existing empirical literature however has not examined the effects of all these four components on unemployment but has confined only to the effects of trade union density and industrial action. Empirical studies have found a positive effect of trade union presence on unemployment (Nickell and Layard 1999; Booth and Bryan 2004; Amable et al. 2011). Nickell and Layard (1999) in their macro analysis examine the effect of labour market institutions

on unemployment and growth. The labour market institutions that are considered are labour taxes, EPL, trade unions and the structure of wage bargaining, the social security system, the system of education and training, and barriers to regional labour mobility. The data cover 20 OECD countries and two time periods (1983–1988 and 1989–1994). They conclude that strong unions that coordinate little with employers increase unemployment. Nevertheless, they employ simple regressions with no other covariates apart from the labour market institutions. Thus, this cannot constitute robust evidence for a positive effect of trade union power on unemployment.

The hypothesis posited in this thesis is that all four components of trade union power are expected to reduce both transitions from employment to unemployment and vice versa through the opposition to layoffs, the demand of higher real wages and the opposition to wage moderation. Thus, trade union power per se will lead to lower transitions from employment to unemployment and vice versa (H3a). The effect of trade union power on job-to-job transitions is more difficult to establish. It could be argued that trade unions, through their positive impact on labour costs (i.e. wages and working conditions) and their negative impacts on returns to capital and investments in physical capital and R&D (Acemoglu and Pischke 1999; Haucap and Wey 2004) reduce job opportunities, and hence job-to-job transitions. However, according to efficiency wage arguments, the increase in wages could in turn improve workers' motivation and productivity. If higher labour costs are accompanied by a comparable productivity premium (Garnero et al. 2018), there should be no impact on job-to-job transitions. The findings from empirical studies (Garnero et al. 2018; Doucouliagos et al. 2017a; Doucouliagos et al. 2017b) suggest that union effects on productivity are quite small on average. For this reason I expect the wage premium to be larger than the productivity premium and trade union power to reduce job-to-job transitions overall (H3b). Finally, given that inactive people are almost always non-unionized (outsiders), I expect trade union power to lead as well to lower transitions from inactivity to employment

(H3c). Nevertheless, this study contends that this average effect of trade union power will depend crucially on the degree of union fragmentation.

Union fragmentation refers to whether trade unions promote strictly and solely the interests of their own members without taking into account the overall interest of other trade unions and the society as a whole (Scarpetta 1996; Soskice 1984). Although the scholarly literature often refers to trade unions as a “single” actor with a common interest (e.g., power resources approach), within-group variation is also large, since “wage earners like any social class, and perhaps to a greater extent than other social classes, have multiple and partly contradictory interests” (Pontusson 1992, 12). As a group, they have an interest in achieving greater social welfare, but individual workers may seek to maximize their share at the expense of others (Anderson and Meyer 2003; Swenson 1992). Trade union fragmentation depends on the absence of demarcations and disputes, the existence of a culture of “consensus” among unions and the centralisation of union confederations. The more centralised the confederations, the more encompassing they are and the lower the degree of fragmentation will be (Hicks and Kenworthy 1998). As Esping-Andersen pointed out, “there is absolutely no compelling reason to believe that workers will automatically and naturally forge a socialist class identity.... unions may be sectional or in pursuit of more universal objectives” (Esping-Andersen 1990, 29). To my knowledge there is currently no previous evidence on the effects of trade union fragmentation on unemployment. I expect it to lead to lower transitions from employment to unemployment but also to lower transitions from unemployment and inactivity to employment and longer unemployment and inactivity durations (H4).

However, if trade union power is high but fragmentation is low, unions will take into account the unemployment effects in other industries from wage increases in their own industry and thus might accept wage restraint, leading to more transitions to employment and fewer transitions to unemployment (H3c). In this context my hypothesis is that the effect of trade union power in

Germany and Italy will differ significantly. Italian trade unions—as opposed to their German counterparts—have been strongly divided along ideological/political lines and social dialogue has been remarkably low in the Italian society. This high union fragmentation and inter-union competition in Italy in conjunction with the relatively high union power are expected to reduce all transitions and undermine labour market performance. On the contrary in Germany, the combination of the same level of union power but with low fragmentation, high coordination among unions and a high degree of social dialogue is expected to lead to more transitions to employment. Finally, the low union power in the UK is expected to lead to more overall transitions in the labour market and shorter spell durations.

2.3.4 The wage bargaining system

When examining the wage bargaining system, it is important to distinguish centralisation, which refers to the level of wage bargaining and typically implies government involvement in wage bargaining, from coordination, which implies a high degree of consensus among the social partners. Whereas the level of wage bargaining refers to the level at which collective agreements take place (national, sectoral or company), coordination refers to the extent at which these decisions are concerted so as to foster a mutually beneficial strategy. Although these are two distinct and crucial indicators, in the empirical literature they have frequently been used interchangeably and their delimitations have been blurred (Newell and Symons 1987; Bruno and Sachs 1985; Calmfors 2001). Nevertheless, it has been argued that coordination could—under specific circumstances—act as a functional equivalent for centralisation with respect to employment and wage outcomes (Soskice 1990; Hall and Soskice 2001). In the absence of formal bargaining arrangements, economies often develop informal bargaining mechanisms whose effects are similar in terms of employment and wages to those arising from formal bargaining.

The potential effects of the level of wage bargaining on real wages and unemployment have been analysed within two different theoretical frameworks: the monopoly union wage-setting model (Dunlop 1944) and efficiency-wage models (Akerlof 1982; Shapiro and Stiglitz 1984). In the former, wages are assumed to be set unilaterally by unions, which trade off the benefits from a real wage increase for employed union members against the associated loss of employment. In the latter, wages are instead determined unilaterally by employers, who weigh the disadvantages from higher wages and thus higher costs, against the benefits of higher productivity from the employees, skills acquisition and/or reduced labour turnover. Nevertheless, although very insightful as a theoretical exercise, both models represent two extremes and are highly unrealistic, especially for Western European capitalisms. Thus, more realistic models were developed in the next decades such as the bargaining models, in which unions and employers negotiate about how the revenues from production are to be shared (Layard et al. 1991). Several studies employed these models to estimate the effects of wage bargaining in unemployment and other macroeconomic variables such as productivity and growth.

The most influential theoretical study on the effects of wage bargaining has been the study of Calmfors and Driffill (1988). In it the authors contend that both very centralised and very decentralised bargaining systems are conducive to real-wage moderation, high employment and low unemployment. In the centralised case this is explained by the internalisation of the externalities of wage agreements whereas in the decentralised case by the restraint imposed by market forces. On the contrary, intermediate levels of centralisation per se are likely to under-perform, especially in the absence of coordination. Real wage flexibility tends to be high when bargaining is centralised because unions internalise the economy-wide effects of their actions. The source of flexibility when bargaining is conducted at the firm level is that wages will reflect local productivity conditions. This hump-shaped relationship is known in the

scholarly literature as the inverted-U shape between unemployment and the degree of centralisation, or the Calmfors and Driffill hypothesis.

Nevertheless, the hump hypothesis has been challenged by several empirical studies and there is limited empirical evidence supporting it. Aidt and Tzanatos (2002) conduct a comprehensive meta-analysis of all the studies testing it. They have identified 28 comparative, cross-country studies using data from subsets of OECD countries during the past 40 years.³ In total, 45% of the studies examined found evidence in support of the hump-shaped hypothesis. However, as the authors point out, “the favour evidence comes from the first generation of studies that relied on simple correlations and thus failed to control for other determinants of economic performance” Aidt and Tzanatos (2002, 278). Most of them are based on a sample of 10–20 observations from OECD countries at a given point in time. Only a few (Dowrick 1993; OECD 1997; Traxler et al. 2001) use panel data. This increases the number of observations to about 60 and makes it, in principle, possible to take unobserved country and time fixed effects into account. In addition, these studies did not control for any other covariates. Studies that controlled for cross-country differences in economic policy, the institutional environment and economic conditions, and employed as well more advanced econometric techniques rejected the hump-shaped hypothesis.

This thesis espouses (and tests) the Calmfors and Driffill hypothesis and contends that an increase in the level of wage bargaining will not have a linear positive effect on unemployment but the latter will depend on the existing level of centralisation: it will reduce transitions from unemployment and inactivity to employment for low levels of centralisation and it will increase them for intermediate levels of centralisation (H5a). Nevertheless, an increase

³ The studies are Cameron (1984), OECD (1988, 1997), Rowthorn (1992a, 1992b), Freeman (1988), Tarantelli (1986), Bruno and Sachs (1985), Crouch (1985; 1990), Bleaney (1996), Jackman (1993), Golden (1993), McCallum (1983, 1986), Dowrick (1993), Calmfors and Driffill (1988), Soskice (1990), Scarpetta (1996), Bean (1994), Blau and Kahn (2000), Zweimuller and Barth (1994), Nickell and Layard (1999), Nickell (1997), Iversen (1999) and Traxler et al. (2001).

in the level of wage bargaining will have a negative effect on job-to-job transitions irrespective of the level of centralisation as it will always imply lower wage gains (H5b). This thesis contends that this effect of wage bargaining will depend crucially on coordination and more precisely, on whether bargaining parties are willing and able to internalise the broader implications of wage settlements and set wages in alignment with productivity and the broader economic conditions. In particular, my hypothesis is that under high coordination a monotonic relationship between the level of wage bargaining and unemployment is more likely whereby increasing centralisation will increase transitions from unemployment and inactivity to employment (H5c). This is because in a coordinated system both unions and employers' associations take into account the potential effects of a nominal wage and price increase in their sector for the overall economy. This is supported by the empirical evidence that countries with a high level of bargaining coordination tend to have less wage dispersion and more compressed wages (Lallemand et al. 2005; Aidt and Tzannatos 2002). This finding can be attributed to a number of causes, including egalitarian bargaining; the fact that centralised bargaining reduces the scope for firm- and/or industry-specific factors to enter wage contracts (Harcourt 1997); or to insurance motives (Agell and Lommerud 1992).

Based on the preceding analysis, a synopsis of all the research hypotheses posited for each labour market institution is presented in Table 2.1. Nevertheless, as explained in Chapter 1, this thesis espouses the institutional complementarities approach of the VoC, according to which the effects of each institution will change in the presence of institutional complementarities. Section 2.3.5 presents accordingly these additional research hypotheses.

2.3.5 Effects of interactions among institutions—institutional complementarities

Two institutions are complementary when in a particular institutional framework, the effect of one of them is reinforced by the other. The empirical

literature on interactions among institutions has focused on interactions with macroeconomic variables and shocks (Ljungqvist and Sargent 1998; Fitoussi et al. 2000; Blanchard and Wolfers 2000; Bertola et al. 2001). The underlying idea behind these studies is that certain labour market institutions protract the adjustment of wages and employment to temporary shocks and prolong their effects on unemployment, transforming a temporary increase in unemployment into a long-lasting one (hysteresis). In their influential study, Blanchard and Wolfers (2000), argue that labour market institutions can affect the effects of economic shocks on unemployment in two ways: (a) they can affect the impact of shocks on unemployment per se, (b) they can affect the persistence of unemployment in response to shocks. Based on a panel of labour market institutions and shocks for 20 OECD countries since 1960, they test these hypotheses through two specifications, and both lend credence to the interactions hypothesis. In the first specification there are common but unobservable shocks across countries, and these shocks have a larger and more persistent effect in countries with strong labour market institutions. More precisely, the indicators of the eight labour market institutions are defined so that an increase in the measure is expected to increase the effect of an adverse shock on unemployment. All institutions, except for the union coverage variable, have a statistically significant mediating effect on unemployment. In the second specification the country-specific shocks are included and interacted with labour market institutions. Again, only the effect of union coverage is statistically insignificant. Thus, the authors interpret these findings as corroborating their hypotheses and suggesting that institutions interact with economic shocks and have mediating effects on unemployment.

Nevertheless, there have been only very few studies looking at interactions among different labour market institutions. Coe and Snower (1997) argued theoretically that a wide range of institutions may have complementary effects on unemployment. Belot and van Ours (2004) find empirical support to the theory that institutions strongly affect performance only when their effects

on employment and unemployment are combined and thus reinforced by each other. More precisely, they find that the replacement rate on its own reduces both the unemployment and the employment rate. However, the positive interaction effect between labour taxes and the replacement rate, makes the authors conclude that different combinations of the replacement rate and labour tax rates can yield the same employment and unemployment rates. Moreover, their estimate of the interaction between EPL and the bargaining level is also significant suggesting that the effect of EPL on the unemployment rate varies according to the bargaining level: it is negative when wages are set at the firm level, positive when bargaining is at the industry level and insignificant when wages are set at the national level. Similarly, union density raises unemployment only in decentralised bargaining systems. However, these effects become insignificant when time and country effects are included in their regression, casting a doubt on the existence of institutional complementarities and whether these reflect more fixed differences between countries and time periods.

Following the discussion in 2.3.1–2.3.4 the following research hypotheses on complementarities are posited: the negative effects of trade union power, trade union fragmentation and EPL per se, will be exacerbated in the presence of interactions among them. In countries with low EPL and decentralised wage bargaining like the UK, the interaction of these two institutions will lead to more transitions from unemployment and inactivity to employment and short spell durations. On the contrary, in countries with sectoral wage bargaining, low coordination and relatively high average EPL, the interaction of these two institutions will lead to lower transitions from unemployment and inactivity to employment and longer spell durations.

TABLE 2.1. Main research hypotheses of the thesis

Institutions	Job-to-job transitions	Transitions from employment to unemployment	Transitions from unemployment to employment	Unemployment duration	Transitions from inactivity to employment
Employment protection legislation	-	-	-	+	-
Unemployment benefits					
Level	0	0	-	+	0
Duration	0	0	-	+	0
Conditionality and activation	0	0	+	-	0
Trade union power	-	-	-	+	-
Trade union fragmentation	-	0	-	+	-
Wage bargaining	-	0	Depends on the level [†]	0	Depends on the level [†]
EPL * Union power	-	-	-	+	-
Union power * Union fragmentation	-	-	-	+	-
Wage bargaining * Union fragmentation	-	0	-	-	-
Wage bargaining * Union power	-	-	-	-	-
Wage bargaining * Unemployment benefit	-	0	-	-	-

[†] + for intermediate/sectoral/industry but - for low/decentralised.

2.4 Conclusion

This chapter provided the rationale for the case study selection and the reasons that render their choice and comparison interesting. Italy, Germany and the UK are all three big European economies that despite their particularities have been exposed to more or less relatively similar economic conditions. However, each of them constitutes a representative case of a different European model of capitalism and welfare regime. To what extent does this affect and accounts for the different employment and unemployment rates, job episodes and labour market transitions in the three countries during the last two decades? This is the main question motivating this study. Furthermore, this chapter proceeded as well to the theoretical framework of the thesis and the main research hypotheses both for each institution per se as well as on the potential institutional complementarities. The data and method employed are the subject of the next chapter.

Methodology and Data

“It is a capital mistake to theorize before one has data.”

—Arthur Conan Doyle, *A Scandal in Bohemia*

“Felix, qui potuit rerum cognoscere causas”

—Virgil, *Georgics*

3.1 The Three Major Issues: (a) Identification, (b) Measurement, and (c) Modelling and Estimation

Distinguishing and estimating the effects of labour market institutions on labour market performance in general and labour market transitions in particular is inherently difficult. This chapter presents the main challenges that researchers face and the issues and challenges they have to overcome in terms of identification, measurement, modelling and estimation. I proceed by describing the methodology employed in this thesis, the specific event history model chosen and the reasons for it. I discuss the credibility of the key identification assumptions and how can event history analysis improve upon standard panel data methods for the purposes of this type of research. Section 3.3 continues with the operationalisation of the main variables of interest and concludes by presenting and analysing the datasets used.

3.1.1 Identification issues

Identification issues essentially result from (a) endogeneity, (b) multicollinearity, (c) reverse causality, and (d) the known as the *fundamental problem of causal inference*. Endogeneity occurs because labour market institutions in a specific country and time are not randomly chosen but are the

outcomes of several social, political, historical and economic factors, most of them unobserved or impossible to control for. This would not constitute a problem if these unobserved factors did not affect as well labour market transitions. Nevertheless, several factors such as economic conditions, bureaucracy, law enforcement and judicial efficiency are likely to be correlated with both labour market institutions and labour market transitions. In that case, their non-inclusion in the model will lead to omitted variables bias.

Multicollinearity occurs when one predictor variable can be linearly predicted by the others i.e. it is a linear combination of the others. In our case multicollinearity is likely to occur since labour market institutions are interrelated. Countries with high union power are also expected to have high employment protection and/or high coordination and/or a more centralised wage bargaining compared to countries with low union power. Furthermore, if a country is experiencing a fall in union power, the government might decide to strengthen the collective bargaining coverage or even introduce a minimum wage. This is precisely what happened in the last few years in Germany leading to the introduction of a national minimum wage. In the presence of multicollinearity, the standard errors of the coefficients will be too large, leading to a type II error. In the extreme case of a perfect linear relationship among the institutions (perfect multicollinearity), their effects cannot be uniquely estimated.

Another source of bias undermining the internal validity of the estimation is reverse causality. Reverse causality will occur if the labour market transitions will lead to changes in labour market institutions. This cannot be excluded since often a change in one institution e.g., unemployment benefit is the result of labour market conditions. This is the main problem of any macro analysis based on cross-country aggregate data. However, it does not constitute a problem with micro data since a change in a labour market institution cannot be the result of an individual transition.

Finally, the fundamental problem of causal inference refers to the well-known problem of the “missing counterfactual”, i.e. what would be the outcome without the specific institution in place. How can we ascertain that an observed change in a labour market status is the result of a specific institutional change? The reality is, it is impossible to know for sure. We could be certain only if we could have also observed what would be the outcome had the value of the specific institution remained the same, *ceteris paribus*. This counterfactual is by default not observable and in order to infer causality researchers either try to construct it or resort to randomized control trials (RCTs). RCTs are however impossible in our case since labour market institutions cannot be randomly assigned for political and moral reasons i.e. no government would ever exclude a random sample of a specific group from unemployment benefits to allow for robust evaluation of the impact of the institution.

To deal with these four issues this study conducts a micro event history analysis using longitudinal data. As it will be demonstrated in Section 3.2, if properly implemented, this method deals effectively with the fundamental problem of causal inference. By controlling for individual and institutional characteristics and including also fixed effects to account for unobserved time constant characteristics it aims to deal with omitted variables bias. To deal with multicollinearity I performed collinearity tests in Stata and dropped from my analysis these institutions that were found to be highly correlated with the rest. This led to the exclusion of the coordination of wage bargaining which was highly correlated with trade union power, trade union fragmentation and wage bargaining. However, coordination is explicitly captured in trade union fragmentation. The latter is operationalised as a composite indicator of (a) the Number of Union Confederations (NUCs), (b) demarcations between union confederations, (c) demarcations within union confederations in the country and (d) the power that the confederation has over its affiliates. Points (b) and (c) refer to the ability of the social partners to coordinate their decisions hori-

zontally (within a given bargaining level, e.g., across various industries) and vertically (between bargaining levels, e.g., the national, sectoral and firm-level), which is actually nothing else than the degree of coordination among the social partners. Finally, this approach deals effectively with reverse causality since labour market institutions are macro variables and thus not likely to be affected by labour market transitions and spells measured at the micro level, especially given that the latter take place one year later than the institutional change (lagged institutional variables).

3.1.2 Measurement issues

Measurement issues stem from the fact that it is difficult to quantify several labour market institutions. While this might not be the case with minimum wages and union density; laws regulating contracts, collective bargaining practices, the conditionality of unemployment benefits, the length of trials on labour disputes as well as coordination among social partners and union fragmentation are less easily and accurately quantified (Boeri and Jimeno 2005; Micco and Pagés 2006). However, as will be demonstrated in Section 3.3, the OECD has developed new, more sophisticated indices capturing different qualitative aspects of labour institutions. Furthermore, Jelle Visser in his ICTWSS database has also developed some indices capturing different qualitative aspects such as enforcement or control of trade union confederations over their affiliates. As will be analysed below, to construct my labour market indicators of interest I use and combine the OECD, the ILO NATLEX and the ICTWSS databases.

3.1.3 Modelling and estimation issues: Event history analysis vs. Panel data analysis

Researchers trying to identify causal effects on a binary dependent variable such as the employment, unemployment and inactivity status and the

transitions among them typically use panel data and estimate a multinomial probit or logit model with fixed effects. However, there are four methodological issues with this approach that led me to choose an event history method instead. Firstly, using panel data and fixed effects with a binary dependent variable is problematic when most of the units never or always experience the event, as it is the case with labour market transitions or job-to-job transitions. Many people remain in the same job for years or choose to remain outside the labour force for years. This is not a problem with event history analysis.

Secondly, as Heckman and Singer (1984) argue, labour market data are very likely to violate the temporal independence assumption i.e. the time-varying errors will not be i.i.d. over time. When the temporal independence assumption is violated, estimates from a multinomial logit/probit are not only inefficient but in some cases, they are also inconsistent. Event history methods are superior since they allow for corrections for the duration dependence.

Another problem arising with panel data and the multinomial probit/logit is that when modelling multiple events, second and subsequent events are modelled just like first events, which is highly unrealistic. Subsequent job episodes at later points in the life course are likely to be longer and more stable than the first one (Heckman and Singer 1984). Event history models can directly control for that.

Finally, panel estimates are particularly sensitive to the length of the time interval relative to the speed of the process (Coleman 1981). The fact that the observational period in my analysis will be continuous (data are collected retrospectively as opposed to a panel dataset) ensures that there are fewer unobserved confounding factors occurring between waves that could lead to biased estimates.

Apart from the aforementioned methodological issues, from a conceptual, intuitional point of view, event history analysis will be much more insightful and illuminative than a panel data analysis for the purposes of this study. This is because it enables me to examine not simply employment, un-

employment and inactivity states but instead events i.e. transitions among these states as well as their durations. This will allow me to thoroughly understand the dynamics of the different labour markets and spells and how the different institutional configurations impact on them. Consider for example a simple process with two states: employment and unemployment. And let us further assume that a specific labour market institution increases the probability of moving from unemployment to employment ($U \rightarrow E$) but also increases the probability of moving from employment to unemployment ($E \rightarrow U$). In a logit/probit model of the probability of being employed the estimated coefficient will only tell the net effect of these two directional effects, it will not tell the effect on each possible transition. Thus, if the positive effect on $U \rightarrow E$ offsets the positive effect on $E \rightarrow U$, the net effect of the labour market institution will be zero. On the contrary, events history analysis distinguishes and yields both effects. Furthermore, in labour markets with high mobility an individual who is employed (or unemployed) in two consecutive panels might experience several employment and unemployment episodes in between. This is particularly the case for the UK as will be demonstrated below. In that case a simple multinomial probit/logit would yield misleading results focusing solely on the status (employed/unemployed) and neglecting for instance the high mobility and labour turnover in the UK as opposed to the low mobility and long, stable spells in Germany and Italy. In that sense, event history analysis constitutes a more advanced and insightful method.

Of course, we clearly do not know and are not able to measure all the causal factors affecting employment and unemployment spells and their durations; therefore this study cannot claim to make strict causal claims. Nevertheless, the use of detailed longitudinal data combined with data on macroeconomic factors and conditions and the use of an event history model with fixed and random effects can at least limit as much as possible all these factors that are likely to bias my estimates.

3.2 Methodology: an Event History Analysis

An event history is a longitudinal record of the timing until the occurrence of one or more types of events (change of state). Examples include employment/job histories which typically include dates of any changes in job or employment status, partnership/marriage histories which typically include the start and end dates of cohabitation relationships/marriages and health histories which typically include the survival time of a patient after the occurrence of a disease or a major surgery. Event history analysis is used to examine the transitions across a set of discrete states for a specified time as well as the duration until the occurrence of an event of interest, where the duration is measured from the time at which an individual becomes exposed to the “risk” of experiencing the event. For a detailed description of the method see Blossfeld and Rohwer (2002) and Blossfeld et al. (2007).

Event histories are collected in a number of social surveys. In the UK for example, employment, marriage and birth histories are collected by the British Household Panel Study (BHPS). Event history data are almost always collected retrospectively and respondents are asked to recall the dates of events that have occurred since a certain age or during a fixed window of time before the interview. The potential for recall error will depend on the salience of the events to individuals and the length of the recall period. Employment histories are less prone to recall errors since the events of e.g., unemployment or job change are critical and salient.

Let me define a random variable T to represent the duration, beginning at t_0 , until a change in the dependent variable, that is, a transition from the origin state j to the destination state k , occurs. To simplify the notation, I will assume that $t_0 = 0$. Then, the following probability can be defined:

$$Pr(t \leq T < t + dt | T \geq t)$$

This is the probability that an event occurs in the time within the time interval $(t, t + dt)$ given that it has not occurred before. This probability is well defined and used to describe the temporal evolution of the process (Blossfeld et al. 2007).

This leads us to the main variable of interest, the *transition (hazard) rate*:

$$h(t) = \lim_{dt \rightarrow 0} \frac{Pr(t \leq T < t + dt | T \geq t)}{dt}$$

where the numerator is the probability that an event occurs within the time interval $(t, t + dt)$ given that it has not occurred before. This rate can be interpreted as the propensity to change the state from origin state j to destination state k at time t . It is worth noting that this is defined only in relation to the risk set at time t i.e. the set of individuals who can experience the event at t because they have not experienced it before. The *survivor function* is the probability that no event has occurred before time t .

$$S(t) = Pr(T \geq t)$$

Individuals who have not yet experienced the event are said to have “survived”. Note that S is a decreasing function of t with $S(0) = 1$ and $S(t) \rightarrow 0$ as $t \rightarrow \infty$.

The basic analytical framework comprises a state space and a time axis. The choice of the state space is crucial and the researcher should be particularly cautious to the misspecification of states. This choice depends fully on the specific research question to be addressed. For the purposes of this study, four separate state spaces will be used. The first one consists of all the (a) **job-to-job transitions** that an individual had in his working lifetime until the interview date. I define origin states as entry into a specific job and destination states as move to another job:

1. Entry into job1: origin state
2. Move to job2: destination state

3. Entry into job2: origin state
4. Move to job3: destination state
5. Entry into job3: origin state
6. Move to job4: destination state, etc.

The other three state spaces comprise labour market transitions. In particular, since individuals who leave a job do not necessarily enter into another one (they might become unemployed or stay out of the labour force), the second state space will cover (b) **transitions from employment to unemployment:**

1. Employment: origin state
2. Unemployment: destination state

The third and fourth state spaces cover (c) **transitions from unemployment to employment:**

1. Unemployment: origin state
2. Employment: destination state

and (d) **transitions from inactivity to employment:**

1. Inactivity: origin state
2. Employment: destination state

The inactivity state in this thesis is defined as those inside the labour force (i.e. of working age and capable to work) but outside the labour market, neither looking for a job nor being in education. Transitions from employment to inactivity will not be covered since almost all of them in all three countries were associated with transitions into pensions or to maternity leaves or to educational leaves, which are beyond the scope of this thesis. The number of transitions to other inactivity statuses is negligible.

This yields overall four states spaces. Clearly, the analysis would have profited from the examination of more detailed states such as full-time and part-time employment, temporary and open-ended contracts as well as self-employment. An increase in employment episodes and a decrease in unemployment and inactivity episodes is not necessarily indicative of a well-

functioning, efficient labour market, since for instance these job episodes might be precarious, referring to atypical employment of a limited period with no social security and no prospects for career advancement. Unfortunately, there were no longitudinal datasets with such information available (on type of work and contracts).

To define the time axis, one can either reset the clock at the beginning of each new episode (use job-specific labour market experience as a process time) or use a common process time where the first episode for each individual begins at time zero (use general labour market experience as a process time). I do the latter and use a continuous time-process. With this approach consecutive episodes are evaluated according to their starting and ending times on the common process time axis.

There are two issues to deal with when conducting event history analysis. Firstly, the main problem that researchers face is that of censoring. Episodes can be *left-censored* if the individual is exposed to the risk of experiencing the event before the start of the observational period. It occurs when event histories are collected retrospectively for a fixed window of time and the history is only partially observed. Left censoring constitutes a serious problem if the assumption of a Markov process (i.e. that spells are independent and thus the transition rates do not depend on the duration in the origin or other unobserved states) cannot be justified as it is clearly the case with labour market and job spells. However, this does not constitute a problem in my analysis because in all countries the observation window starts from the time of entry into the labour market up to the day of the interview and thus there are no left-censored episodes. Apart from left-censoring, there is also right-censoring. Episodes can be *right-censored* in the sense that individuals might not have yet experienced an event. For example, when examining transitions from unemployment to employment, this will be the case when the individual is still unemployed at the end of the observation period. One way of dealing with right-censored observations would be to exclude them from the analysis.

However, this approach is not recommended because it can lead to large bias. Right-censored episodes are not likely to be a random subset of the original sample; they might be for instance people who have a permanent contract e.g., civil servants and thus never exited employment or long-term unemployed individuals without formal qualifications who find it very difficult to enter employment. Therefore, I keep these right-censored episodes and identify them by the fact that their destination state equals their origin state.

The second issue to address is that of examining the effects of explanatory variables on the timing of events, and some of these variables may change value over the course of the observational period; such variables are called time-varying covariates. While one approach would be to take the value of such variables at one point in time, such as the start of the observation period, this approach is problematic, inaccurate and does not allow us to explore how the timing of an event relates to a change in the value of a covariate. Thus, in order to assess the impact of labour market institutions on individual labour market and job-to-job transitions, following Blossfeld (1986) and Blossfeld et al. (2007), I use the method of episode splitting based on the time points at which my institutions change their values. I have recoded the dates of institutional changes to century months. At all points in time at which one of the labour institutional variables changes its value, the original job episode is split into sub-episodes. For each sub-episode a new record is created containing the starting and ending times of each sub-episode, the values of all the covariates at these splitting points as well as information on whether the sub-episode ended with an event or is right censored. Each of the original episodes is replaced by a continuous set of sub-episodes (splits) with appropriate values of the covariates. The last of these splits has the same exit status as the original episode and all other splits are regarded as right censored (Blossfeld et al. 2007).

3.2.1 Piecewise constant exponential model (PCE)

Over the last 20 years, transition rate models have increasingly been used in empirical research for the analysis of event history data instead of nonparametric methods. Transition rate models are a general statistical technique through which one can analyse how the transition rate is dependent on a set of covariates.

Having defined the origin and destination states, the transition rate and the survivor function, we can now proceed to the modelling approach. The basic form of a transition rate model is:

$$r(t) = g(t, x),$$

where $g(\cdot)$ is a function of time t and the covariates x . There are several event history models that can be used to specify the function $g(\cdot)$. When choosing an appropriate model, someone has to consider the distributional assumption for the hazard rate. Non-parametric models such as Life Tables and the Kaplan-Meier estimators are frequently used in the literature because of their simplicity and the fact that they do not make any restrictive assumptions about the population parameters. Nevertheless, precisely for this reason they are not insightful. Furthermore, they are suitable only for modelling single-episode data and they also do not allow for the control of time-dependent covariates. On the other hand, parametric models are more insightful but they require full specification of the overall shape of the hazard rate in advance, which in turn requires a solid theoretical rationale for it. The assumption of exponentially distributed transition rates, for example, implies a constant hazard, while distributions such as the Weibull and gamma imply monotonically increasing or decreasing hazards. An interesting alternative strategy developed to analyse multiple episodes is to specify only a functional form for the effect of the covariates, but leave the shape of the transition rate as unspecified as possible. Such models are known as semi-parametric models. Semi-parametric models are particularly helpful when researchers are not in a position to measure and

include important time-dependent covariates explicitly or when they do not have a clear idea about the form of the time dependence of the process. The most widely applied semi-parametric model is the proportional hazards model proposed by Cox (1972), broadly known in the literature as Cox model, in which:

$$r(t) = \exp(\beta' \chi) = r_0(t) \exp(x(t)\beta) \quad (1)$$

The transition rate, $r(t)$, is the product of an unspecified *baseline rate*, $r_0(t)$, and a second term specifying the impact of a covariate vector $x(t)$ on the transition rate. It is called *proportional hazard model* exactly because the effect of the time-dependent covariates is proportional i.e. they can only induce proportional shifts in the transition rate but they cannot change its shape. Therefore, the Cox model should only be used if this proportionality assumption is justified. Given that this is a quite stringent assumption, one option is the episode splitting method described above i.e. to split the time axis into sections within which the proportionality assumption is plausible. This yields the piecewise constant exponential model (PCE), a modified version of the standard exponential model. The modification comes from splitting the time axis into time periods and assuming that transition rates are constant within each of these intervals but can change between them. The basic idea underlying the PCE model is that the duration time is divided into discrete time intervals in each of which the hazard rate is assumed to be constant across time. The PCE was first introduced by Tuma (1980) and is estimated through maximum likelihood (MLE).

As a robustness check against potential bias from unobservable characteristics I included fixed and random effects in my model following the approach of Allison (2009). Fixed effects were not included in my initial model as this would have impeded the estimation of the effect of time-constant variables such as sex. Nevertheless, when fixed effects were added as a robustness check, the results did not change substantively, which is reassuring.

To introduce random effects equation (1) may be generalised to:

$$r(t; x_i, u_i) = r_0(t)u_i \exp(\beta' \chi_i) \quad (2)$$

where u_i is the random effect or frailty for i . In (2) frailty acts multiplicatively on the hazard. Because the hazard function must be greater than zero, u_i must be a positive quantity. For this reason, and for mathematical convenience, is most often assumed to follow a gamma distribution with mean 1 and variance $\sigma^2 u$ (see Hosmer and Lemeshow 1999, Chapter 9, for a detailed discussion of proportional hazards models with gamma frailty).

3.2.2 Control variables

“Everything should be made as simple as possible, but not simpler.”
—Albert Einstein

My main independent variables of interest are the following five labour market institutions:

1. employment protection legislation (EPL)
2. the wage bargaining system
3. the unemployment benefits system
4. trade union power
5. trade union fragmentation

In the model I use lagged values for all these independent variables since I do not expect an institutional change to affect immediately transition rates but with a one year lag. In that way I also deal with reverse causality. Apart from the labour market institutions which constitute my main variables of interest, I further control for time constant as well as time varying individual characteristics (labour market experience, age, highest educational qualification obtained, sex, civil status and region) and country-specific economic indicators (unemployment rate, GDP per capita). In the pooled datasets chapter (Chapter 7) I also control for interactions among institutions since the theory predicts substantial institutional complementarities.

3.2.3 Estimation

If there are K time periods, then the piecewise constant transition rate is defined by K parameters. To estimate the effects of the labour market institutions I assume that these can vary across periods but the covariates have the same proportional effects in each period. In order to estimate the PCE model in Stata (since there is no built-in command) I first split episodes. If there are L time periods, the piecewise constant transition rate is defined by L parameters (splitting points τ_i):

$$0 = \tau_1 < \tau_2 < \tau_3 < \dots < \tau_L, \text{ with } L \text{ time periods: } l = 1, 2, \dots, L$$

Given these time periods, the transition rate from a given origin state to a destination state k is:

$$r(t) = \exp(\alpha_1 + A(\tau) + \alpha)$$

where α_1 is a constant associated with the 1st time period, whereas $A(\tau)$ is a vector of covariates and α is a constant that does not vary across time periods.

This model is estimated by Maximum Likelihood. Generally, there is no rule for the appropriate number of periods to be chosen. However, as Blossfeld et al. (2007) demonstrate, there is a trade-off in the choice of time intervals for episode splitting: “If one chooses a large number of periods, he will get a better approximation of the unknown baseline rate but this implies a large number of coefficients to be estimated. Alternatively, if one chooses a small number of periods, there are fewer estimation problems but there is a poorer approximation of the baseline rate” (Blossfeld et al. 2007, 118). A practical concern is that there should be at least some events taking place within each time period otherwise the model cannot be estimated. Therefore, I decided to split periods based on two criteria: the mean duration of episodes with an event occurring and the time at which the time-varying labour market institutions change their values.

3.3 Data and Operationalisation of Concepts

For the purposes of this study it would have been ideal to use one dataset with longitudinal data on labour market histories for all three countries. Unfortunately, such a cross country longitudinal dataset does not exist. Both the EU-LFS and the EU-SILC do not contain panel or event history data but repeated cross-sectional data. Therefore, I had to unavoidably use three different national datasets. This of course generates some problems, the main one being that the three datasets differ with regards to their construction, measurement and variables, rendering a comparative analysis cumbersome (although not impossible as will be demonstrated in Chapter 7).

Individual labour market histories have been employed from the German Socioeconomic Panel (GSOEP), the British Household Panel Survey (BHPS) and the Survey “Famiglia e soggetti sociali” of the Italian National Institute of Statistics (ISTAT). For the purposes of this study I have restricted the time span to 1990–2009 in all three countries. This was done in order to have fully homogeneous data for Germany (post-unification period) and to exclude the influences and the impact of the financial crisis on labour market transitions. In all of my datasets there are no left-censored episodes because all employment histories were collected retrospectively since the entrance into the labour force.

To control for the different economic conditions and macroeconomic indicators, I use data from the Eurostat and the OECD Database. For the labour market institutions and policies, I combine data from the OECD Employment Database,⁴ the ILO NATLEX Database,⁵ and the ICTWSS Database,⁶ developed by Jelle Visser at the Amsterdam Institute for Advanced Labour Studies (AIAS). The OECD Employment Database contains several

⁴ <http://www.oecd.org/els/emp/employmentdatabase-labourmarketpoliciesandinstitutions.htm>.

⁵ http://www.ilo.org/dyn/natlex/natlex4.home?p_lang=en.

⁶ <http://www.uva-aias.net/en/ictwss>.

indicators on labour market policies and institutions for the period 1985–2017. The ILO NATLEX Database contains a comprehensive record of all the pieces of legislation in the field of labour markets and social security for over 190 countries. The two main problems with this database are that firstly, it is descriptive (not indicator-based) and secondly, it does not capture the degree of the law enforcement. Thus, it depends on the individual researcher to use the information in the two datasets for the creation of indicators and to also complement them with other datasets. The ICTWSS Database contains indicators for several qualitative aspects of the labour market and the industrial relations system that are not covered in either the OECD or the ILO NATLEX Databases. More precisely, it provides information on the institutional characteristics of trade unions, wage settings, State Intervention and Social Pacts in 51 countries between 1960 and 2014. Finally, the World Bank “Doing Business” Database provides scores for regulations hampering a business-friendly environment, with an attempt to capture also information on enforcement. Within the Doing Business framework, this Database includes as well a number of indicators concerning labour market regulations for 85 countries. Nevertheless, the time span of the Database is relatively short, starting only in 2003. Thus, I could not use it for the construction of my indicators.

3.3.1 Operationalisation of labour market institutions

1. For the **employment protection legislation** I use the OECD index which measures the procedures and costs involved in dismissing individuals or groups of workers and the procedures involved in hiring workers on fixed-term or temporary work agency contracts. It is based on 21 different items (both de jure and de facto) and comprises three indices: the individual dismissal of workers with regular contracts; the additional regulations for collective dismissal and the index for temporary employment. I have created the indicator for regular contracts (EPR) as a weighted average of the first two indexes, with weights re-

spectively of $\frac{5}{7}$ and $\frac{2}{7}$. I have then created a separate indicator for temporary contracts (EPT).

2. With regards to the **wage bargaining system**, there have been several indicators developed over time. The first measure of wage centralisation was created by David Cameron (1984). Cameron aimed to capture “the scope of collective bargaining, ranging from restrictions on collective bargaining on the one hand to economy-wide bargaining on the other” (Cameron 1984, 164). This resulted in an index ranging from 0 to 1 which was widely used by comparative political economists in the 1980s, and it became a useful basis for future indicators. In the late 1980s, Lars Calmfors and John Driffill created a rank ordered centralisation measure based on the degree of coordination within central organizations of business and labour and the degree of cooperation between such organizations. In the 1990s the Calmfors-Driffill indicator was the most widely used by economists interested in wage-setting arrangements and their effects. Nevertheless, both the Cameron and Calmfors-Driffill measures are time invariant, and thus not helpful for the purposes of this study.

For the purposes of this study the indicator I constructed is a weighted average of the bargaining level and the coverage of collective agreements. Both indices are obtained through the ICTWSS database and equal weights of $\frac{1}{2}$ are applied. The indicator for the bargaining level developed by Visser in the ICTWSS is on a 1–5 scale index with 5 indicating bargaining predominantly taking place at the national level with government-determined binding ceilings, while 1 indicating fragmented wage bargaining predominantly taking place at the plant/company level:

5 = economy-wide bargaining, based on a) enforceable agreements between the central organisations of unions and employers affecting the entire economy or entire private sector, or on b) government imposition of a wage schedule, freeze, or ceiling
4 = mixed industry and economy-wide bargaining: a) central organisations negotiate non-enforceable central agreements (guidelines) and/or b) key unions and employers associations set pattern for the entire economy
3 = industry bargaining with no or irregular pattern setting, limited involvement of central organizations and limited freedoms for company bargaining
2 = mixed industry- and firm-level bargaining, with weak enforceability of industry agreements
1 = none of the above, fragmented bargaining, mostly at company level

Source: ICTWSS.

The indicator for the coverage of collective agreements is simply a percentage. A higher level of the overall indicator of wage bargaining suggests a more centralised wage bargaining and/or higher coverage of collective agreements. I had initially included a separate indicator for the coordination to test as well the VoC which contends that coordination is a functional equivalent for wage centralisation. Coordination was the focus of Colin Crouch's 1985 indicator of "industrial relations system". This coordination has been extended and used by several scholars including David Soskice, Richard Layard, Stephen Nickell, and more recently by Peter Hall and Robert Franzese. However, this indicator was highly collinear with my other institutional variables and in particular, trade union power and trade union fragmentation and thus I had to exclude it from the analysis.

3. The power resource approach used trade union density to gauge the power of trade unions (Bradley et al. 2003; Korpi 1989; Korpi and Palme 2003). According to this approach, unions with larger membership are expected to be stronger, and are in turn expected to be better able to protect existing employment protection regulations. Nevertheless, this thesis argues that trade union density is an inadequate measure of trade

union power as it fails to explain why in countries like Italy and Germany with low trade union density, unions play still a pivotal role. For this reason, I construct instead a more comprehensive indicator of **trade union power** as a weighted average of three indices: (a) **trade union density**, (b) **the involvement of trade unions in economic decisions and social policy** and (c) **industrial action**. For trade union density I use the OECD index, defined as the percentage of the labour force who are trade union members. The involvement of trade unions in economic and social policy is operationalised through an ICTWSS index ranging from 0 to 2, with 0 indicating rare or absent involvement; 1 indicating irregular and infrequent involvement while 2 indicating regular and frequent involvement. Finally, with regards to industrial action, there are two common indicators used to operationalise it: the number of working days lost in a year due to industrial action and the number of workers involved in industrial action. However, a cross-country comparison cannot be based on these two indicators due to differences in country sizes, labour forces and economic activities. Therefore, I use an alternative standardised ILO measure i.e. the number of days not worked per 1.000 workers. For this measure the numerator and denominator have the same coverage. For example, if agriculture is excluded from the coverage, the figure for the total number of workers also excludes agriculture. Similarly, if self-employed workers are excluded from the coverage, they are also excluded from the total number of workers. Thus, my final indicator is a weighted average of these three indices and after rescaling, it ranges from 0–1, with 0 indicating very low union power and 1 high union power.

4. **Trade union fragmentation** is operationalised as a weighted average of four indices all by the ICTWSS Database: (a) the Number of Union Confederations (NUCs); (b) the index of external demarcations i.e. demarcations between union confederations (**Deme**); (c) the index of in-

ternal demarcations i.e. demarcations within union confederations (**Demi**) and (d) an index for the power that the confederation has over its affiliates (**cfveto**). Both Deme and Demi take values between 1 and 2 with 1 indicating no cleavages, 1,5 indicating moderate (occupational, regional, linguistic, religious) cleavages and limited competition while 2 indicating sharp (political, ideological, organisational) cleavages associated with conflict and competition. Cfveto takes values from 0–2, with 0 indicating that the confederation has no power over its affiliates while 2 indicating that all strikes need prior approval from the confederation. All four indices are obtained through the ICTWSS database and equal weights of $\frac{1}{4}$ are applied. A higher level of the index indicates higher trade union fragmentation. The final indicator for union fragmentation after rescaling takes values ranging from 0–1, with 0 indicating the lowest fragmentation and 1 the highest. It is worth noting that the effect of trade union fragmentation in the UK cannot be estimated since the indicator has remained constant throughout the whole 20-year period examined.

5. Finally, when examining the effect of the **unemployment benefits system** on labour market transitions, one has to take into account the following aspects of it: the level (replacement rate); the duration, the conditionality/activation based on job search, participation in active labour market programs, demands on occupational mobility and demands on geographical mobility; as well as the strictness of sanctioning in case of non-compliance with conditionality. The literature so far has only examined the effects of changes in only the first two elements i.e. the replacement rate and the duration. This is mainly due to the fact that the other aspects are not easily quantifiable and also conditionality and sanctioning can only be captured de jure, not de facto. Any attempt to quantify them is highly susceptible to measurement error and erroneous conclusions.

Thus, for the purposes of this study I construct an indicator for the **unemployment benefits system** measured as a weighted average of three indices: the replacement rate, duration and activation. The data for both the level and the duration are obtained through the OECD Tax and Benefits Database.⁷ The latter provides data on the replacement rates and the duration across different earnings levels, family situations, employment contributions and unemployment durations. The replacement rate is measured as percentage of the wage in the previous job. Duration is measured in months. With regards to activation, I have constructed an own measure of activation as a weighted average of three further indices: (a) Public Employment Services (PES), (b) Direct Job Creation and (c) Training for the unemployed. Data are obtained through the OECD Labour Market Programmes (LMPs) Database. All three indicators are measured both through public expenditure on the respective LMP as a percentage of GDP and through stock participants as a percentage of those in the labour force excluding the employed. I use activation instead of conditionality due to the inherent difficulty to disentangle between de jure and de facto conditionality. My measure of activation captures both the supply side of activation (total expenditure) as well as the demand side (number of participants).

OECD (2013) defines PES as the authorities that connect jobseekers with employers. In particular, PES offer placement and related services such as information services on work opportunities, training and active labour market policies, counselling and case management of jobseekers, job brokerage and related services for employers. PES are also often occupied in the unemployment benefit administration. Direct job creation programmes create additional jobs usually in the public or non-profit sector for the long-term unemployed or persons otherwise difficult to activate. However, if not well de-

⁷ <http://www.oecd.org/social/benefits-and-wages.htm>.

signed, these programmes may result in wasteful spending of public money, particularly if the subsidised jobs would have been created/maintained anyway (deadweight loss), or if the subsidies simply induce employers to hire/keep certain workers instead of others (displacement effects). They may also reduce productivity to the extent that they create incentives for companies to substitute more productive workers with less productive ones. For these reasons, direct job creation was heavily employed only immediately after the crisis to alleviate its social impact but today it is avoided or confined only to those workers who are difficult to find a job. Finally, training for the unemployed comprises four different types of training:

- *Institutional training* refers to programmes where most of the training time (75% or more) is spent in a training institution (school/college, training centre or similar).
- *Workplace training* refers to programmes where most of the training time (75% or more) is spent in the workplace.
- *Alternate training* (formerly called Integrated training) refers to programmes where training time is evenly split between a training institution and the workplace.
- *Special support for apprenticeship* refers to programmes providing incentives to employers to recruit apprentices from labour market policy target groups, or training allowances for particular disadvantaged groups.

All these four types are captured within the indicator for training.

Table 3.1 presents a summary of all five institutions in 2016 (latest available data) for the 3 countries. As the Table demonstrates both Germany and Italy are characterized by high employment protection for those in open-ended (regular) contracts and low protection for those in temporary contracts, a phenomenon broadly known as dualisation. The UK on the other hand has very low levels of employment pro-

tection. Italy and Germany have also sectoral wage bargaining although the former has a much higher coverage of collective agreements (80% as opposed to 56%, respectively). The UK on the other hand has a decentralised wage bargaining, predominantly taking place at the company level in the private sector. Germany is characterized by low trade union power and low fragmentation, in stark contrast to Italy which has high both trade union power and trade union fragmentation. The UK stands between the two, with intermediate trade union power and low trade union fragmentation. Finally, with regards to the unemployment benefits system, as the Table suggests, Italy has the most generous system, followed by Germany and then by the UK. More precisely, in Germany the replacement rate for a single person without children is 60% of previous earnings net of tax and social security contributions and 67% for a worker with at least one dependent child. In Italy, NASpI grants 75% of previous earnings net of tax and social security contributions and the benefit decreases by 3% each month starting from the fourth month. In the UK on the other hand there is a weekly flat rate of £73,10. To be eligible for the benefit, Italy requires 13 weeks of contributions in the last 4 years whereas both Germany and the UK require 12 months of contributions in the last 2 years. The maximum duration of the benefit is high in both Italy and Germany (2 years) and very low (6 months) in the UK. After the maximum period however, all 3 countries now offer unemployment assistance for the long-term unemployed. There are also remarkable differences with regards to activation with Germany spending relatively more, whereas both Italy and the UK devote a negligible amount of their GDP on activation.

TABLE 3.1. Labour market institutions by country in 2016

Institutions	Germany	Italy	UK
<i>Employment protection legislation</i>	High (EPR = 2,68, EPT = 1,13) Dualisation	High (EPR = 2,76, EPT = 2) Dualisation	Low (EPR = 1,26, EPT = 0,38) Deregulation
<i>Wage bargaining system</i>	Sectoral with intermediate coverage of collective agreements (56%)	Sectoral with high coverage of collective agreements (80%)	Decentralised (company-level at the private sector), low overall coverage of collective agreements (26,3%)
<i>Trade union power</i>	Low (union density: 17%; 102.360 working days lost due to industrial action; irregular and infrequent involvement of trade unions in social policy and economic decisions)	High (union density: 35%; 226.375 working days lost due to industrial action; regular and frequent involvement of trade unions in social policy and economic decisions)	Intermediate (union density: 25%; 170.000 working days lost due to industrial action; no involvement of trade unions in social policy and economic decisions)
<i>Trade Union fragmentation</i>	Low	High	Low
<i>Unemployment benefits</i>			
Replacement rate (for a single person without children)	60% (67% for a person with children)	75%	Weekly flat rate of £73,10
Eligibility	12 months of contributions in the last 2 years	13 weeks of contributions in the last 4 years out of which at least 30 working days in the last 12 months	12 months of contributions in the last 2 years
Duration (maximum)	24 months	24 months	6 months
Activation	Intermediate (0,36% of GDP spent on PES; 0,20% of GDP spent on training for the unemployed; 0,01% of GDP spent on direct job creation and 0,63% of GDP spent on total ALMPs)	Low (0,10% of GDP spent on PES; 0,17% of GDP spent on training for the unemployed; 0% of GDP spent on direct job creation and 0,51% of GDP spent on total ALMPs)	Low (0,20% of GDP spent on PES; 0,01% of GDP spent on training for the unemployed; 0,01% of GDP spent on direct job creation and 0,23% of GDP spent on total ALMPs)

Source: Own indicators, based on OECD, ICTWSS, ILO NATLEX, Federal Employment Agency (BA) and UK Office for National Statistics (ONS).

3.3.2 Individual characteristics and the three national datasets: ISTAT dataset, BHPS, and GSOEP

3.3.2.1 ISTAT Dataset: “Famiglia e soggetti sociali”

The survey “Famiglia e soggetti sociali” is part of the broader survey “Multiscopo sulle famiglie” conducted by the National Institute for Statistics (Istat). It covers approximately 20.000 households and 40.000 individuals. This is an event history dataset and the survey was conducted retrospectively in 2009. It contains full labour market and job histories as well as individual characteristics for gender, age, education and civil status. However, it does not contain data on the type of contract (open-ended/temporary, full-time/part-time) and sector. I have restricted the sample only to those inside the labour force between 18 and 65. My final dataset consists of 26.190 individuals who experience in total 39.974 job losses. The maximum number of job episodes in a life course of an individual in the sample is 9, however this is quite rare (only 0,61% of the sample).

3.3.2.2 British Household Panel Survey (BHPS)

The British Household Panel Survey (BHPS) was a longitudinal study carried out by the Institute for Social and Economic Research (ISER) at the University of Essex from 1990 until 2009 (waves 1–18). As from 2009, the BHPS became part of a new longitudinal study called Understanding Society, conducted as well by the ISER. To construct my work-life event history dataset I use the job-spell files `newpan` and `xljobe` and combine them with socio-economic individual characteristics obtained from the respective waves of the survey. My dataset consists of 8.040 individuals who experience in total 35.913 job losses. By default, the number of subjects is much lower than the one in a standard BHPS wave since I had to identify respondents for which there is complete labour market and job history and socio-economic information without any gaps in reported work-life histories. Furthermore, as in the

case of Italy, in order to construct my risk set, I have excluded from the dataset those outside the labour force. In stark contrast to Italy where the maximum number of job episodes that an individual had in his life course was 9, in the case of the UK the maximum number of job episodes is 17 indicating much larger job mobility.

3.3.2.3 *German Socioeconomic Panel (GSOEP)*

The GSOEP started in 1984 as a longitudinal survey of private households and persons in the Federal Republic of Germany. It constitutes the longest-running longitudinal study in Germany, starting with 6.000 households in 1984 and now including more than 12.000 households today. I construct my dataset using the files BIOJOB and PBIOSPE which contain detailed occupational biographies and combine them with individual socioeconomic characteristics from the core files. Furthermore, to examine solely the post-unification period and to obtain the same coverage with the ISTAT and the BHPS I have again restricted my dataset to the period 1990–2009 and to those 18–65 years old inside the labour force. This final dataset consists of 52.227 individuals who experience in total 100.636 job changes. The maximum number of job episodes that an individual had in his life course is 13 while the maximum number of unemployment episodes is 10. On average, during his life course an individual in Germany experiences 3 job episodes, as opposed to the 2 job episodes in Italy and the 5 job episodes in the UK.

Table 3.2 presents the number of job episodes obtained in the individual life course in all three countries. The Table demonstrates that the UK has the highest number of job episodes, followed by German and then Italy. More precisely 50% of the sample in Italy had only one job in their life course, as opposed to 6% of the sample in the UK who only had one job episode. The median number of jobs in the UK sample is 3, corroborating the evidence on the UK as a highly dynamic labour market.

TABLE 3.2. Number of job episodes accumulated in the life course in Italy, the UK, and Germany

Job episodes	Percentage of individuals in the sample		
	Italy	Germany	UK
1	49,41	38,12	5,79
2	27,92	31,51	14,17
3	12,06	15,97	17,60
4	5,5	7,56	17,33
5	2,37	3,76	13
6	1,19	1,65	10
7	0,64	0,81	6,97
8	0,32	0,33	4,86
9	0,61	0,15	3,43
10	NA	0,07	2,24
11	NA	0,04	1,54

Source: ISTAT, BHPS, and GSOEP; own calculations.

Note: NA = not applicable.

Finally, Tables 3.3 and 3.4 present the cumulative density functions for the duration of all employment and unemployment spells that individuals had in their life course. In particular, we can see that 50% of the individuals in the UK sample had employment spells with a maximum duration of 22 months whereas in Italy and Germany they had employment spells with a maximum duration of 30 and 60 months, respectively. With regards to unemployment spells, 50% of the individuals in the UK sample had unemployment spells with a maximum duration of only 4 months whereas in Italy and Germany these had a maximum duration of 24 and 12 months, respectively. Overall, Tables 3.3 and 3.4 suggest that Italy has been characterized by very long unemployment spells and Germany by very long employment spells whereas the UK is remarkably more mobile.

TABLE 3.3. Duration of employment spells (measured in months) in Italy, the UK, and Germany

Country	Percentage of individuals in the sample					
	10%	25%	50%	75%	90%	99%
Italy	3	10	30	71	137	311
UK	2	8	22	59	130	204
Germany	1	12	60	180	372	528

Source: ISTAT, BHPS, and GSOEP; own calculations.

TABLE 3.4. Duration of unemployment spells (measured in months) in Italy, the UK, and Germany

Country	Percentage of individuals in the sample					
	10%	25%	50%	75%	90%	99%
Italy	3	6	24	68	153	422
UK	0	1	4	11	22	113
Germany	2	3	12	24	60	168

Source: ISTAT, BHPS, and GSOEP; own calculations.

“An object at rest will remain at rest unless acted upon by an external force.”

—Newton’s 1st Law of Motion

“The greater the mass of the object, the greater will be the force required to change its motion.”

—Newton’s 2nd Law of Motion

“To every action there is an equal and opposite reaction.”

—Newton’s 3rd Law of Motion

4.1 Introduction: From the Treu Package to the Jobs Act

Against the broadly accepted epistemological view that the laws of natural sciences cannot be applied unaltered to social sciences, the history and evolution of the Italian labour market in the last 3 decades could be adequately described by the 3 Newton Laws, falsifying the seminal contribution of Wilhelm Dilthey. In the last 30 years the Italian labour market underwent 5 main labour market reforms, each of them causing a biggest reaction and opposition than the previous one. Yet, it was only after the Jobs Act that it has started showing signs of real change.

Following the financial crisis of 1992 and the sizeable devaluation of the Italian lira, tripartite agreements between the government and social partners led to the abolition of the automatic mechanism of wage indexation (*Scala mobile*) and the reform of the framework for collective bargaining in order to accommodate for sectoral combined with firm wage bargaining. The second major labour market reform dates back to 1997 and focused mainly on employment protection. It was the law no. 196 of 1997 (the so-called “Treu

Package”) put forward by the Labour Minister Tiziano Treu of the Prodi government. The reform introduced temporary work and on-the-job training by focussing mainly on apprenticeship and temporary work via private agencies and intra-regional mobility. It also reduced disincentives to the use of fixed-term contracts. The goal was to promote employment in Italy by providing different types of flexible work contracts, especially for the young and the economically lagging regions in the South (Mezzogiorno).

With law no. 30 of 2003, the so-called “Biagi Law”, named after labour lawyer Marco Biagi who drafted the White Paper on which it was based, and enacted by the centre-right government of Silvio Berlusconi, new forms of flexible work were introduced. These included mainly the job on call (*lavoro intermittente*), job-sharing (*lavoro ripartito*) and the project-based contract (*contratto di collaborazione a progetto*). The Biagi Law also facilitated the use of part-time employment.

With both the Treu and the Biagi reforms the government introduced flexibility at the margin, without altering the employment protection of the insiders i.e. those with regular open-ended contracts. This exacerbated the dualism of the labour market. However, while all social partners agreed to the Treu reform, the adoption of the Biagi law followed a long confrontation between the government and the unions, especially CGIL, as these new forms of work drastically limited workers’ rights, by not providing for holidays, sick leave, maternity leave and days off.⁸

The fourth major reform of the labour market was implemented by law no. 92 of 2012, the so-called “Monti-Fornero reform” put forward by the Monti government and the Labour Minister Elsa Fornero. This ambitious law had three main objectives: (a) limiting the widespread abuses of atypical work contracts; (b) liberalizing individual lay-offs for economic reasons and (c) in-

⁸ The architect of the Biagi law, Marco Biagi, was murdered in 2002 outside his home in Bologna by members of the Political-Military Communist Party PCPM (*Partito Comunista Politico-Militare*) linked to the Red Brigades, due to his role in the reform.

roducing a more comprehensive and effective system of unemployment benefits. To limit the abuses of atypical work contracts, the hiring of an employee on a fixed-term basis was limited to a maximum period of 36 months including all renewals and extensions. In case a fixed-term contract was declared unlawful, the employment relationship would be considered indefinite and the employee would receive a comprehensive compensation of between 2,5 up to 12 months of his or her previous wage. The waiting period between 2 consecutive fixed-term contracts for the same employee was extended to 60 days (previously it was 10) in case of contracts lasting less than 6 months and to 90 days (previously it was 20) in case of contracts lasting more than 6 months. The conditions for the use of job-on-call were restricted with the exception of employees between 24 and 55 years old. Finally, an increase of 1,4% of social costs was imposed to fixed-term contracts, partly recoverable if the employee was eventually confirmed on a permanent basis.

Concerning individual dismissals, in the case of dismissals due to economic hardship, prior to the reform, Article 18 allowed for the annulment of dismissals and the reinstatement of the employee in the workplace, for companies with more than 15 employees. The “Fornero Reform” replaced the reinstatement clause for individuals by a severance pay, based on the age of the worker and the years of service.

The Monti-Fornero reform revisited as well the whole unemployment benefit scheme and introduced 2 new unemployment insurance schemes: the so-called ASpI and mini-ASpI for employees who involuntarily lose their jobs. The ASpI substituted previous unemployment benefit schemes and covered employees, apprentices and people who work in cooperative. ASpI did not cover civil servants with open-ended contracts, journalists and agricultural workers. Eligible workers must have been involuntary unemployed and had made contributions of at least 2 years in total and at least 1 year of contributions two years prior to the beginning of the period of unemployment. For workers who do not meet the ordinary requirements, an allowance called mini-

ASpI was also introduced. Mini-ASpI replaced the reduced requirements unemployment benefits (*sussidio di disoccupazione a requisiti ridotti*) and its provision depended on having concluded at least 13 weeks of work over the last 12 months. Nevertheless, people with no work in the last 12 months remained not covered from social safety nets. And despite the restriction of the use of atypical contracts, its use remained widespread and its recipients excluded from social security.

Nevertheless, the Monti-Fornero reform and especially the abolition of Article 18 generated a large reaction from the trade unions. The latter was only enacted in 2015 by the newly elected Renzi government. This government brought a real change in the labour market through the 5 major reforms of the Italian labour market, Act no. 183 of 10 December 2014, the so-called “Jobs Act”. The Jobs Act, adopted in 2014 and implemented in 2015 (a) reduced employment protection legislation for permanent contracts, (b) abrogated the different contractual forms introduced by the Biagi Reform and introduced instead a single open-ended contract with increasing protection, (c) introduced social safety nets for those not covered by ASpI and mini-ASpI and (d) initiated a broad reform of public employment services (PES) and active labour market policies bringing the Italian labour market closer to the labour flexibility model.

The new unemployment benefit scheme NASpI22, which entered into force as of 1st May 2015, replaces both ASpI and mini-ASpI introduced by the Fornero reform, thus harmonising the different eligibility requirements and durations and linking benefits to activation policies. Moreover, to further support the use of the new single open-ended contract, the government also granted an exemption from social security contributions paid by employers for three years on all new permanent contracts signed in 2015 (up to EUR 8.060). Finally, the reform reduced administrative costs for firms and included measures to promote work-life balance by extending to self-employed women the opportunity to take advantage of parental leave. The objective was to in-

crease flexibility and enhance labour reallocation but at the same time reduce duality, promote stable open-ended employment and ensure that nobody falls below the safety net. Although beyond the scope of this thesis which covers only the period 1990–2010, the reform has been well perceived at the EU level (European Commission 2017a) and positive effects are already emerging, as employment is growing and dualism is reducing. Administrative data from the Istituto Nazionale Previdenza Sociale (INPS) and the Ministry of Labour confirm that the number of new hires on open-ended contracts increased significantly in 2016. In the longer-long term, the reform is expected to deliver economic gains: simulations using the QUEST model of the European Commission show that the reform of the legislation on dismissal for permanent contracts could increase GDP over baseline by 0,1% by 2020 and by 0,5% in the long term (European Commission 2016, 18–19). This is expected to take place through an increase in productivity while employment will remain broadly stable, consistently with the literature.

However, despite the gradual improvement of the labour market supported by the reform, long-term and youth unemployment remain high (6,7% and 38% respectively in 2016) and more than 1,2 million young people are not in education, employment or training (NEET). The reform of the active labour market policies is still at an early stage, adult learning is not sufficiently developed and employment services remain weak, with wide regional disparities. The participation of women in the labour market and their labour force potential remains largely underutilised. The employment rate of women is one of the lowest in the EU (50,6% for those aged 20–64 years, 20 percentage points less than for men), as does the female activity rate (54,1% in 2015, against the EU28 average of 66,8%). Available estimates suggest that increasing women's labour market participation to the level of men would increase Italy's GDP by 15% (IMF 2016; Eurofound 2016). Some features of the tax-benefit system continue to discourage second earners from participating in the labour force while access to affordable care services (for children and the elderly) remains

limited, with wide regional disparities. Paternity leave is among the lowest in the EU. Age gaps in unemployment rates are even wider with unemployment rates ranging from 11,57% in the 25–54 age bracket, to 45,5% for young people (15–24 years old) and 5,99% for the 55–64. North-South territorial gaps are the widest in Europe: employment rates in Southern Italy are at a low 42% versus an average of 64,2% in Northern Italy (European Commission 2015). Furthermore, unemployed workers take a long-time to find work: according to the same European Commission report, 50% of the unemployed have been out of work for more than one year, remarkably above the EU average. Equally concerning are inactivity rates. Italy has the largest potential additional labour force among all EU countries (13,6% in 2014 as opposed to the 4,8% of the total labour force at the EU level).

This brings us to the main questions of this chapter: what is the reason behind this low labour market performance? What have been the main institutional deficiencies of the Italian labour market? How have labour market institutions evolved over time? And how have they impacted on labour market transitions? This chapter proceeds as follows: Section 4.2 analyses the five labour market institutions of interest as well as their historical evolution throughout the whole period examined by this thesis (1990–2010). Section 4.3 presents the data as well as some descriptive statistics; while Section 4.4 presents the results from the estimation and concludes.

4.2 The Labour Market Institutional Configuration of Italy

4.2.1 Employment protection legislation

A major issue in Italy in the last three decades has been the high employment protection legislation, mainly for those with permanent and full-time contracts. Given the unions' strong resistance towards any significant deregulation of the highly protected labour market, the measures towards more flexi-

bility applied mainly towards the new entrants in the labour market. This led to stringent but also asymmetric employment protection legislation with substantial gaps in the coverage, leading to labour market segmentation, which emerged as a cleavage between older and successive labour market entry cohorts (Blossfeld et al. 2005). As Bernardi and Nazio (in Blossfeld et al. 2005, 354) demonstrate, “the older cohorts enjoyed the strong employment protection guaranteed by the regulatory measures of the 1960s–1980s, while the younger cohorts were more likely to be either unemployed or employed under non-permanent, precarious contracts”.

Despite the several EPL reforms in the last two decades, this problem not only wasn't tackled but on the contrary it was exacerbated until the Jobs Act. This is because all the reforms introduced flexibility at the margin i.e. they substantially deregulated the use of temporary and part-time contracts while maintaining stringent protection for open-ended and full-time contracts (Boeri et al. 2013; Garibaldi and Taddei 2013). This has been a common phenomenon in SMEs, where permanent contracts have represented the most common type of employment. Thus, governments were unable to obtain support for reforms that weaken dismissal rules for permanent employees and focused instead, on easing the regulations on temporary contracts (Saint-Paul 1999). As a consequence, the share of temporary employment in the total number of employees increased from less than 8% in 1998 to nearly 15% in 2015. The larger the asymmetry between employment protection legislation for temporary vs. permanent contracts, the higher the possibility that temporary contracts become a trap, rather than a stepping stone toward quality employment (OECD 2016).

4.2.1.1 Fixed-term and temporary contracts

The 1997 Treu Package introduced for the first time temporary contracts and Temporary Work Agencies and extended the use of fixed-term contracts by reducing the sanctions in the case of a violation of a fixed-term

contract. The reform was introduced in years when the Italian labour market was characterized by its highest unemployment rate (11,3%). In 2003, the Biagi law extended the use of existing atypical contracts and introduced various other “atypical” labour contracts (job on call, job sharing, project-based work, apprenticeships, part-time work). These contracts however were attached to lower social security contributions and lower pension entitlement, did not envisage any maternity or sick leave compensation, and did not allow workers to be entitled to unemployment benefits. Employment growth was strong in the aftermath of the reforms (reaching 1,4% per annum on average from 1997 to 2007) and the unemployment fell to a record low rate by 2007 (at 6,2%, nearly 1,5 percentage points below the euro area average), as the availability of new forms of employment responded to employers’ demand for flexibility. At the same time, however, labour productivity growth deteriorated dramatically, leading to strong competitiveness losses and declining GDP per capita relatively to other EU countries. These 2 EPL reforms created a dual labour market with more low-skill workers into employment and reduced incentives to invest in education and firm-specific skills (Montanino and Sestito 2003; Daveri and Parisi 2015; Rosolia and Torrini 2007). Several studies found that the 1990s reforms of EPL were the root causes of the large fall in productivity: by introducing more flexible part-time and fixed-term contracts, facilitated the entry into the labour market of less productive workers and reduced the incentives to invest in firm-specific human capital, for both employers and employees (see also Montanino and Sestito 2003; Garibaldi and Taddei 2013; Daveri and Parisi 2015). Furthermore, the increase in the demand for workers’ flexibility was not accompanied by the reform of the unemployment benefit provision. Such a reform would have seemed a natural complement of the increase in flexibility and its absence contributed to the depth of dualism in the Italian labour market (Jessoula et al. 2010; Garibaldi and Taddei 2013).

The Fornero reform of 2012 although further liberalized fixed-term contracts, tried at the same time to mitigate that and counterbalance the fixed-term contracts with some limitations. For example, after the reform there is no longer the need to justify recourse to the first fixed-term contract of less than 12 months. However, the period by which a fixed-term contract could be extended beyond its original deadline to meet organisational needs was increased, unless different rules are set by collective agreements. The maximum duration of fixed-term contracts remained 36 months (including extensions and renewals). Social contributions applied to fixed-term contracts were increased by 1,4% to contribute to the Social Insurance for Employment, partly recoverable if the employee is eventually hired on a permanent basis. The apprenticeship contract, for a minimum period of 6 months and with generous social security discounts, was strongly favoured by the reform as the main gateway to employment for young people. However, to avoid the risk of abuses, companies were allowed to hire apprentices in a ratio of 3 for every 2 new skilled employees. Also, further hirings were allowed only if a given percentage of apprentices (50%) have been confirmed as permanent employees at the end of the apprenticeship contract. Still, as mentioned above, this liberalization of employment protection applied only to atypical workers with fixed-term, temporary and part-time contracts and not to those with open-ended contracts, reinforcing dualisation.

4.2.1.2 Regular (open-ended) contracts

As opposed to fixed-term and temporary contracts, the regulations regarding individual and collective dismissals of open-ended contracts remained totally unchanged throughout the whole period examined by this thesis (1990–2010). The only substantial reform was the abolition of Article 18, 5 years later in March 2015. Article 18 has been highly controversial. Until its abolition the judge's decision in case of an unfair dismissal depended on the size of the firm. The law was highly punitive in the case of an unfair dismissal of an em-

ployee working in a business unit employing more than 15 employees or for an employer who overall employs more than 60 employees at national level: the employee could have actually claimed his job back, and was also entitled to be paid retrospectively full damages for all the salaries missed from the date of the dismissal up to the reinstatement ordered by a labour court without any cap. In case the employee refused reinstatement (typically in a situation where he had found another job in the interim of the court proceeding), he could unilaterally opt for payment of an indemnity equivalent to 15 months of his salary. This was the so-called “tutela reale” protecting employees in firms with more than 15 employees in a single plant (or 60 overall). Workers in smaller units were instead covered by the so-called “tutela obbligatoria”. The latter gave to the employer the choice between re-employment (different from reinstatement because it did not give rise to compensation for the period between the date of dismissal and the court decision) and a compensation ranging between 2,5 and 6 months depending on seniority and the size of the firm. This protection provided by the Article 18, introduced in 1970 had been a real taboo of the Italian labour law for decades and previous attempts to reform it had been vehemently opposed by the Italian unions.

The Monti-Fornero reform of 2012 rewrote Article 18. The new formulation has been regarded by many commentators not as revolutionary as originally intended (and needed), and clearly suffered the compromise reached with CGIL, the major Italian national trade union association, who strongly opposed and called for several days of national strike. Consequently, the real abolition of Article 18 was achieved only in 2015. The latter among others radically reduced the scope for reinstatement following unfair dismissals and expanded the number of cases where the sanction leads to a monetary compensation. Reinstatement now can be ordered only in case of discriminatory dismissal. It can no longer be ordered in case the dismissal is motivated by economic reasons, this cannot anymore be judged as unfair.

Figure 4.1 depicts the evolution of EPL for the period 1990–2010, separately for temporary and regular contracts. For the purposes of this thesis the OECD indicator on employment protection legislation is used. This is compiled on the basis of 21 different items with values ranging from 0 to 6, with higher values representing stricter regulation. The items are grouped in the following sub-indexes: the individual dismissal of workers with regular contracts; the additional regulations for collective dismissal and the index for temporary employment. I have created the indicator for regular contracts (EPR) as a weighted average of the first two sub-indexes, with weights respectively of $\frac{5}{7}$ and $\frac{2}{7}$. In alignment with what has been described above, the provisions for regular contracts (EPR) have remained totally constant over time since 1990 and equal to 2,76 in the OECD index, until 2010. As the figure demonstrates all the variation in the indicator over time comes from temporary contracts (EPT). The latter decreased from a high value of 4,9 in 1990 to 2 in 2010, a decrease of 60%.

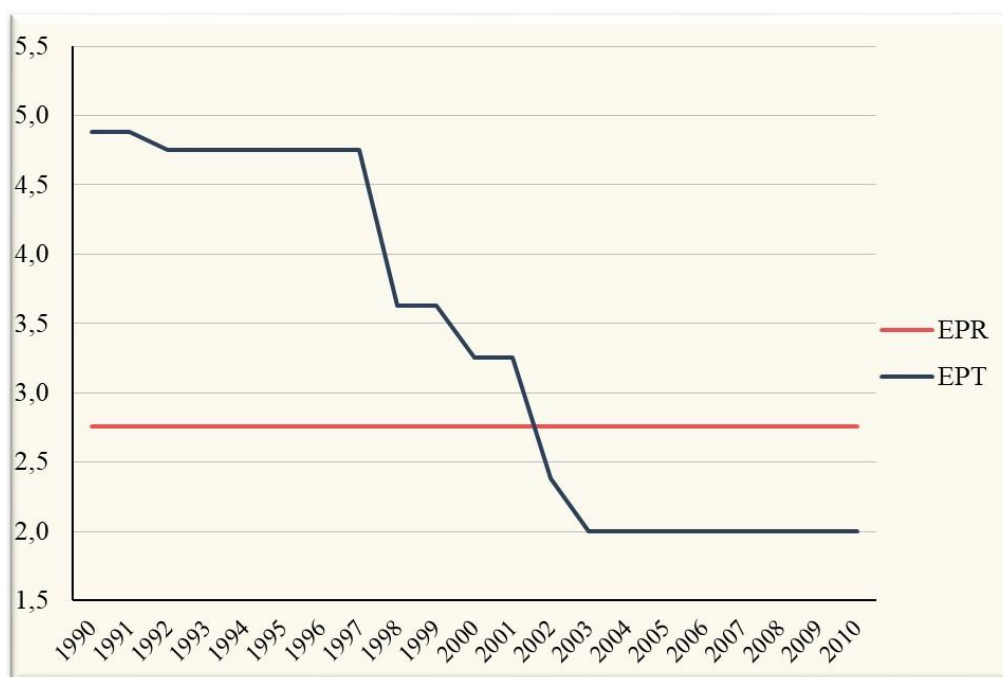


FIGURE 4.1. The evolution of employment protection legislation in Italy between 1990 and 2010

Source: OECD; own calculations.

4.2.2 Wage bargaining system

There is no national statutory minimum wage rate in Italy.⁹ Minimum wage rates are set in binding sectoral collective agreements that legally are valid only for the companies and employees affiliated to the associations that sign the collective agreement. Nevertheless, although there is no legal extension of collective agreements, in practice there is automatic extension and courts usually refer to collectively agreed minimum pay rates in order to assess the appropriateness of actual wages in individual disputes, according to Article 36 of the Constitution (Megale and Leonardi 2002). As a result, even workers who are not covered should receive wages at least equal to the minimum rates determined in collective agreements. This is why the ICTWSS database assigns to Italy a much higher collective bargaining coverage compared to the country's union density (80% and 35%, respectively). Collective agreements are usually determined for a period of four years and the provisions concerning pay levels are renegotiated every two years.

The most significant reform of the wage bargaining system in the last decades was the abolition of the Scala Mobile (automatic wage indexation) in 1992. Article 36 of the Italian Constitution states that an employee “should receive a wage proportionate to the quality and the quantity of his work and in any case sufficient to guarantee a free and decent life to him and to his family”. On the basis of this Article, the escalator clause (Scala Mobile) was introduced in 1975. According to this, for each percentage point of an increase in the cost of living (inflation as measured by ISTAT), wages were increased by a fixed amount every three months. However, this automatic indexation was broadly criticized and considered as a main obstacle to controlling rising inflation and finally it was fully abolished in 1992.

⁹ It is worth noting that a statutory minimum wage was envisaged in the Jobs Act for workers not covered by collective agreements but was finally left out of the Decree of the law due to strenuous opposition from the social partners. The issue of state interference in collective bargaining remains a “taboo” in Italy.

Another major step in wage bargaining took place one year later with the tripartite agreement of 23 July 1993 which allowed for bargaining at the company level to be combined with that at the sectoral level. After the abolition of the automatic wage indexation, the agreement of 1993 stipulated that the rate of the increase in nominal wages would be determined through tripartite consultations after taking into account both expected inflation as stated in the government's macroeconomic predictions and productivity. The idea of the reform was to move towards a two-tier bargaining system whereby sectoral agreement at national level would set the wage pace while intra-sector firm- and local level arrangements would cater for productivity growth and cross-firm differences. Still, this was not implemented in practice. The nominal wage increases were almost never connected to productivity changes but only followed anticipated inflation, leading in turn to a further rise in inflation (spiral). Furthermore, despite the demand for a shift towards decentralisation, the number of sectoral agreements remained very high (400 in 2009). A new agreement was signed on 22 January 2009 in which all three parties agreed to reduce the number of sectoral agreements. Moreover, the 2009 agreement specifies that nominal wage increases should follow an index based on consumer prices as harmonised at the European level. In this way wage negotiations will not be any more subject to political influence. However, this 2009 agreement was opposed by CGIL and was never enforced.

Today the principal and dominant level of wage bargaining is still sectoral and second-level bargaining at the company level is not broadly used. In 2016 only 20% of firms were covered by firm- or territorial-level contracts (European Commission 2016a). This hampers the efficient allocation of resources and the responsiveness of wages to local economic conditions. Further decentralisation is deemed necessary to allow wages differentials to adequately reflect the productivity differentials at regional and firm-level. This will help reduce structural unemployment and favour a better allocation of re-

sources. It would also help maintain wages dynamics more in tune with productivity dynamics, which have been substantially lower.

Figure 4.2 depicts the evolution of the bargaining system in Italy between 1990 and 2010. As explained in Chapter 2, this is operationalised through an own indicator, weighted average of the bargaining level and the coverage of collective agreements. Both indices are obtained through the ICTWSS database and equal weights of $\frac{1}{2}$ are applied. A higher level of the index indicates more centralised wage bargaining and/or higher coverage of collective agreements. Following the breakdown of the negotiated collective bargaining in 1984, industrial relations were decentralised and conducted mainly at the company level until 1992, as indicated by the low initial value of the indicator in Figure 4.2. More precisely, there was mixed industry and firm level wage bargaining with no bargaining pattern. In 1992 after a huge accumulated debt and two devaluations of the lira that led Italy to be expelled from the European Monetary Mechanism, the Scala Mobile was abolished and the unions agreed to freeze company level bargaining for 2 years to support the government's emergency program of fiscal consolidation. Thus, bargaining became much more concentrated and centralised as demonstrated by the sharp increase in the indicator below. After the recovery, the indicator remained stable and equal to 2,1 until 2010.

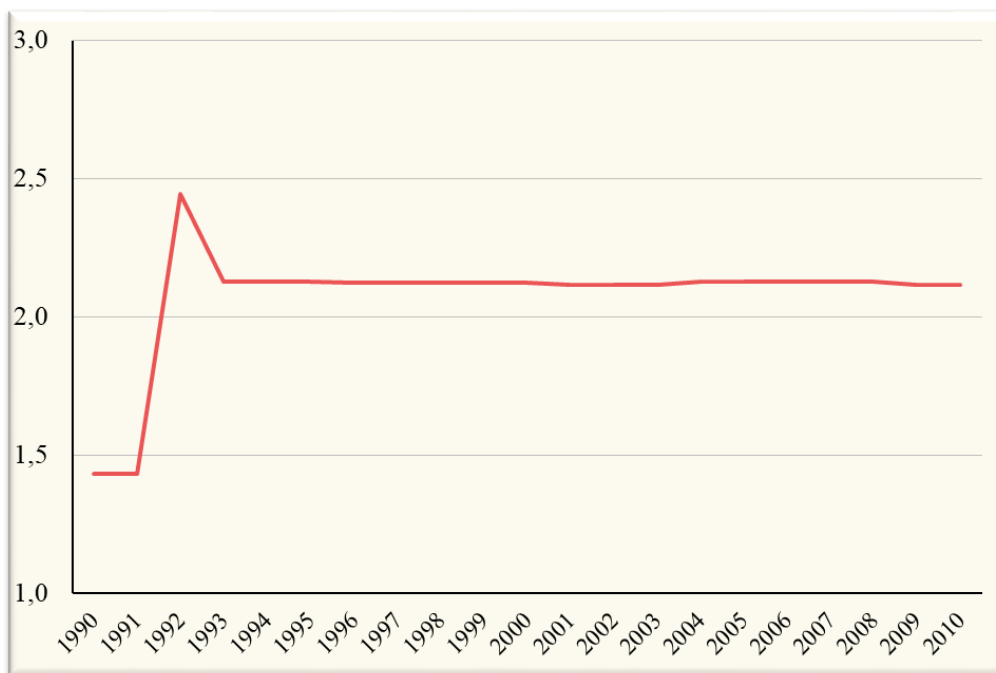


FIGURE 4.2. The evolution of the wage bargaining system in Italy between 1990 and 2010

Source: ICTWSS; own calculations.

4.2.3 Unemployment benefits system

A notable feature of Southern European market economies in general and Italy in particular, has been its focus on passive rather than active labour market policies i.e. benefits and income support instead of services and activation. Over 2005–2015, on average, in Italy active labour market policies constituted around 24% of total expenditure on labour policies, a share much lower than in Germany (41%) or the OECD as a whole (38%).

Nevertheless, even the provision of benefits is highly insufficient and asymmetric. Most European countries have a two-pillar unemployment benefit system comprising the ordinary contributory unemployment insurance (UI) pillar, providing earnings-related benefits with a duration ceiling, and a second unemployment assistance (UA) pillar, for those unemployed who either do not fulfil contributions requirements to be entitled to the unemployment insurance or are no longer entitled to it. By contrast, in Italy the system of unemploy-

ment insurance throughout the whole 1990–2010 period was underdeveloped and very fragmented. It included a variety of ad-hoc schemes (e.g., unemployment benefits with reduced requirements, unemployment benefits for agricultural or construction workers) which depended more on the characteristics of specific markets (e.g., seasonality of production) or on previous job tenure than on the unemployment status (i.e. a state which is directly verifiable through monitoring job search intensity and readiness to work). There was no unemployment assistance.

Instead, there were wage supplementation schemes in case of temporary working-time reduction without dismissal (Cassa integrazione guadagni, CIG). These wage supplementation schemes are short-term working schemes aimed at compensating the wage for workers suspended or with a reduced time schedule. CIGO (Cassa integrazione guadagni ordinaria) was first introduced in 1945 for blue-collar workers and subsequently extended to all other categories of dependent workers. CIGS (Cassa integrazione guadagni straordinaria) was introduced in 1968. Nevertheless, CIG has been characterised by fragmentation of coverage and excess discretion. Their coverage was not universal but depended on the contract of the worker as well as on the size and sector of activity of the firm. Furthermore, access to the scheme was not automatic but it had to be authorised by the Ministry on a case-by-case basis following negotiations between the firms and the trade unions. The allowance at 80% of foregone earnings, with caps, for all forms of CIG resulted in a replacement rate much higher than for the unemployment benefits.

In addition to CIG, several industrial sectors also benefited from the mobility allowance scheme (Indennità di mobilità) which was introduced in 1991. Workers in mobility were formally laid-off and included in a “mobility list” from which the old employer had to choose in case he intended to hire again. The period of the mobility allowance was up to 12 months for those below 40 years of age; 24 months for workers with more than 40 years of age and 36 months for workers with more than 50 years of age. Again, this was an

unemployment protection scheme only for a share of employees in medium and large firms, excluding the vast majority of employees in small firms. Its replacement rate has been significantly high as well: 80% for the first twelve months and its provision could be extended under certain circumstances even up to the astonishingly high level of 10 years (depending on the age of the worker and the territorial area).

Indeed, the Italian CIG (and mobility) system was assessed in 2010 as the most generous short-term work scheme in the EU (Boeri and Bruecker 2011). The generosity of the benefits, the limited experience-rated contribution, the absence of conditionality and monitoring, combined with strict employment protection legislation, made the recourse to wage supplementation schemes preferable to lay-off for both the employers and the employees.

This resulted into no protection for individuals and families with insufficient resources, no benefits for first-time job seekers and no protection for those with atypical employment. Consequently, Italy has had the third highest share of people living in poor or jobless households that are not covered by social transfers among EU countries and the largest share of the working age population which is dependent on the pension income of a family member (European Commission 2016b).

Furthermore, it was only since 2000 that unemployment benefits were tied to conditionality and activation. Still, as Jessoula and Vesan (2011) demonstrate, this conditionality had been more apparent rather than real due to monitoring and sanction problems. Enforcement of the rules remained lax and sporadic. In her analysis of unemployment benefits systems, Langenbacher (2015) shows that although Italy and Germany have *de jure* similarly strict conditionality of unemployment benefit provision, *de facto* in Italy there is no requirement to prove job-search activity i.e. no monitoring takes place as opposed to Germany where reviews take place at fixed point times. As Figure 4.3 demonstrates, expenditure for both training and direct job creation has remained below 0,3% of the GDP throughout the 1990–2010 period.

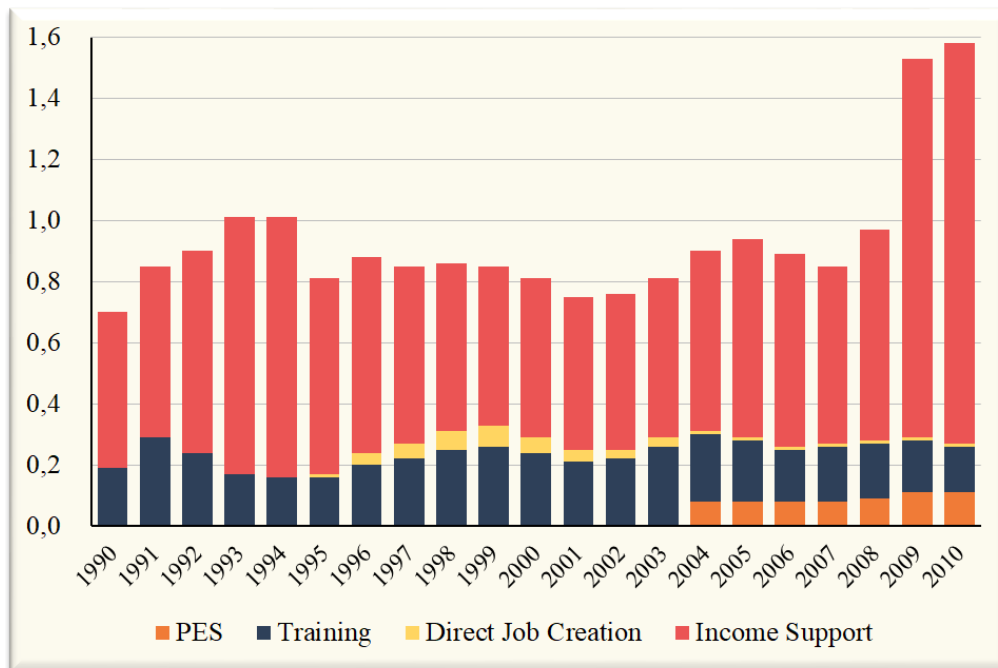


FIGURE 4.3. Public expenditure on active and passive (income support) labour market policies for the unemployed as a % of GDP in Italy between 1990 and 2010

Source: OECD; own calculations.

With regards to public employment services (PES), until the mid-90s, the state had a monopoly over job placement services, which resulted in ineffective services for matching labour demand and supply. In 1997, the Law Treu ended the public monopoly on placement services, allowing private recruitment agencies to operate fully. Furthermore, activation and education competencies were transferred to the Provinces, giving them autonomy to design their own training policies and to set up their own public employment services through the establishment of job centres at province level.

The 2014 reform of Provinces created additional problems for PES. In fact, the management responsibility and the staff of PES were transferred from the Province level to the Regional level but the corresponding budget was not transferred. A solution is still under negotiation between the State and the Regions on who should bear the costs. Finally, Italian PES is also substantially absorbed by the obligation to carry out administrative tasks, which could be easily reduced or outsourced. The registration of users through the compilation

of a Statement of Immediate Availability (“Dichiarazione di immediata disponibilità”, DID) largely absorbs the capacity of many employment offices (Mandrone and D’Angelo 2014). The placement capacity of Italian PES is limited. The 2012 Isfol Plus survey reports that over 2003–2010 only 2,9% of jobseekers were directly placed into employment by a PES (Isfol 2012). In 2015, only 10,2% of people out of work had a contact with a PES (Istat 2015). Co-operation with employers is usually very limited, and coordination with education institutions and social services has practically not existed so far. This reflects also the scarcity of resources devoted to PES. The total expenditure on PES in Italy was 0,44 billion euros in 2015 in contrast to the 5,57 and 10,69 billion euros in France and Germany, respectively (Eurostat). The efficiency of services is hampered by the systematic absence of evaluation and monitoring of public employment services, partly stemming from the aforementioned lack of resources and standards, and partly from the responsibility of the corresponding level of government. Italy is one of the few EU countries which do not collect any data on the actual delivery of services by PES. This is also due to the absence of a common methodology for data collection and of a national database.

The Jobs Act of March 2015 changed drastically the unemployment benefit system. It introduced a new unemployment benefit scheme (NASpI) extended in coverage and duration and based on employees’ social contributions accrued in the last 4 years. The maximum duration of the new support measure is 24 months, and the allowance amounts up to a maximum of 1.300 euros. The March decree also introduced an unemployment benefit for project workers (DIS-COLL) and a means-tested allowance for low income long term unemployed after expiration of NASpI (the so-called ASDI). CIG has been streamlined in order to better balance between workers’ and companies’ safeguard and the need for a quicker reallocation of resources from bad to best performing sectors and business. Companies can now have access to CIG only in 3 cases:

- business restructuring for a maximum period of 24 months (not necessarily consecutive) over a five-year period (to be counted from the date when such payment begins);
- business crisis for a maximum of 12 months;
- solidarity contracts for a maximum time span of 24 months (not necessarily consecutive), which can be extended up to 36 months.

Furthermore, workers receiving CIG need to also participate in training and other activation measures. With regards to PES, the Jobs Act emphasises the potential role of private operators in the delivery of employment services through a system of vouchers, to overcome the aforementioned weaknesses of the PES.

The approach is in line with most of recent PES reforms both in Europe and in the OECD countries, where the focus of unemployment benefits has shifted towards activation and a gradual introduction of competition in the delivery of the employment services, in order to increase both efficiency and effectiveness. Finally, the Jobs Act created a new national agency for active labour market policies—the Agency for Active Labour Market Policies (ANPAL). Since the beginning of 2016, the Ministry has been working on a strategic plan on ALMP (Piano per le Politiche Attive), which included support from the 2014–2020 European Social Fund (6,7 billion euros). To what extent this will change the landscape of the unemployment benefit provision in Italy it is yet to be shown.

4.2.4 Trade union power

Italy is one of the few EU countries where union density has not declined substantially over the last 20 years (it decreased from 39% in 1990 to 36% in 2010), due mainly to the sizeable growth in the number of pensioners enrolled with the trade unions. According to the latest version of the ICTWSS database, Italian trade unions have officially almost 12 million members. However, only 6 million comprise active, dependent and employed labour

force i.e. 50% of the unionized workers comprise self-employed, unemployed, students or retired workers, leading to a union density of 37,3% in 2015. Figure 4.4 depicts the evolution of the trade union power in Italy between 1990 and 2010. As explained in Chapter 2, this is operationalised through an own indicator, weighted average of 3 indices: (a) the union density, (b) the involvement of trade unions in economic decisions and social policy and (c) industrial action in the country. An equal weight of $\frac{1}{3}$ is applied and a higher number of the indicator indicates higher trade union power. During this 20 year period, trade union density declined but less than in the other two countries of the study. The involvement of trade unions in economic decisions and social policy remained increased whereas industrial action varied non-monotonically. As a result trade union power in 2010 was at a slightly higher level than the one of 1990 despite the decrease in trade union density.

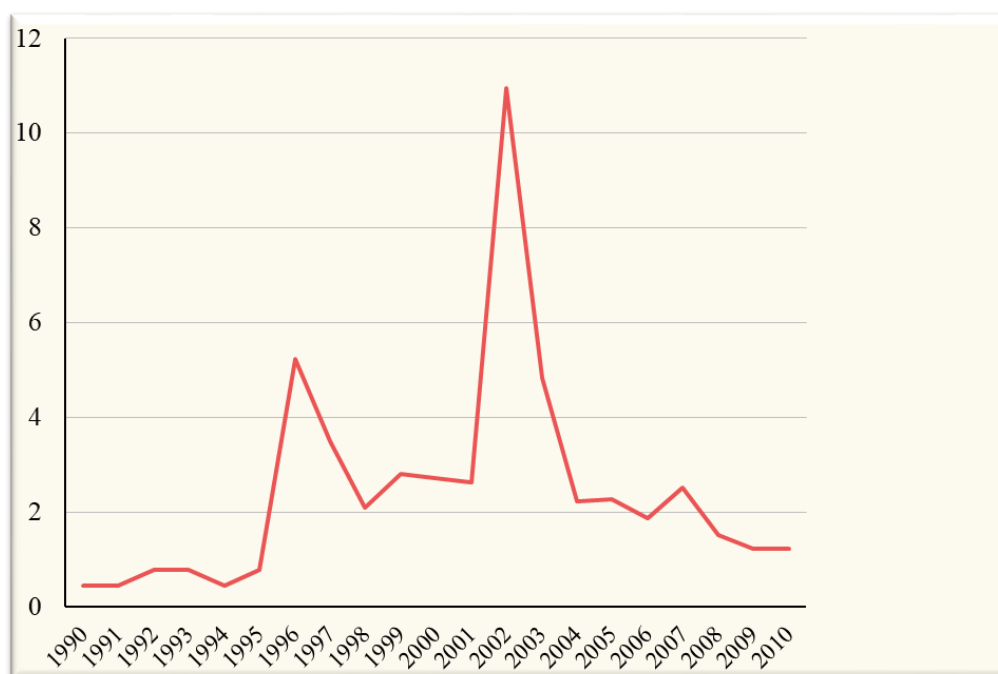


FIGURE 4.4. The evolution of trade union power in Italy between 1990 and 2010

Sources: OECD, EIRO; own calculations.

An illuminative example of the trade union power prior to the Jobs Act was the reform of the Article 18 mentioned above. The technocratic Monti

government (2011–2013) attempted to abolish the provision for reinstatement of a worker in the company after an unfair dismissal and to establish that employees in this case could only receive financial compensation. After the pressure from the unions, especially the powerful Italian General Confederation of Labour (CGIL), which includes the particularly combative Federation of Metal Workers, the proposal was tempered to permit the worker to be reinstated if the reasons for a layoff are found to be “manifestly nonexistent”. This demonstrates the influence of the trade unions on the political process, despite the low in trade union density.

Since 1973, Italian trade unions have benefited from the check-off system: membership fees are deducted from wages and paid to the unions by employers. That subscription fee, about 1 per cent of the wages of a full-time worker, is renewed automatically every year, unless specifically revoked by the worker. Part of the Italian union membership stability can certainly be explained by this support, which provides financial continuity (Leonardi et al. 2017).

The Workers’ Statute, passed in 1970, establishes the employees’ right to elect workplace representatives and to freely exercise union rights and liberties in companies with more than 15 workers. Trade unions and especially CGIL have been accused of being supporters of a worn-out notion of representation, concentrated on safeguarding the interests of the last bastions of the “protected” workforce and increasingly out of touch with the younger generation and the new world of work. The fact that this criticism has been strongly reiterated also by a centre-left government indicates the rift that has increasingly widened between trade unions and political parties.

4.2.5 Trade union fragmentation

Italian trade unions have been traditionally strong but as opposed to their German counterparts they have been much more fragmented. There are three main trade union confederations in Italy, although there are also others

of minor importance. The largest is the CGIL, which according to the latest available data had 5.616.340 members in 2014, although only 2.650.986 of them were employed. The second biggest is CISL with 4.090.681 members in 2016, of whom 2.267.046 were employed. Finally, the third largest confederation is UIL, which had 2.249.727 members in 2016, of whom 1.361.868 were employed.¹⁰

As Baccaro (2002) demonstrates the high trade union fragmentation in Italy is inextricably linked to the two dimensions of the unions' structures: the horizontal and the vertical one. The presence of multiple confederations has led to a competition among the different peak-level actors. The latter for example tend to engage in "leapfrogging" i.e. demand a bit more than the others had obtained. Furthermore, the presence of multiple levels of organizations within the same peak organisation and the weak and inefficient mechanisms of intra-organizational control imply an additional problem of vertical coordination since the lower level structures with ample operational autonomy tend to exceed (or worse, ignore) the terms negotiated by the peak levels. To understand the reasons for that one has to examine the evolution of trade unionism in Italy.

After the Second World War trade unionism was rebuilt and all Italian workers were organised in a single confederation: the Italian General Confederation of Labour (CGIL), which comprised all the different political and cultural components of the Italian labour movement. However, due to internal disputes, the CGIL split in 1948 and since then organised labour has been divided into three major confederations with clear political affiliations: (1) the CGIL consisting mainly of communist and some socialist workers, (2) the Italian Confederation of Workers' Union, CISL, consisting mainly of Catholic

¹⁰ All figures from confederation websites:

CGIL: <http://old.cgil.it/CGIL/Tesseramento/Default2014.aspx>;

CISL: <https://www.cisl.it/primo-piano/5169-sindacato-cisl-buona-tenuta-dell-organizzazione-in-molti-settori-produttivi-importanti-del-paese.html>;

UIL: http://www.uil.it/tesseramento_cat.asp.

workers and linked to the Christian Democratic Party and (3) the Italian Workers' Union, UIL, comprising Social Democrats and Republicans. Nevertheless, the changes in the political structure (none of these parties still exist in their previous form) and changes within the confederations render this political categorisation obsolete and invalid. The relations between CGIL and the other two confederations have always been characterized by tensions (ETUI 2013). CGIL has also taken a more combative approach to governments—both to the right-wing government led by Silvio Berlusconi and to the technocratic government of Mario Monti—and to the employers than the other two. In the recent period this has been clearly evident in the three confederations' approach to changes in the system of collective bargaining. CISL and UIL agreed a new national framework for bargaining with the government and the employers in January 2009 but CGIL refused to sign.

Apart from these three dominant confederations, there are also some other confederations but of small size and importance: CISAL, CONFSAL, COBAS and UGL, formerly called CISNAL. CISAL states that it has 1,7 million members in “autonomous unions” particularly in public and finance sectors, CONFSAL states that it has 1,8 million members while UGL states that it has 1,9 million members, although its membership is disputed by other, apparently smaller confederations (ETUI 2013). Overall, trade union representation in Italy has been increasingly fragmented in the last 30 years, also in the public sector. Figures published by the state agency ARAN, which represents the state in its capacity as an employer, show that at the end of 2011, there were 1.282.000 union members in the public sector. As the public sector had approximately 3,25 million employees in 2011, this indicates a union density in the sector of around 40%. However, these 1.282.000 members were divided between more than 300 unions, of whom more than 200 had fewer than 100 members and 100 had fewer than ten. These small trade unions represent small groups of employees, who unite to protect their own specific interests.

Employers' associations are also characterized by some fragmentation impeding coordination and efficiency, although not as acute as the one of trade unions. For example, private employers are grouped not in a single but in three confederations, one for each major branch of the economy: industry (Confindustria), commerce (Confcommercio) and agriculture (Confagricoltura). Artisans are also represented by separate confederations: Confartigianato and CNA being the two largest. Confindustria is composed of many national associations (almost 100) each covering a sector of the industry but in many cases they are actually overlapping. For example the Federation of Metal-Mechanical Employers has almost the same jurisdiction as the Federation of Textile Employers. State-owned associations disaffiliated from the industrial confederations of private employers in 1957 and formed two separate organizations: ASAP, comprising the petrochemical sector and INTERSIND comprising all remaining public sectors. Nevertheless, the trend towards privatisation of state-controlled enterprises and convergence in industrial relations policies has made the separate representation of these organizations less and less significant. Therefore, both ASAP and INTERSIND merged with Confindustria in 1994. Meanwhile in the same year after law 29/1993 the bargaining system in the public sector was entrusted to a new government agency named ARAN, the Agency for the representation of public administrations in collective bargaining (Agenzia per la rappresentanza contrattuale delle pubbliche amministrazioni). ARAN represents all employers' associations in the public sector and since then collective bargaining takes place at national level in 12 nationwide bargaining units and at decentralised level in the single public administrations, creating a two-tier system of bargaining similar to that present in the private sector.

Figure 4.5 depicts the evolution of the trade union fragmentation in Italy between 1990 and 2010. As explained in Chapter 2, this is operationalised through an own indicator, weighted average of 4 indices: (a) the Number of Union Confederations (NUCs), (b) an index for demarcations between union

confederations, (c) an index for demarcations within union confederations in the country and d) an index for the power that the confederation has over its affiliates (e.g., in strikes). All 4 indices are obtained through the ICTWSS database and equal weights of $\frac{1}{4}$ are applied. A higher level of the index indicates higher trade union fragmentation. From Figure 4.5 we can see that in alignment to what was described above, fragmentation decreased during the period 1992–2000, when trade unions accepted a freeze in collective agreements and higher centralisation of wage bargaining for reasons of urgent fiscal consolidation. However, after 2000 it increased again to its pre-1992 level, as demonstrated by the several disputes over the Treu Package and the abolition of Scala mobile.

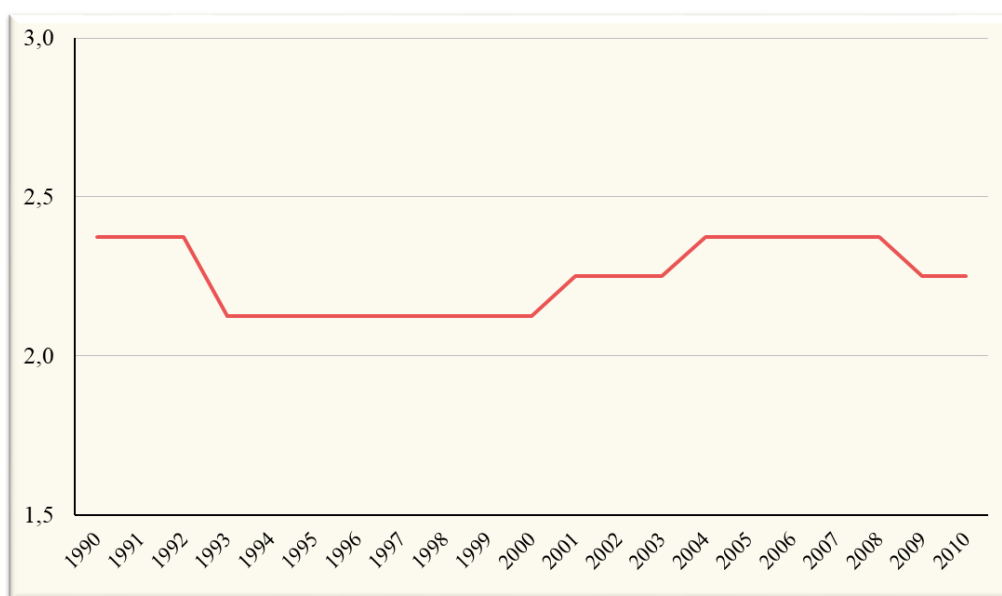


FIGURE 4.5. The evolution of trade union fragmentation in Italy between 1990 and 2010

Source: ICTWSS; own calculations.

4.3 Data, Methodology, and Variables

4.3.1 Data

For the purposes of this chapter I use longitudinal data from the ISTAT Dataset “Famiglia e soggetti sociali”. The survey “Famiglia e soggetti sociali” is part of the broader survey “Multiscopo sulle famiglie” conducted by the National Institute for Statistics (ISTAT). It covers approximately 20.000 households and 45.000 individuals. This is an event history dataset and the survey was conducted retrospectively in 2009. It contains detailed information not only on individual labour market histories and labour market characteristics (employment, type of contract, number of jobs, duration in each job, etc.) but also on individual socio-economic characteristics (age, sex, education, civil status, region). I have restricted the sample only to those inside the labour force i.e. between 17 and 65 and not disabled. Finally, as analysed in Section 3.3.1) for the labour market institutions I have constructed my own indicators using data from the OECD and ICTWSS databases.

4.3.2 Descriptive analysis and statistics

What kind of labour market transitions do we observe in Italy, how many jobs per worker in his/her work life and who holds these jobs?

The maximum number of job episodes in the life course of an individual in the sample is 11, however this is quite rare. From Table 4.1, which depicts the number of job episodes accumulated in the working lives of the subjects until the survey date, we can see that only 0,27% of the sample had 11 different job episodes. In fact 77,3% of the sample had a maximum of 2 job episodes in their working lives with almost 90% of the sample having no more than 3 job episodes.

TABLE 4.1. Number of job episodes accumulated in the lifetime

Number of job episodes	Percentage of people (%)
1	49,41
2	27,92
3	12,06
4	5,50
5	2,37
6	1,19
7	0,64
8	0,32
9	0,61

Source: ISTAT; own calculations.

Tables 4.2 and 4.3 demonstrate the types of labour market episodes obtained in the individual life course and their maximum duration, respectively. Since a 10% unemployment (inactivity) rate might mean that every person in the labour force is unemployed during 5 weeks per year or that 10% of the population are unemployed the whole year, it is important to look not only at rates but also at durations (share of long-term unemployment and inactivity). Long-term unemployment (inactivity) has detrimental effects both for the individual (human capital depreciation, scars on employability, financial costs and psychological costs) and the economy as a whole (labour market slack, increasing bargaining power of insiders, less efficient matches, lower output and productivity). It is remarkable that on average for 50% of the sample the minimum duration of employment spells is 2,5 years, the minimum duration of unemployment spells is 2 years while the minimum duration of inactivity for working age and able to work people is 4 years. This is in accordance with Italy being the country with the highest percentage of inactivity in the EU, the third highest percentage (after Greece and Spain) of long-term unemployment and the third lowest percentage (after Greece and Slovenia) of job-to-job tran-

sitions (European Commission 2017b). It is worth noting that by construction in the inactivity rate I have excluded those in pensions and early-pensions, the latter being a common practice in Italy before 2000, as well as those in education and on disability benefits. Thus, the variable for inactivity in this thesis captures all those inside the labour force and not currently in education.

TABLE 4.2. Labour market episodes

Type of labour market episode	Percentage (%) of total labour market episodes
Employment	55,50
Unemployment	17,12
Inactivity—working age	11,90

Source: ISTAT; own calculations.

TABLE 4.3. Duration of labour market episodes

Cumulative percentage (%)	Employment spells duration (months)	Unemployment spells duration (months)	Inactivity spells duration (months)
10	3	3	4
25	20	6	16
50	77	17	49
75	91	68	117
90	137	153	229
99	311	422	459

Source: ISTAT; own calculations.

Furthermore, as the scholarly literature has previously demonstrated, the main divides in the Italian labour market can be identified along three lines: gender, generations and regions (Garibaldi and Taddei 2013). Indeed, when we distinguish groups on these 3 bases, interesting results arise and these divides are confirmed. Table 4.4 depicts the number of job episodes by sex, Table 4.5 the number of labour market episodes by sex and age while Table 4.6 and Table 4.7 do the same by birth cohort.

TABLE 4.4. Number of job episodes by sex

Number of job episodes	Men (%)	Women (%)
1	48,73	50,71
2	28,00	27,77
3	12,25	11,69
4	5,66	5,18
5	2,50	2,11
6	1,30	0,97
7	0,69	0,53
8	0,28	0,38
9	0,22	0,23

Source: ISTAT; own calculations.

TABLE 4.5. Labour market episodes by sex and age

Type of labour market episode	Men (%)	Women (%)	Old (>35) (%)	Young (≤ 35) (%)
Employment	68,50	57,26	61,60	77,30
Unemployment	7,44	8,00	8,64	9,70
Inactivity—working age	1,70	18,00	6,93	9,50

Source: ISTAT; own calculations.

We can see that in the sample more women are unemployed and fewer women are employed compared to men, however these differences are not statistically significant. The large differences by gender are with regards to inactivity where only 2,7% of the male population are inactive as opposed to 18% of the female population. This is in accordance with a large part of the literature identifying Italy as a familialistic, gender-bias labour market where women in the past had an “alternative” role (Ferrera 19998; Barbieri 2011; Barbieri and Scherer 2005). Furthermore, unemployment is slightly more prevalent in young ages (younger or equal to 35).

If we want to compare birth cohorts, we cannot simply compare their job episodes and labour market episodes, since each cohort is observed until a

different age. The 2 younger birth cohorts for example have negligible percentages of pension episodes but this is totally expected given that they were all below the age of 45 when the interview was conducted and thus below the legal retirement age. Given that the youngest cohorts had not yet reached the age of the oldest and thus we don't know their labour market episodes and outcomes at the equivalent ages as well as the accumulated number of job episodes, we can't simply compare cohorts since the differences among them might simply capture only cohort effects. For this reason, in order to enable the comparison, I restrict all cohorts at the age of 34 and compare their job and labour market episodes until that age, since all cohorts are observed until that age. From Tables 4.6 and 4.7, we can see that there has been an increase in terms of the number of jobs episodes as we move from younger to older birth cohorts as well as an increase in employment and unemployment and a decrease in inactivity episodes. Again the same caution applies to the youngest cohort which has only been observed until the age of 45.

TABLE 4.6. Number of job episodes until the age of 35 by birth cohort

Number of job episodes	Birth Cohort 1945–49 (%)	Birth cohort 1955–59 (%)	Birth cohort 1965–69 (%)	Birth cohort 1975–79 (%)
1	45,37	40,96	38,19	40,18
2	30,37	39,99	35,36	33,61
3	15,35	12,84	14,74	13,83
4	5,54	5,86	6,42	7,14
5	1,19	1,63	2,32	2,78
6	0,37	0,70	1,28	1,02
7	0,71	0,48	0,61	0,52
8	0,16	0,09	0,28	0,39
9	0,42	0,12	0,15	0,20

Source: ISTAT; own calculations.

TABLE 4.7. Labour market episodes until the age of 35 by birth cohort

Type of labour market episode	Birth cohort 1945–49 (%)	Birth cohort 1955–59 (%)	Birth cohort 1965–69 (%)	Birth cohort 1975–79 (%)
Employment	59,79	82,56	85,41	84,71
Unemployment	7,23	4,85	8,29	10,90
Inactivity—working age	39,97	12,59	6,30	4,32

Source: ISTAT; own calculations.

The last dimension along which significant differences exist is that of the geographical region. As Tables 4.8 and Table 4.9 demonstrate, there are large differences in the sample in terms mainly of the number of job episodes accumulated but also in terms of the employment and unemployment episodes in the three broader regions (North, Centre and South). In particular, we can see that the percentage of people with only one job episode in their life until now in the South is double the one of people in the North whereas the percentage of those in the South with 4 job episodes in their life until the survey date is $\frac{1}{3}$ of those in the North; indicating that in the South on average people have fewer job episodes. Furthermore, the North has higher employment and lower unemployment than the South and the differences are statistically significant. Therefore, the region dimension has been included in the estimation as a dummy in order to not bias the effects of labour market institutions.

TABLE 4.8. Number of job episodes by region

Number of job episodes	North (%)	Centre (%)	South (%)
1	28,0	35,0	55,0
2	35,5	35,3	31,0
3	19,0	16,0	8,8
4	9,6	7,8	2,8
5	4,0	3,0	1,2
6	1,8	1,5	0,8
7	2,0	0,8	0,2
8	0,5	0,2	0,2
9	0,3	0,1	0,0

Source: ISTAT; own calculations.

TABLE 4.9. Labour market episodes by region

Type of labour market episode	Region		
	North (%)	Centre (%)	South (%)
Employment	68,5	66,0	59
Unemployment	4,5	8,0	14,0
Inactivity— working age	7,0	7,0	9,0

Source: ISTAT; own calculations.

4.3.3 Methodology and variables

As described in Chapter 2, a multiple-events exponential model is the most appropriate for the analysis of labour markets transitions (Blossfeld and Rohwer 1995, 1-32). Thus, I estimate a piecewise constant exponential model for the effect of labour market institutions on the number of job episodes and labour market transitions. I use two different state spaces: one on job-to-job transitions and another one on labour market transitions. In both cases the process time is continuous. Furthermore, the latter is a competing risks model, since for example the transition from employment to unemployment competes

with other possible destination states, such as the transition from employment to inactivity.

I specify the rates of a job-to-job transition or a labour market status as a function of time-constant (X_1) and time-dependent covariates ($X_2(t)$) (see Blossfeld et al. 1989; Blossfeld and Huinink 1991; Tuma and Hannan 1984):

$$r(t|X_1, X_2(t)) = \exp(\beta_1 * X_1 + \beta_2 * X_2(t))$$

To introduce the time-dependent labour market institutions into the rate equation, I used the method of episode-splitting every 12 months since the institutions change on average values at an annual basis. The other explanatory variables include measures of age, education, sex, geographical region and labour market experience. For the region I have constructed a categorical variable taking values from 1 to 3 covering all the 20 different regions in Italy. More precisely, region equals 1 for the North (Aosta Valley, Liguria, Lombardy, Piedmont, Emilia-Romagna, Friuli-Venezia Giulia, Trentino-South Tyrol, Veneto); 2 for the Centre (Lazio, Marche, Tuscany, Umbria); and 3 for the South including the islands (Abruzzo, Apulia, Basilicata, Calabria, Campania, Molise, Sicily, Sardinia).

Given that the study examines different cohorts, one has to also control for the fact that when the survey was conducted (2009) each of the cohorts was examined over different age spans and until different ages. To do so, I create 4 different birth cohort dummies: one for those who were born in 1975–79 and thus can be observed until the age of 30; those who were born in 1965–1969 and thus can be observed until the age of 40; those who were born in 1955–59 and thus can be observed until the age of 50 and finally those who were born in 1945–49 and thus can be observed until the age of 60.

4.3.3.1 First state space: Job-to-job transitions

With this state space the risk set includes all those currently employed. The process time is continuous and the job time is defined by the job entry.

Every job episode starts at the time relative to labour market entry and the first job episode by default starts at time zero, when the subject enters the risk set for the first time. With this state space individuals are not in the risk set in the period within job episodes, they are not exposed to the risk of an event (job change). In total there are 14.997 individuals with at least 1 job episode in their lives. They experience in total 58.452 failures i.e. job-to-job transitions. Every person in the risk set has on average 2,32 job episodes in his life with a maximum of 9 job episodes. Remarkably, the average job change in the sample is observed after 110 months whereas the longest job change is observed after a duration of 286 months. Figure 4.6 depicts the Kaplan-Meier survivor function for the average person in the sample, while Figure 4.7 depicts the survivor functions of men and women separately. As can be seen from Figure 4.6 30% of the sample on average never changes job. Furthermore, Figure 4.7 demonstrates that there are significant differences between men and women, with women being less likely to change job.

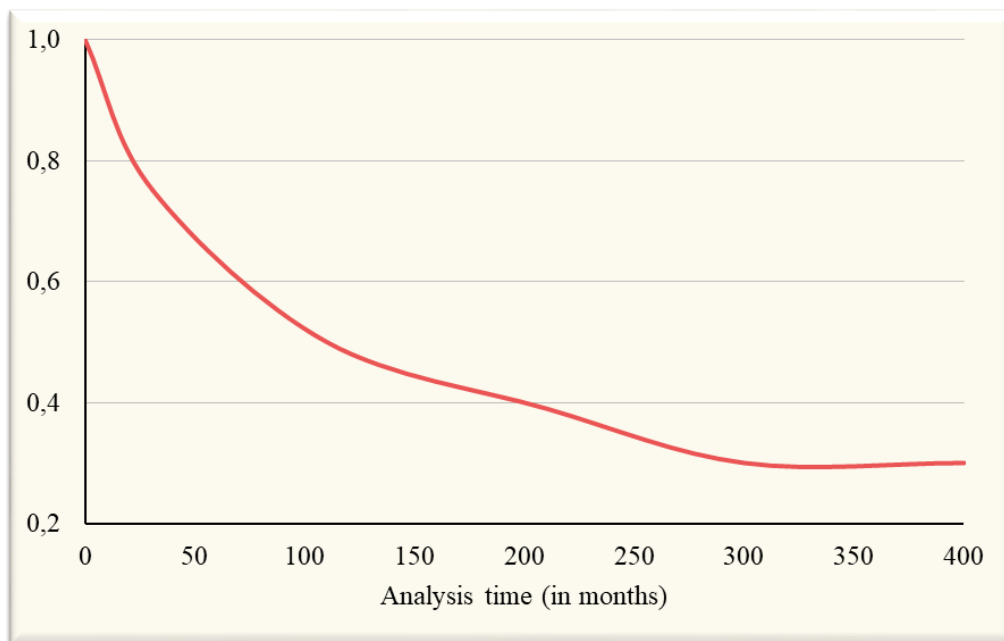


FIGURE 4.6. Kaplan-Meier estimates of the survivor function for the job-to-job transitions of the average worker in the sample

Source: ISTAT; own calculations.

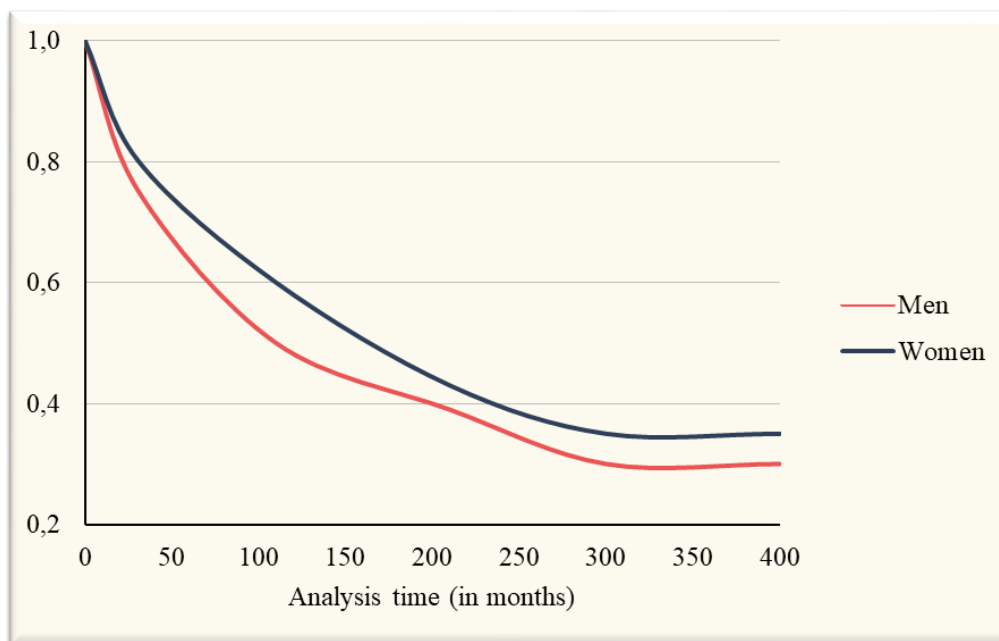


FIGURE 4.7. Kaplan-Meier estimates of the survivor functions for the job-to-job transitions of men and women separately

Source: ISTAT; own calculations.

4.3.3.2 *Second state space: Labour market episodes and transitions in the labour market*

As explained in Chapter 2, this thesis focuses on 3 transitions in the labour market: from employment to unemployment, from unemployment to employment and from inactivity to employment. There are no transitions from unemployment to inactivity in none of my samples. Furthermore, there are no theoretical justifications for the labour market institutions examined to affect the transition from employment to inactivity.¹¹ This would require the examination of other institutions and policies such as family policies and social benefits (Gornick and Meyers 2003; Mills and Blossfeld 2005) which are beyond the scope of this study.

Transitions from employment to unemployment. In this risk set now I have 16.199 individuals with 2.702 failures i.e. transitions from employment

¹¹ As a robustness check this estimation was conducted and yielded no statistically significant results at all.

to unemployment. The average transition to unemployment in the sample is observed after 77 months (i.e. approximately 6 years) in employment while the maximum time for this transition in the sample is observed after 311 months (i.e. approximately 26 years) in employment. Nevertheless, from Figure 4.8 which depicts the Kaplan-Meier survivor function for the average person in the sample, we can see that this becomes almost horizontal after 26 years in employment.

Figure 4.9 depicts the survivor functions of men and women separately and again there are statistically significant differences between men and women, with employed women being less likely to become unemployed than men. It is remarkable that 40% of employed women in the sample never became unemployed.

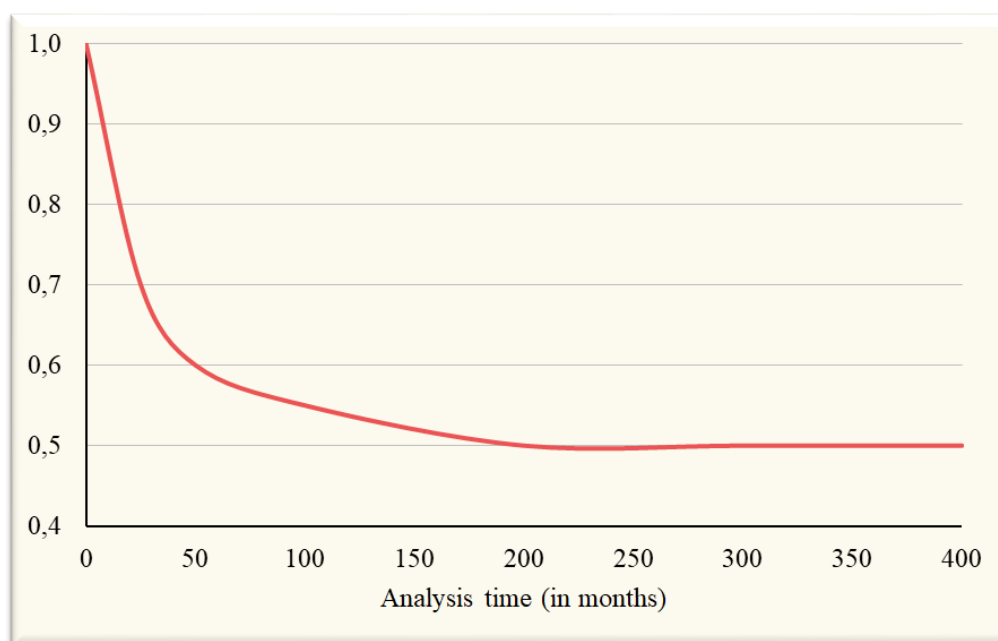


FIGURE 4.8. Kaplan-Meier estimates of the survivor function for the transition from employment to unemployment of the average worker in the sample

Source: ISTAT; own calculations.

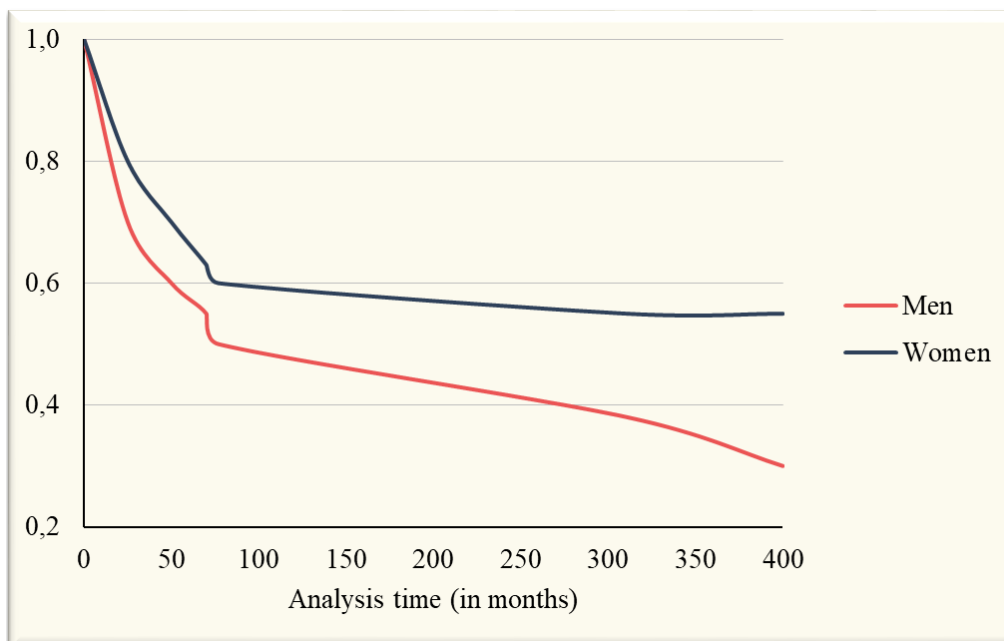


FIGURE 4.9. Kaplan-Meier estimates of the survivor functions for the transition from employment to unemployment of men and women separately

Source: ISTAT; own calculations.

Transitions from unemployment to employment. In this risk set now I have 2.711 individuals with 3.534 failures i.e. transitions from unemployment to employment. The average transition to employment in the sample is observed after 17 months (i.e. 1,5 year) in unemployment while the maximum time for this transition in the sample is observed after 422 months (i.e. approximately 35 years) in unemployment. Figure 4.10 depicts the Kaplan-Meier survivor function for the average person in the sample, while Figure 4.11 depicts the survivor functions of men and women separately. There are two remarkable points: firstly, as opposed to the previous, reverse transition from employment to unemployment, now the survivor function of women is higher than the one for men, implying that although women are less likely to lose their job, they are also less likely to find one if unemployed. Secondly, after 50 months the survivor function becomes almost horizontal, suggesting that it is very difficult for long-term unemployed to find a job in the Italian labour market.

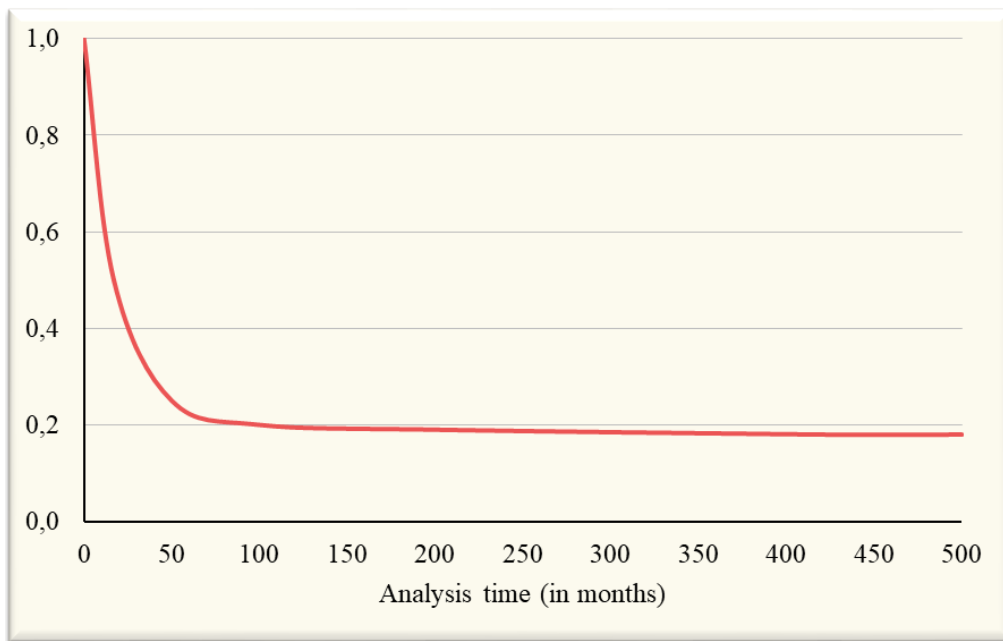


FIGURE 4.10. Kaplan-Meier estimates of the survivor function for the transition from unemployment to employment of the average worker in the sample

Source: ISTAT; own calculations.

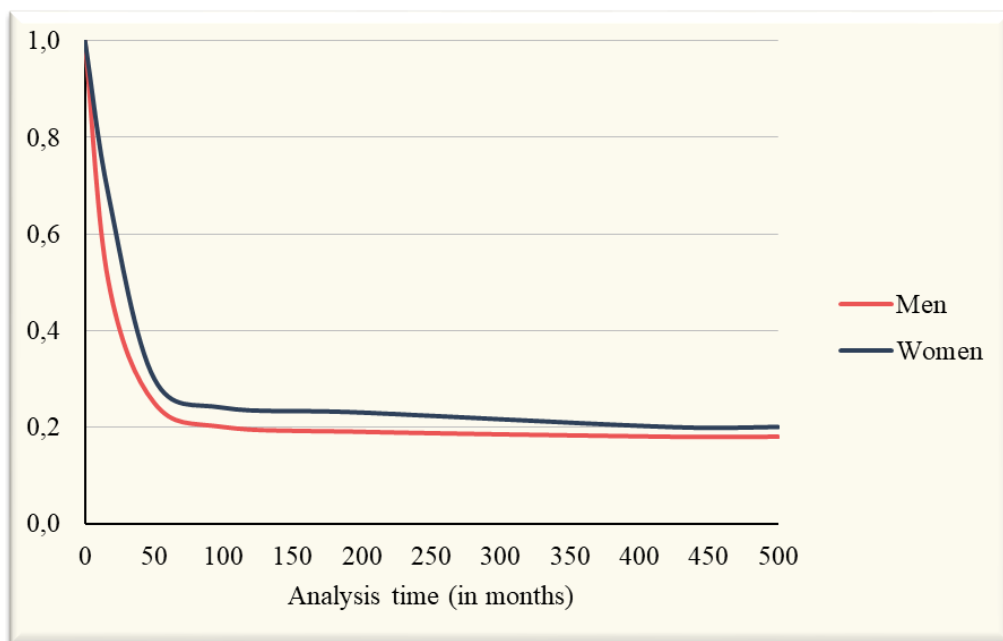


FIGURE 4.11. Kaplan-Meier estimates of the survivor functions for the transition from unemployment to employment of men and women separately

Source: ISTAT; own calculations.

Transitions from inactivity to employment. In this risk set there are 1.427 individuals with 3.164 failures i.e. transitions from inactivity to employment. The average transition in the sample is observed after 49 months (i.e. 4 years) while the maximum time for this transition in the sample is after 459 months (i.e. approximately 38 years). Figure 4.12 depicts the Kaplan-Meier survivor function for the average person in the sample, while Figure 4.13 depicts the Kaplan-Meier survivor functions of men and women separately. It is remarkable that 40% of the sample of inactive never enters the labour force. Furthermore, there appear to be large differences with regards to men and women. Men seem less likely to move back to employment but again this is not a robust outcome since their number is too negligible.

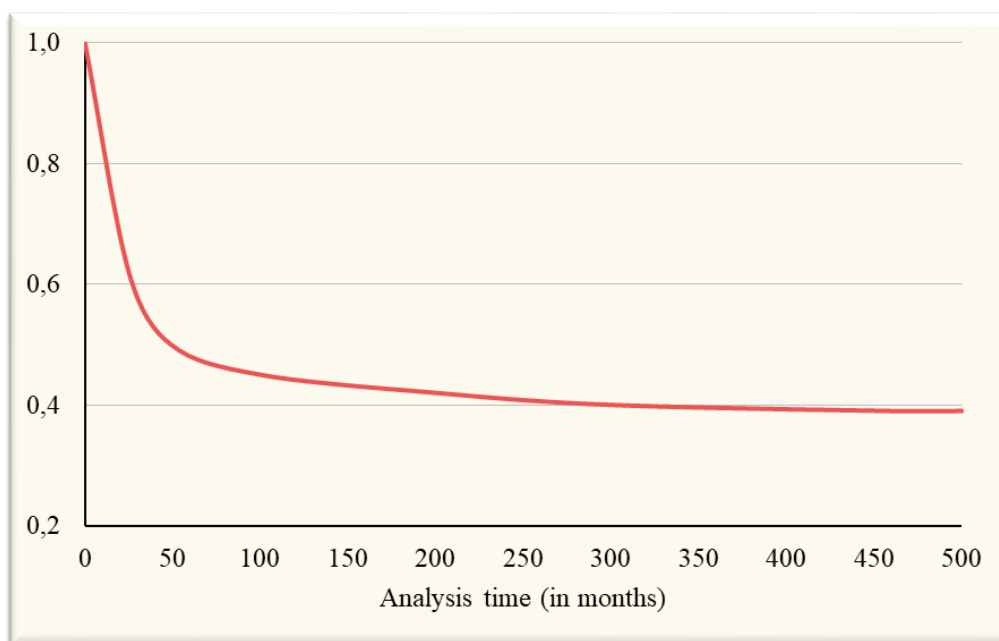


FIGURE 4.12. Kaplan-Meier estimates of the survivor function for the transition from inactivity to employment of the average worker in the sample

Source: ISTAT; own calculations.

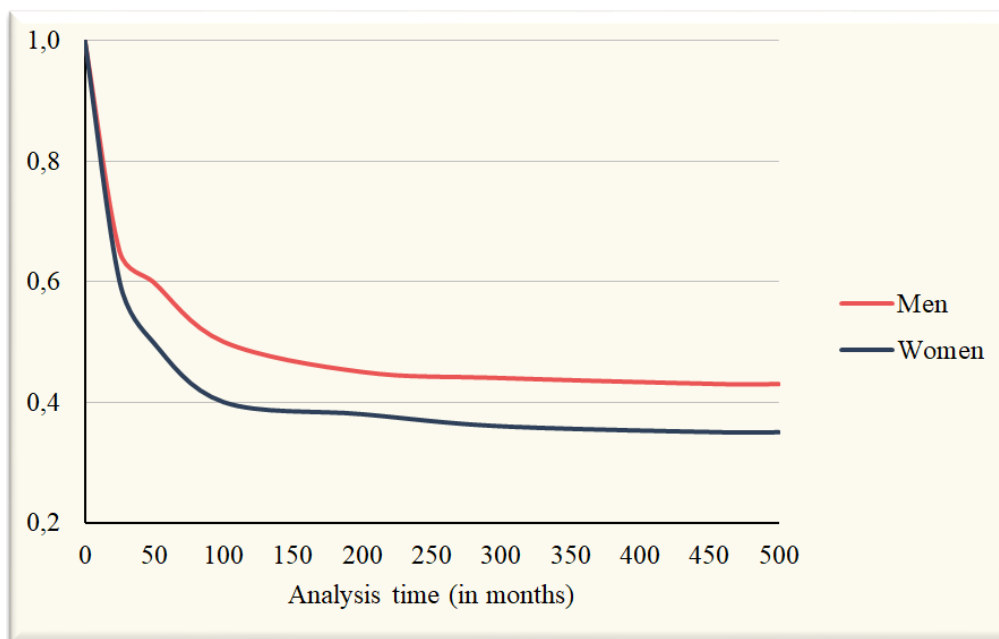


FIGURE 4.13. Kaplan-Meier estimates of the survivor functions for the transition from inactivity to employment of men and women separately

Source: ISTAT; own calculations.

In conclusion, we can see that Italy during the period 1990–2010 was characterised by low transitions from employment to unemployment and vice versa, indicating a sluggish, rigid labour market. Especially the long-term unemployed have a very low probability to re-enter the labour market. Women are less likely to become unemployed but they are also less likely to find a job if unemployed. In accordance with the theory of labour market segmentation, inactive have a very low probability of finding a job.

4.4 Estimation Results

Before proceeding to the interpretation of the results, one important point needs to be made. One cannot really comment on the magnitude of the coefficients because these depend on the scale on which the variable is measured. Instead, we can comment on the sign and on the statistical significance of the estimated coefficients in order to decide whether an institution has an effect or not.

Overall, the results presented below confirm to a large extent the research hypotheses posited in Section 2.3. More precisely, the results for EPL with the exception of the transition from inactivity to employment are fully aligned with the research hypotheses and demonstrate a negative effect on the other three labour market transitions examined. For the transition from inactivity to employment, quite surprisingly EPL is found to have a positive effect. The results for the unemployment benefit are also consistent with the research hypotheses on the negative effect on job-to-job transitions, transitions from employment to unemployment and transitions from unemployment back to employment as well as with the hypothesis of no effect on the transitions from inactivity to employment. Trade union fragmentation also has a negative effect on both the transitions from unemployment and inactivity to employment, supporting the hypothesis of detrimental effects of trade union fragmentation for the labour market outsiders. Nevertheless, with the exception of the effect of wage bargaining on the transition from inactivity to employment, the effects of the other two labour market institutions (wage bargaining and trade union power) are not statistically significant in any of the four transitions. This does not necessarily mean that our research hypotheses were wrong and should be rejected. In general, statistical significance depends on the number of observations. But with an event history model it depends on the number of events and the smaller this is, the more likely that the effect will be statistically insignificant. This is because the t-statistic equals the ratio of the estimated coefficient to the estimated standard error and the latter is inversely related to the number of events. Thus, a low number of events will lead to a statistically insignificant outcome for a given level of significance. This would still not explain why the estimated coefficients for some institutions—namely EPL and the unemployment benefit—are statistically insignificant while for the others they are not. Nevertheless, even if the number of events is sufficiently large, results may be insignificant due to low variation in the covariates (labour market institutions).

This is a more plausible explanation for the lack of statistical significance. Chapter 7 will try to amend this by pooling all the 3 countries together.

4.4.1 First state space: Job-to-job transitions

Table 4.10 depicts the results from the estimation of the PCE model on the job exit rates. The negative effects of the three oldest birth cohorts dummy variables (1945–49, 1955–59, 1965–69) imply that the youngest cohort (1975–79) is more mobile (higher exit rate and higher number of job episodes). Furthermore, this strong cohort effect remains even after controlling for age and education. As expected, job mobility decreases with age and this effect is statistically significant. The negative and highly statistically significant effect of the region indicates that indeed as we move towards the South job-to-job transitions decrease. The effect of labour force experience is also negative. This is in accordance with the human capital theory which stipulates that for higher tenure, experience and investment in job-specific human capital, the incentives to change a job decrease and consequently, job-to-job transitions decrease. The effect of education is not statistically significant.

With regards to labour market institutions, we can see that in accordance with the research hypotheses, EPL decreases job-to-job transitions. The generosity of the unemployment benefit also reduces job-to-job transitions which could be accounted by the incentives it provides to people to become unemployed and look for a better matching job instead of moving directly to a new job. This does not mean that people would quit their jobs to become unemployed and profit from a generous unemployment benefit but that those on fixed-term/temporary contracts for example will not look for any other possible job to start after the termination of their contract but would prefer to become unemployed and look for a more suitable (better matching job). The same would apply to those who are dissatisfied with their current job. The effects of trade union power, wage bargaining and trade union fragmentation are not statistically significant. In accordance with economic theory, a higher

growth rate increases job-to-job transitions while higher unemployment decreases them. It is worth noting that in all estimations I introduced interactions between institutions to test the hypothesis of institutional complementarities but due to insufficient variation all the estimates were statistically insignificant. For this reason, interactions will be introduced again in Chapter 7 when all data will be pooled together.

TABLE 4.10. The effect of labour market institutions on job-to-job transitions. Estimated coefficients from a piecewise constant exponential model.

Labour Market Institutions	EPL	-0,343** (-2,78)
	Trade union power	-0,567 (-0,29)
	Bargaining system	-0,146 (-1,53)
	Unemployment benefit	-2,16** (-2,95)
	Trade union fragmentation	2,375 (1,20)
Individual Characteristics	Education	0,0184 (0,38)
	Region	-0,163*** (-5,84)
	Birth cohort 1945–49	-0,224*** (-3,30)
	Birth cohort 1955–59	-0,111** (-3,23)
	Birth cohort 1965–69	-0,0587* (1,98)
	Number of previous job episodes	0,355*** (73,72)
	Female	0,0637 (0,28)
Young	0,357*** (8,47)	
Macroecon. Variables	GDP growth rate	6,245*** (3,49)
	Unemployment rate	-2,059* (-2,01)

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

4.4.2 Second state space: Transitions in the labour market

The effect of labour market institutions on the transition from employment to unemployment and vice versa. Table 4.11 depicts the results from the estimation of the PCE model on these two transitions in the labour

market. In contrast to our research hypotheses, with both transitions the effects of labour market institutions with the exception of EPL and the unemployment benefit are not statistically significant despite the fact that the number of events is sufficiently large (2.702 and 3.534 events, respectively). In accordance with our research hypotheses, both EPL and the unemployment benefit reduce transitions from employment to unemployment as well as transitions from unemployment back to employment. The statistically insignificant estimates of other covariates may be due to the low variability in them over time. For this reason, in Chapter 7 I pool all the 3 countries together and estimate again the model with country dummies. This yields highly statistically significant results for all the labour market institutions, corroborating the research hypotheses.

With regards to individual characteristics, gender has a positive and statistically significant effect on both transitions. That is, women are more likely to become unemployed but they are also more likely to find a job if unemployed, compared to men. In accordance with all the existing evidence, the region has a negative and statistically significant effect on the probability of moving from employment to unemployment (as we move to the South the probability of becoming unemployed increases substantially) but it does not have a statistically significant effect on the probability of moving from unemployment to employment. Education affects significantly both types of transitions and in full accordance with human capital theory, more educated people in Italy are less likely to move to unemployment and more likely to move back to employment if unemployed, compared to those with lower levels of education.

TABLE 4.11. The effect of labour market institutions on the transitions from employment to unemployment and vice versa. Estimated coefficients from a piecewise constant exponential model.

		Origin state: Employment	Origin state: Unemployment
		Destination state: Unemployment	Destination state: Employment
Labour Market Institutions	EPL	-0,0807* (-2,35)	-0,176* (2,47)
	Unemployment benefit	-0,683* (-1,99)	-0,430* (-2,51)
	Bargaining system	-0,0592 (-0,31)	-0,069 (-0,14)
	Trade union power	-5,477 (-1,06)	-4,004 (-0,88)
	Trade union fragmentation	0,211 (0,64)	-0,297** (-2,06)
Individual Characteristics	Birth cohort 1945–49	-0,545* (-2,32)	-0,0677 (-0,30)
	Birth cohort 1955–59	-0,166 (-1,88)	-0,359*** (-4,31)
	Birth cohort 1965–69	-0,114* (1,98)	-0,0837 (-1,68)
	Female	0,391*** (8,6)	0,1* (2,47)
	Region	-0,136*** (5,30)	0,035 (1,52)
	Education	-0,0114* (-1,98)	0,0386*** (4,53)
	Young	0,579*** (4,01)	0,608*** (8,88)
Macroecon. Variables	GDP growth rate	-2,692 (-1,16)	13,94*** (3,97)
	Unemployment rate	-5,477 (-1,06)	-5,412** (-2,65)

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

The effect of labour market institutions on the transition from inactivity to employment. From Table 4.12 we can see that with the exception

of EPL and wage bargaining, none of the labour market institutions has a statistically significant effect. In accordance with our research hypotheses, wage bargaining increases transitions from inactivity to employment. Quite surprisingly and in contrast to my research hypothesis, EPL increases the probability of a transition from inactivity to unemployment. The statistically insignificant results for the other institutions as well as for the macroeconomic variables could be accounted by the low number of events in this particular transition in conjunction with the low variability in wage bargaining, trade union power and trade union fragmentation over time.

As expected, older birth cohorts are less likely to move from inactivity to employment. This suggests that female labour market participation has improved over time among cohorts. Females are also in general more likely to move from inactivity to employment, however these findings should be interpreted with caution since in this sample being female is almost a predictor of being inactive and the percentage of male inactive is remarkably low (1,70%).

TABLE 4.12. The effect of labour market institutions on the transitions from inactivity to employment. Estimated coefficients from a piecewise constant exponential model.

Labour Market Institutions	EPL	0,342*
		(2,15)
	Unemployment benefit	0,574*
		(1,97)
	Bargaining system	-0,0857
	(-0,38)	
	Trade union power	-1,89
		(-1,01)
	Trade union fragmentation	-0,755*
		(-1,98)
Individual Characteristics	Birth cohort 1945–49	0,746*
		(2,55)
	Birth cohort 1955–59	0,443**
		(3,98)
	Birth cohort 1965–69	0,133
		(-1,71)
	Education	-0,023
		(-1,66)
	Female	0,213***
		(8,36)
	Young	0,939***
		(0,36)
Macroecon. Variables	GDP growth rate	2,049
		(0,84)
	Unemployment rate	2,401
		(0,84)

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

5.1 Introduction: The German Labour Market from the “Sick Man of Europe” to the “German Miracle”

“When the facts change, I change my mind. What do you do, sir?”
—J. M. Keynes

The German welfare state was traditionally described as “protective and conservative”, “placing particular emphasis on wages and the preservation of the social status” (Esping-Andersen 1990; Pierson 2001; Kitschelt and Streeck 2004). Esping-Andersen (1990) in his welfare typology classified it in the “Conservative” regime where “what predominates is the preservation of status differentials; rights therefore are attached to social class and status, social insurance typically excludes non-working wives, and family benefits encourage motherhood” (Esping-Andersen 1990, 27). After the reunification and during the whole 90s, Germany was depicted as the “sick man of Europe” attributed by Tsar Nicholas I of Russia to the Ottoman Empire in the mid-19th century. The reunification had indeed deep and long-term economic and social repercussions and the economic trajectory was characterized by low economic growth and a high debt, deficit and unemployment (ILO 2015). Furthermore, Germany was seen as “an example of Eurosclerosis, i.e. a regime with a considerable lack of flexibility” (Walwei 2014, 3). Today, even after the latest crisis of 2008 where the export-led German economy was particularly hit, its labour market has performed remarkably well and the unemployment rate continued its decline from 11,3% in 2005 and fell to a post-reunification low of 3,9 % by the fourth quarter of 2016, despite a growing workforce, whereas the employment rate increased to 78,9 % by the third quarter of 2016. Everybody

in the last decade has been talking about the “German labour market miracle” (Krugman 2009). The German labour market and industrial relations system proved to be far more adaptive, flexible and resilient than one would consider. This reflects the supportive economic situation, but also results from the institutional configuration and the structural changes that took place in Germany in the last 3 decades.

This chapter examines in depth the labour market institutional setup of Germany, its transformation and its effect on labour market transitions. The Chapter is organized as follows: Section 5.1.1 presents an overview of the historical evolution of the German labour market since the reunification. The main questions addressed are: what are the reasons behind this remarkable labour market development, how this was achieved, what were the costs, is the German labour market truly “miraculous” as Krugman argued, did everyone in the labour market benefit from it and what are the main challenges facing Germany today? Section 5.2 presents the 5 labour market institutions of interest and their evolution throughout the 1990–2010 period. Section 5.3 presents the data as well as some descriptive statistics, while Section 5.4 presents the results from the estimation and concludes.

5.1.1 Historical evolution of the German labour market

The world’s first modern welfare state (Socialstaat) was implemented by Otto Von Bismarck, the first Chancellor of Germany, in 1883. Bismarck introduced for the first time insurance against: (1) sickness and accidents, (2) disability, (3) unemployment and (4) old age. In that sense the welfare state is a German conception. By making insurance compulsory and setting benefit and contribution stipulating the legal framework for the insurance funds, the German state played a pivotal role in the functioning and performance of the labour market.

5.1.1.1 *The reunification cost*

Undoubtedly the milestone in Germany's post war history has been the German reunification in 1990. Apart from its political repercussions, the German reunification had equally important economic, social and labour market repercussions. The economic and monetary union with the conversion of the East German currency to the *Deutschmark* was deemed necessary in order to avoid an even more rapid migration from the East to the West. In the four months from October 1989 to January 1990 more than 300.000 people emigrated from East to West Germany, while after the first 6 months of 1990 this flow amounted to 1,2 million. This outflow decreased sharply with the German Economic, Monetary and Social Union (GEMSU). However, the economic and monetary union led to a dramatic increase in labour costs for East German companies with an overnight appreciation of the local currency by 400%. This rendered them highly uncompetitive. East German wages also rose up to 90% of those in West Germany while the productivity of East German companies stood at approximately 30% of that of the West. As a result, almost 80% of firms in the East went bankrupt (Alber 2006). This necessitated huge transfers and support from the West to the East and it had adverse effects to the whole German economy for a long period. East Germany became a "dependent" or "transition economy" (Hickel and Priewe 1994) where transfer payments from West Germany funded one quarter of the aggregate income in East Germany (Ragnitz 2007) and the budget deficit and public debt rose dramatically.

Furthermore, the reunification led to the transfer of the West German labour market institutional framework to East Germany. The only institution whose transfer failed was the collective bargaining system (Schmidt 1992). However, this transition was not straightforward and smooth since the institutional configuration of the labour market and the welfare state in West and East Germany prior to reunification differed significantly. In the latter, unemployment was not considered a risk to be insured against. Wage differentials

were modest and, in turn for work, citizens received heavily subsidised prices on basic commodities and services. The workplace was the main provider of welfare for the workers. Under state socialism, employers ensured many basic needs, such as food, housing, health service, schools and childcare (Wagener 2002). Compared to West Germany however, the social services and cash benefits were of low quality (Dornbusch et al. 1992; Schmidt 2013). The most important change was the introduction of the unemployment benefit which by definition didn't exist in East Germany due to the guaranteed work system. Nevertheless, after the reunification unemployment increased dramatically in both regions, reaching a historical high of 9,2% and 11% in 1997 in West and East Germany, respectively. At the same year unemployment of men increased to 11,2% and 16,6% in West and East Germany, respectively; while unemployment of women stood for the first time at 10,7% and 22,5% in West and East Germany, respectively. All these implied that a central issue for the German government was to reduce unemployment in both regions and create the institutions for wage bargaining, social security and unemployment benefits in East Germany.

Indeed, unemployment benefits were introduced in East Germany and early retirement, vocational training and employment schemes were greatly expanded. More than half of all East Germans participated in such schemes between November 1989 and November 1994 (Schmid 1998, 163). Furthermore, spending on active labour market policies more than doubled from 17,1 billion DM in 1989 to 38,2 billion DM in 1991 (Schmid 1998, 159). A reduced retirement age for unemployed and older part-time workers prompted a 163% increase in their numbers, from 111.838 to 294.133 between 1993 and 1995 (Deutsche Rentenversicherung Bund 2011). The effects on public finances were enormous, and were described in 1990 as "catastrophic" by the Bundesbank president Karl-Otto Pöhl who resigned in protest. Social spending increased from 27,8% to 30,4% of GDP between 1991 and 1998. The total net transfer of public funds from west to east between 1991 and 2003 is estimated

to be the equivalent of half a year's average GDP during that period (Dustmann et al. 2014, 182).

The promise of the Kohl government that reunification will be achieved without raising taxes, implied inevitably that the costs had to be incurred to a large extent by social security funds i.e. workers in employment and employers. In particular, all the aforementioned transfers from the West to the East were financed by a mixture of higher social security contributions (rising from 35,5% to 40% of gross wages), some minor benefit cuts, plus a substantial amount of borrowing, increasing public debt from 40% of GDP in 1989 to 62% in 1997 (OECD). The Maastricht Treaty imposing strict qualifying criteria, added substantially to the fiscal pressure on Germany. In sum, in the mid/late 90s there was a clear need for change, a comprehensive labour market reform and modernisation (Fleckenstein 2011). The change came first through an increase in flexibility and a remarkable wage restraint enabled through the institutional setup of the German industrial relations and in particular through the consensus reached between trade unions, works councils and employers' associations. The number of firm-level deviations from industry-wide union agreements sharply increased since the mid-1990s. From 1995 to 2008, the share of employees covered by industry-wide agreements fell from 75% to 56%. Opening clauses also played a pivotal role. Opening clauses for wages were introduced only in 1995 (opening clauses regarding hours of work had existed before 1995) and rose to about 60% of industry-wide collective agreements in 2004. According to a survey of works councils in 2005, 75% of all firms with collective agreements used opening clauses in order to suppress wages and ease the burden for firms (Bispinck 2007; Bispinck, Dribbusch, and Schulten 2010).

In addition to the wage restraint, the most profound and controversial reform in the last decades took place in the early 2000s: the notorious Hartz reforms. In 2002, the government took advantage of a scandal involving the

federal employment office¹² to initiate a series of rather radical policy changes. The goal was to reform fundamentally the welfare state and labour relations and in particular to (a) improve the efficiency of employment services and unemployment benefit provision, (b) activate the unemployed and (c) foster employment demand by deregulating the labour market (Jacobi and Kluve 2006). The reforms fundamentally changed the institutional and legal framework that determined the unemployment benefit system in Germany until today.

5.1.1.2 The Hartz reforms

The set-up of unemployment policy in Germany during the 1990s was clearly ineffective: unemployment benefits were aimed at maintaining the worker's social status during unemployment rather than providing a safety net (Jacobi and Kluve 2006). Unemployment insurance was linked to the recipient's previous earnings and was paid for up to 32 months of unemployment (depending on previous employment duration and age). Unemployment assistance, which was paid thereafter without any time limit could amount to 57% of the last net income (again depending on previous employment duration and age). This led to replacement rates for the long-term unemployed which were higher than in any other OECD country (OECD 2004). Furthermore, PES was blamed for operating inefficiently and failing to provide jobseekers with sufficient incentives to search and find a job (Jacobi and Kluve 2006). Finally, employment protection legislation was found to be too strict to facilitate the hiring of new people and to increase labour market mobility. Thus, in the beginning of the 2000s there was a clear exigency for reform.

The Hartz reforms comprised four legal acts, the most controversial being Hartz IV. The first three parts of the reform package, Hartz I-III, aimed mainly at creating new, flexible types of employment contracts, introducing

¹² The federal employment office was accused of massive fraud in the reporting of successful job placements.

additional wage subsidies as well as, restructuring the Federal Employment Agency and improving its efficiency. In particular, Hartz I established the so called "Staff Services agencies" (Personal-Service-Agenturen" or PSAs) all over the country, reformed the German Law on Temporary Employment and Labour Leasing, changed the right to social benefits "Leistungsrecht" (e.g., uniform entitlement, simplified calculation of the unemployment benefits) and introduced the training vouchers. Hartz II introduced two new types of employment: Minijob and Midijob, with lower taxes and insurance payments, as well as benefits for business start-ups (Ich-AG). A Minijob is a job generating an income below 400 EUR per month whereas a Midijob is a job with income between 400 and 800 EUR. A person holding a Minijob is exempt completely from social security whereas Midijobs have reduced social security contributions. Furthermore, Hartz II reformed the Federal Employment Agency (Bundesagentur für Arbeit, BA) and introduced the so-called Job-Centers, agencies to improve the matching between unemployed and firms with vacancies. Hartz I came into force in 2003, Hartz II came into force between 2003 and 2006 while Hartz III came into force between 2004 and 2006.

The final and most controversial part, Hartz IV, came into force between 2004 and 2005 and resulted in a significant cut and change in the unemployment benefit provision. More precisely, Hartz IV abolished unemployment assistance altogether and shortened the maximum time that insurance (now called Arbeitslosengeld I (ALG I)) could be received to 12 months in general; 15 months for those aged 50 or older; 18 months for those 55 or older and 24 months for those 58 or older. After that, workers would fall into social assistance (now called Arbeitslosengeld II (ALG II)). Social assistance is means-tested at a household level. Additionally, the conditions under which the unemployed would get unemployment insurance were tightened to work search, program participation and acceptance of a broad type of jobs and sanctioning was made effective and binding. Although sanctioning via temporary suspension of UB payments was in principle possible already prior to the

reform, evidence suggests that sanctions were rarely imposed (Biewen and Wilke 2005).

For a detailed description of the Hartz reforms as well as for evaluation results see Jacobi and Kluve (2006), Fahr and Sunde (2006) and Krebs and Scheffel (2013). Overall, the Hartz legislation constitutes one of the most ambitious attempts in the recent history of restructuring the labour market of an advanced economy and has received strong opposition. The opposition was strongest in East Germany. Krebs and Scheffel (2013) find that on average both the Hartz I-III and the Hartz IV had a positive effect and reduced the non-cyclical unemployment rate in Germany by 1,5 and 1,4 percentage points, respectively. It is fair to acknowledge that the Hartz reforms attempted a remarkable shift to a more goal- and efficiency-oriented approach within contribution-based active schemes administered by BA. However, it is also true that Hartz IV resulted in a significant cut in the unemployment benefits for the most vulnerable groups (long-term unemployed and young/labour market entrants), who were particularly hit by the reform. Furthermore, although the new types of contracts like Mini jobs were initially aimed to legalize flexible work and promote employment, in practice these contracts often acted as “deadends” and not as “stepping stones”, increasing inequality, in-work poverty and dualisation in the labour market.

Even though the Hartz reforms overall are often credited for the remarkable performance of the German labour market and economy, one cannot underestimate the pivotal role of the introduction of the euro and the evolution of Germany’s exports and trade balance in the context of the Eurozone in conjunction with the inherent flexibility of the German system of industrial relations, which set the scene for the remarkable wage restraint described above (Dustmann et al. 2014). The Hartz reforms were implemented starting only in 2003, hence nearly a decade after the process of wage decentralisation and the improvement in competitiveness in Germany. It seems plausible that the changes already underway in Germany’s labour markets helped in preparing

the political ground for the Hartz reforms, however the latter cannot be considered as the sole key factor for the gain in competitiveness and the effectiveness of the German labour market.

5.1.1.3 Post-crisis period: Positive developments and challenges

In the post-crisis period the German labour market has performed remarkably well. Unemployment decreased from 7,6% in 2009 to a post-reunification low of 3,9 % in 2016 (Eurostat). According to the same Eurostat data, youth unemployment followed this trend by declining from 11,1% in 2009 to 7,1% in 2016 (much below the 37,8% and the 13% of Italy and the UK in 2016, respectively). Total employment grew from 70,3% in 2009 to 78,9% in 2016. This overall employment growth was accompanied by an increase in female employment and a decrease in the gender employment gap. From 2009 to 2014, the share of female workers grew from 65,2% to 69,5%, whereas the share of male workers increased from 75,4% to 78,1%. This is above the EU27 average of 62% and the Italian one of only 50% (Eurostat).

Nevertheless, the increase in employment has been partly due to an increase of part-time work, in particular among women and despite its decrease, the gender pay gap remains high (22,3 % compared to an EU28 of 16,7 % in 2014). Germany ranks in the bottom third of Member States in terms of its full-time equivalent (FTE) employment rate of women (57,1 % in 2015). It is for this reason that the European Commission in its Country-specific Recommendations in both 2016 and 2017 requested a better provision of quality full-time childcare, all-day schools and long-term care as a crucial factor for increasing women's participation in the workforce.¹³ The tax treatment of second earners was considered another important driver hampering female full-time employment.

¹³ https://ec.europa.eu/info/publications/2017-european-semester-country-specific-recommendations-commission-recommendations_en.

Furthermore, despite these positive developments, there has also been an acceleration of atypical employment and certain groups of the population face particular challenges. In 2012, 7,4 million people had a Mini job, while 4,9 million employees, two-thirds of them women, were exclusively in precarious employment; 2,5 million people had precarious employment as a second job. As a result of all these developments the low-wage segment i.e. the number of those who earn less than two-thirds of the median wage expanded between 1995 and 2012 to more than 22% or 6,6 million employees. Mini-jobs remain widespread, with about 4,8 million people having a mini-job as their only job in September 2016, which represents only a 1 % reduction in a year (Pusch and Seifert 2016).

5.2 The Labour Market Institutional Configuration of Germany and its Historical Evolution

5.2.1 Employment protection legislation

5.2.1.1 Fixed-term and temporary contracts

Fixed-term contracts without specifying an objective reason are possible for up to 2 years or for up to 4 years if the employer has started a new business. An exception holds for employees who are over 52 years old and have been unemployed for more than 4 months. These employees are entitled to fixed-term contracts without any restriction. The maximum number of successive fixed-term contracts is 4 up to a maximum entire length of 2 years. Furthermore, this maximum cumulative duration of successive fixed-term contracts can be extended to 48 months when launching a new business and to 60 months for the older unemployed (above 52). The length of the trial period is 6 months for all workers (OECD 2013).

5.2.1.2 *Regular (open-ended) contracts*

In the case of individual dismissal of a worker in a regular contract a previous notification including the reason of dismissal must be given to the works council. The latter can make a statement within one week. In the case of objection of the works council and subsequent law suit, the dismissal has to wait the decision of the Labour Court. Firms employing 10 or less employees are exempted from these provisions. If the dismissal is deemed unfair by the court, the compensation that the employee must receive from the employer is up to 12 months depending on the length of the service. A compensation of 15 months applies in the case the employee is above 50 and has a tenure of more than 15 years and a compensation of 18 months applies in the case the employee is above 55 and has a tenure of more than 20 years.

Fair dismissals are defined only on the basis of personal reasons (personal characteristics and behaviour of the employee such as insufficient skills) or operational (business needs) reasons. It is worth noting that dismissals where the employee can be retained in another capacity within the same firm as well as redundancy dismissals which have not taken into account “social considerations” (seniority, age, etc.) are unfair. The maximum time period after dismissal up to which an unfair dismissal can be claimed is 3 weeks. There is no right to severance pay in case of dismissal for personal reasons. In case of dismissal for operational reasons, severance pay depends again on the tenure duration: if the employee accepts the dismissal he is entitled to severance pay equal to a half month pay for each year of tenure. Firms employing less than 10 employees are exempted from severance pay. The Works Constitution Act 2001 (as last amended in 2003) stipulates that the works council must be consulted before every dismissal and can, on the basis of legally specified grounds, object to a dismissal.

Collective dismissals are defined as dismissals within 30 days of:

- more than 5 employees in firms of 21–59 employees
- more than 25 employees in firms of 60–499 employees and

- at least 30 employees in firms of at least 500 employees

Figure 5.1 depicts the evolution of EPL for the period 1990–2010. For the purposes of this thesis the OECD indicator on employment protection legislation is used. This is compiled on the basis of 21 different items ranging from 0 to 6, with higher values representing stricter regulation. In alignment with Chapter 4 for Italy, I have created two separate indicators, one for regular contracts (EPR) and one for temporary contracts (EPT). As opposed to the employment protection for temporary contracts which has decreased largely over time, the regulations for regular, open-ended contracts have slightly increased over time from 2,58 to 2,68 but still remained below the 2,76 in Italy in 2010.

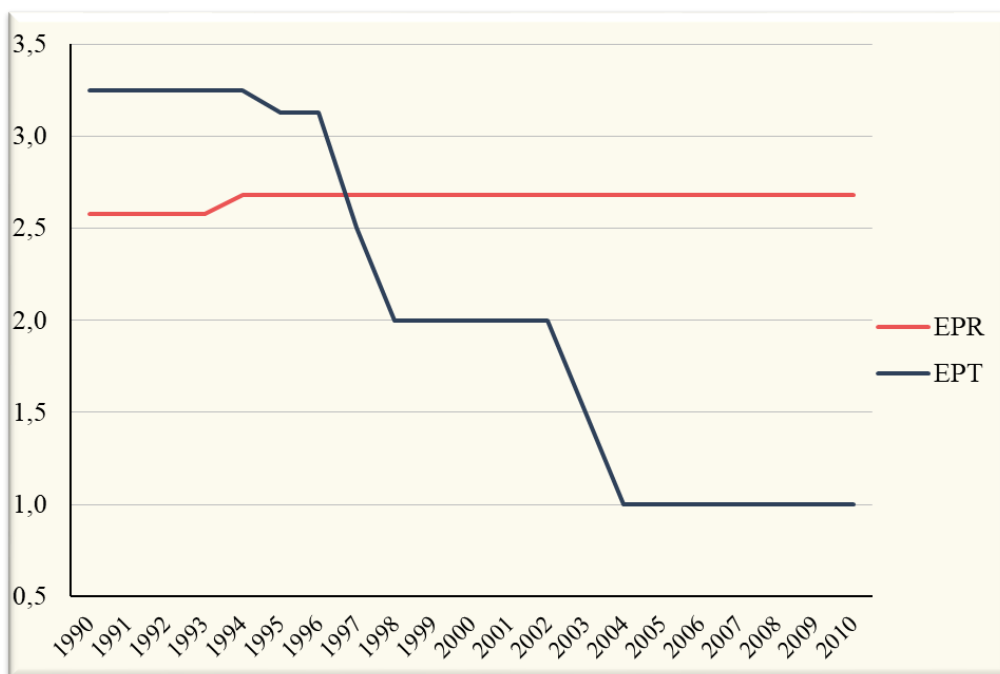


FIGURE 5.1. The evolution of employment protection legislation in Germany between 1990 and 2010

Source: OECD; own calculations.

5.2.2 Wage bargaining system

The German wage-setting system is characterized by a high degree of bargaining autonomy of the social partners. The Act on Collective Agreements (Tarifvertragsgesetz, TVG), which came into force in 1949, stipulates that only trade unions and employer organisations can legally conclude collective agreements at the sectoral level with practically no intervention on the part of the state. The concluded agreements are binding. Single-employer agreements concluded by a company or firm and a trade union are of minor importance. Works councils are not legally able to negotiate collective agreements. They can, however, reach agreements with individual employers on issues not covered by collective agreements as well as on how the terms of the collective agreement will be applied in practice. This has become increasingly important as collective agreements give greater flexibility to local negotiators, often through so-called opening clauses, which provide for differentiation in industry-level collective agreements taking into account the particular circumstances of the employer. In the chemical industry, for instance, after threats of several companies to leave the employers' association, an opening clause was introduced in 1997 allowing companies to reduce the collectively agreed wage by up to 10% for a limited period of time in order to save jobs or improve competitiveness (for details see Schulten 1997). Figures from the IAB show that in 2005 the opening clauses applied to 29% of all the employees covered by collective agreements in West Germany, although they were used for only about half this number.

The state can intervene in minimum wage setting: firstly, Article 5 of the Collective Agreement Act (Tarifvertragsgesetz) makes it possible to extend collectively agreed minima in a sector to all workers. Secondly, the Posted Workers Act (Arbeitnehmerentsendegesetz) makes it possible to extend collective agreements that cover more than 50% of employees in a sector to all employees, a method that has been applied in cleaning, construction, laundries, electrical work, care services, mining and postal services.

Despite these mechanisms, only 640 of the 64.300 agreements registered in 2008 have been extended (Eurofound 2011). Furthermore, the share of workers covered by (sectoral) collective bargaining agreements has eroded. Their share fell from 70% in West Germany and 56% in the East in 1996 to 53% in the West and 35% in the East in 2013 (Dribbusch and Birke 2012). With regards to company or plant level agreements, as mentioned above these are of minor importance and only an additional 8% of workers in West Germany and 12% of workers in the East were covered by company-level agreements in 2013. For 40% of workers in the West and 53% in the East there were no collective agreements in 2013 (IAB 2014). This erosion of collective bargaining is due to both the increasing retreat of employers from their collective representation (Silvia and Schroeder 2007) and to the significant declines in trade union membership.

This erosion of collective bargaining is one of the reasons accounting for the introduction of the statutory minimum wage in 2015. Until then Germany was characterised by the absence of a national statutory minimum wage and high collective bargaining coverage. But since the 2000s, collective bargaining agreements could not be anymore regarded as functional equivalents of statutory minimum wages. The declining bargaining coverage led German trade unions to reconsider the idea of a statutory minimum wage and to start campaigning for it. This was introduced in 2015 at the level of 8,5 euros per hour.

Figure 5.2 depicts the evolution of the bargaining system in Germany between 1990 and 2010. As explained in Chapter 2, this is operationalised through an own indicator, weighted average of the bargaining level and the coverage of collective agreements. A higher level of the index indicates more centralised and/or more coordinated wage bargaining with higher coverage of collective agreements. From the figure we can see that in alignment to what has been described above wage bargaining has eroded over time in Germany, and this is due to the reduction in the index of the coverage of collective

agreements. More precisely, in 1990 Germany had a very high coverage of collective agreements and the highest among the 3 countries (85% as opposed to 80% and 47% in Italy and the UK, respectively). This was reduced to 68% in 2000 and by 2010 it had fallen to 60% as opposed to Italy who had again a coverage of 80%.

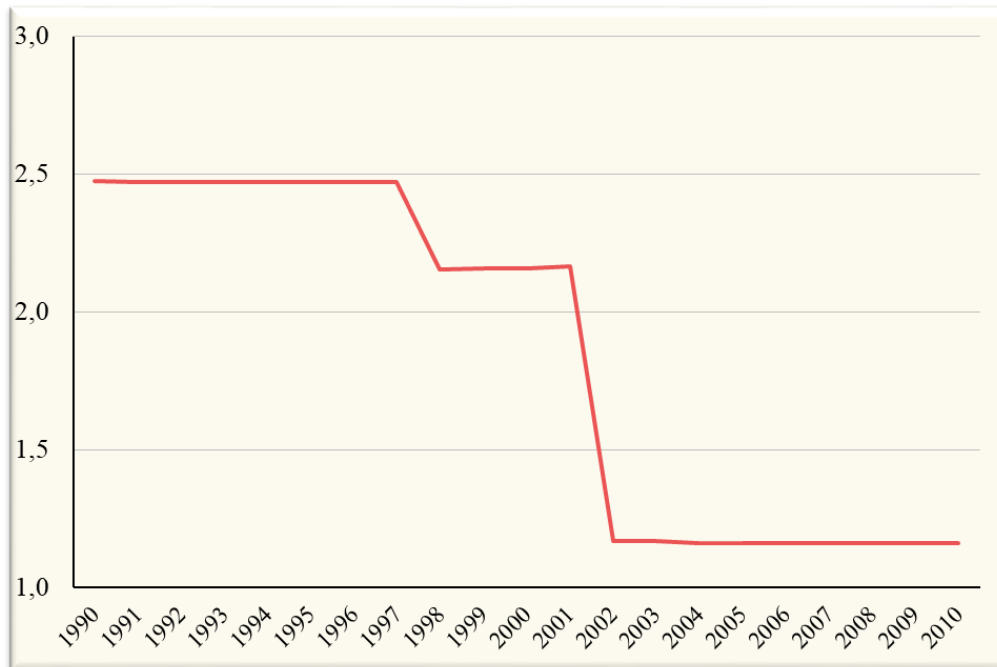


FIGURE 5.2. The evolution of the wage bargaining system in Germany between 1990 and 2010

Source: ICTWSS; own calculations.

5.2.3 Unemployment benefits system

As explained in Section 5.1.1, after the reunification Germany experienced high unemployment and the unemployment benefit system was seen to be notably over-generous to claimants. As can be seen in Table 5.1, prior to the Hartz reforms benefit levels were relatively high and of long duration. The Federal Labour Office (FLO) gave a low priority to job search assistance and monitoring and sanctions for failing to meet job search requirements were rarely applied (Wilke et al. 2009). Prior to the reform, those who had exhaust-

ed their unemployment benefit entitlement were entitled to unemployment assistance (Arbeitslosenhilfe), a tax-financed transfer. This unemployment assistance replaced up to 57% of prior net earnings and was provided for an indefinite period as long as the person remained unemployed. Furthermore, prior to the reform, households could also claim social assistance (Sozialhilfe) if their total income fell below the legally defined subsistence level. Social assistance was a means-tested program that could be paid in addition to labour earnings and unemployment benefits.

TABLE 5.1. Unemployment benefits in Germany prior to the Hartz reforms

	Description	Duration	Amount
Unemployment Insurance	Linked to worker contributions and paid to the unemployed.	Varied with age but went up to 32 months.	67% of the previous income for unemployed with one child; 60% for the childless.
Unemployment Assistance	Began when unemployment benefits run out. This was means-tested and financed from the federal budget.	Indefinite.	57% of previous wage in cases of a worker with one child; 53% for the childless.

Source: OECD Tax and Benefits.

German Socio-Economic Panel data indicated that in the early 2000s, 60% of the changes in the unemployment rate were due to increases in the “inflow rate” (i.e. the number of people becoming unemployed) rather than changes in the “outflow rate” (i.e. more unemployed people finding work). The OECD suggested that: “The parties running the system arguably had little interest in reforming it, since most of these training and other programmes were run by the social partners themselves, who controlled around 60% of the further education sector.”¹⁴

¹⁴ Tompson, William. 2009. *The Political Economy of Reform: Lessons from Pensions, Product Markets and Labour Markets in Ten OECD Countries*. Paris: OECD. <http://www.oecd.org/site/sgemrh/46190166.pdf>.

In his election campaign, Chancellor Gerhard Schröder had promised to reduce the number of Germans registered as unemployed from 4,2 million to 3,5 million within 4 years. In 2002, after his successful re-election and several scandalous practices within the PES, Schröder established a Commission under Peter Hartz (the Personnel Director of Volkswagen) to reform the labour market, and address the high unemployment rate. Following the Hartz Commission's recommendations, 4 major reforms called the "Laws for Reform of the Job Market," (or Hartz Reforms) were enacted between January 2003 and January 2005. Hartz IV reformed the unemployment benefits system. With regards to unemployment insurance, the new benefit (now called Arbeitslosengeld I (ALG I)) provided a replacement rate of 60% of previous net earnings (67% if having a child) and a normal duration of 12 months with a maximum duration of 24 months for those above 55. The duration of the benefit depends on age and employment record. Eligibility requires a minimum of 12 months of contributions in the last 2 years.

Furthermore, the Hartz IV reform merged unemployment assistance and social assistance in the so-called Arbeitslosengeld II (ALG II), a means-tested lump-sum benefit at the household level. The benefit covers the legally defined minimum income and is not related to prior earnings. In addition to reducing the amount and duration of the benefit, the Hartz IV also strengthened conditionality, sanctioning and active job search. Every legal job is now considered acceptable for claimants of ALG II, and claimants refusing to take up a job or integration measure were sanctioned with a benefit reduction of 30% for 3 months and by a further 30% reduction in case of continued non-compliance. Benefit recipients younger than 25 years can be sanctioned with an immediate loss of ALG II for three months.

In addition to these changes, the PES was also substantially reformed with an emphasis on the philosophy of the British New Public Management (NPM). In a first step of immediate measures implemented after the placement scandal, the top-level administrative structure of the PES was modernized to

initiate the transformation from a public bureaucracy to a public company, with management structures comparable to private companies. Accordingly, the tripartite management board and the presidency were replaced with a corporate-like board of three managers nominated by the government. Furthermore, these immediate measures included changes to the job placement regime so that new elements of competition were introduced. The compulsory licensing procedure for private job placement agencies by the Federal Employment Office was abolished and private job placement agencies are now allowed to demand (limited) fees for their services from jobseekers. Linguistically, renaming the PES from “Federal Employment Service” into “Federal Employment Agency” (Bundesagentur für Arbeit) was thought to express the change of administrative philosophy (BMWA 2004). In search of reference models for the PES the Hartz Commission paid considerable attention to the one-stop agencies in Denmark, the Netherlands and, particularly, the UK. The UK Job Centre Plus was considered particularly instructive with regard to the role of the “personal adviser” with overall responsibility for service provision and facilitating reintegration measures. Policy papers on the reform of the PES in the UK and several other countries were provided and fact-finding missions to the UK and four other countries were organized (Seeleib-Kaiser and Fleckenstein 2009). The study of Seeleib-Kaiser and Fleckenstein (2009) provides strong evidence that the UK Job Centre Plus was indeed emulated by German policy-makers. The UK represents an example of rather top-down governance, in which the targets of LMP are set by the government and then codified with a “Public Service Agreement” between the government and the PES, implementing the governmental objectives.

Figure 5.3 depicts the evolution of public expenditure on active and passive (income support) labour market policies for the unemployed as a % of GDP in Germany during the period 1990–2010. In accordance with what has been described above, we can see that until the early 2000s Germany was devolving a larger percentage of its GDP on income support as well as training

for the unemployed. Nevertheless, in 2004 the focus shifted towards less income support and more PES, while expenditure on training remained unchanged. More precisely, expenditure on PES increased from 0,23% of GDP in 2004 to 0,30% in 2005 and 0,38% in 2010, whereas income support for the unemployed decreased from 2,14% of GDP in 2004 to 1,87% in 2005 and to 1,23% in 2010.

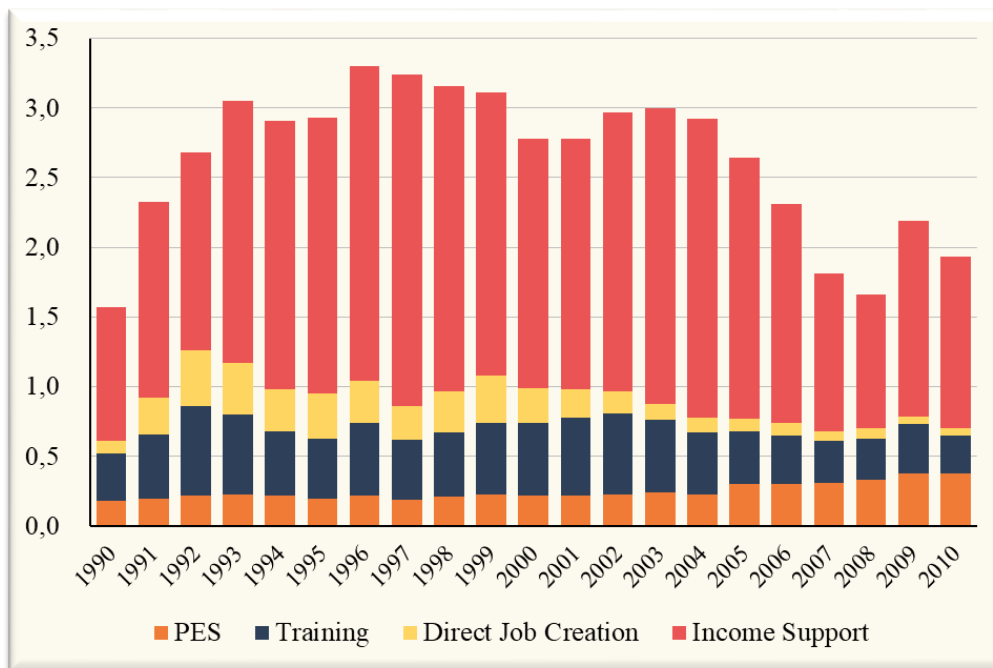


FIGURE 5.3. Public expenditure on active and passive (income support) labour market policies for the unemployed as a % of GDP in Germany between 1990 and 2010

Source: OECD; own calculations.

The Hartz Reforms were highly unpopular and led to thousands of people demonstrating against them. As a result in the next election the SPD lost and the government was replaced by a CDU-FDP coalition. This loss has been widely attributed to voters' discontent with the Hartz reforms, especially Hartz IV. To what extent were these reforms effective? Although highly unpopular, these reforms transformed largely the welfare and the unemployment benefit system from a generous and contribution-based system to a basic and taxpayer-financed system. By 2011, the unemployment rate dropped below 3

million, the lowest it had been since 1992 (Eurostat). IMF analysis of the Hartz IV reforms found that employed households gained as the output gains outweighed the welfare loss due to the reduction in unemployment insurance. This gain was equal to an increase of around 0,3 % of lifetime consumption. The long-term unemployed suffered a loss equivalent to 1% of their lifetime consumption; while the short-term unemployed also suffered a welfare loss although much smaller to the welfare loss of the long-term unemployed. The rate at which the unemployed found jobs, which had been stable and very low before the Hartz Reforms, began to increase steadily until the year 2007, at which stage they remained relatively stable at a significantly higher level.¹⁵

Nevertheless, the OECD criticised the Government for the way the Hartz IV law was introduced. It particularly argued that: “little was done to explain the controversial Hartz IV reform either to the public at large or to those who would be directly affected by it.”¹⁶ Indeed, a communications strategy and campaign was clearly missing and would have probably led to much less reaction and demonstrations, although it is impossible to tell whether it would have led to the avoidance of the vast electoral defeat of SPD.

5.2.4 Trade union power

The industrial relations system in Germany has been best known for its high coordination among the social partners taking place mainly at the sectoral level (Hall and Soskice 2001; Pierson 2001; Kitschelt and Streeck 2004; Fleckenstein 2012). It comprises 3 union confederations, the largest and most important being the German Confederation of Trade Unions (Deutscher Gew-

¹⁵ Krebs, Tom, and Martin Scheffel. 2012. “Macroeconomic Evaluation of Labor Market Reform in Germany.” Paper presented at the 13th Jacques Polak Annual Research Conference hosted by the International Monetary Fund, Washington D.C., November 8–9. <http://www.imf.org/external/np/res/seminars/2012/arc/pdf/krebs.pdf>.

¹⁶ Tompson, William. 2009. *The Political Economy of Reform: Lessons from Pensions, Product Markets and Labour Markets in Ten OECD Countries*. Paris: OECD. <http://www.oecd.org/site/sgemrh/46190166.pdf>.

erkschaftsbund, DGB), founded in 1949. This consists of 8 affiliated unions, each of which represents a specific industry. Total DGB membership reached its all-time high—almost 12 million members—following the integration of East German union members in 1991, but decreased afterwards and in 2010 had 6,2 million members, more than three-quarters of all trade union members in the country. They are depicted in Table 5.2 in order of decreasing magnitude. The two largest unions of the DGB are the German Metalworkers Union, IG Metall, with 2.269.281 members and the United Services Union (Ver.di) with 2.039.931 members (Eurofound 2015). Ver.di was created in 2001 from a merger of five unions, covering transport and a range of public services, retail and finance, post and telecommunications, the graphical and media sector and a non-manual confederation, the DAG, which had previously been outside the DGB. For a period after the merger it was the largest union in the DGB but, following membership losses, it is now in second place. The third largest in size is the Industrial Union Mining, Chemistry and Energy (IG BCE) with 657.752 members, which covers mostly chemical and energy workers. These three unions (IG Metall, Ver.di and IG BCE) account for 81% of total DGB membership.

TABLE 5.2. DGB-affiliated trade unions

Trade union name	Sector
IG Metall (Industriegewerkschaft Metall)	Metal and electrical industry, steel industry, textiles and clothing, dry cleaning, wood working, automotive industry, electrical trade, joinery, plumbing, etc.
Ver.di (Vereinte Dienstleistungsgewerkschaft)	Civil service, trade, banks and insurance companies, health care, transport, ports, media, social and educational services, printing, private services, fire brigade, etc.
IG BCE (Industriegewerkschaft Bergbau, Chemie, Energie)	Chemical industry, pharmaceutical industry, mining, energy utilities, etc.
IG BAU (Industriegewerkschaft Bauen-Agrar-Umwelt)	Construction industry, industrial cleaning, agriculture
EVG (Eisenbahn- und Verkehrsgewerkschaft)	Railways, rail transport
GEW (Gewerkschaft Erziehung und Wissenschaft)	Teachers, educators, higher education
NGG (Gewerkschaft Nahrung-Genuss-Gaststätten)	Food industry, milling, pubs, restaurants
GdP (Gewerkschaft der Polizei)	Police

Source: Eurofound.

The second largest confederation is the Federation of Career Public Servants (Beamtenbund und Tarifunion, DBB), consisting of 39 national affiliated trade unions, having a total membership of 1.276.407 members (Eurofound 2015). In contrast to the DGB, trade unions in the DBB are of small size and minor importance. Probably, the most industrially powerful of the DBB unions is the union for locomotive drivers, the GDL, which was involved in a lengthy industrial dispute in 2007. Finally, the third union confederation is the Confederation of Christian Unions (Christlicher Gewerkschaftsbund Deutschlands, CGB), founded in 1959. This consists of 16 trade unions with 273.815 members in total (Eurofound 2015). However these are of minor importance and not relevant anymore. In several instances DGB trade unions disputed the right of CGB trade unions to participate in collective bargaining in the courts, as a result of which these unions can no longer conclude valid collective

agreements. None of these 3 trade union confederations has the right to conclude collective agreements; the latter lies only within the competence of their member unions (wage bargaining at the industrial/sectoral level). There are a number of other, non-affiliated unions with a total of between 200.000 and 300.000 members.

Net union density (all confederations and non-affiliated unions combined) peaked in 1991 after German unification when 36 per cent of employees were members of a union. By 2001 it was less than a quarter and in 2015 some 17 out of 100 employees were unionised. By European comparison net union density in Germany is—despite its large individual trade unions—in the lower ranks, in Western Europe only undercut by France.

Employer associations are also organized by industry. As such, each sector has a dominant employer association and trade union and these two bodies engage in sector-wide bargaining that produces a contract for the entire sector. These agreements establish minimum labour and wage standards that apply to all members of the employers' association irrespective of the number of union members at each company. The contract coverage rate in the 1990s was approximately 65%, much higher than the trade union membership rate, which was approximately 25% (ICTWSS Database; Visser 2013). However, during the last two decades, many companies have withdrawn from these collective agreements, thus leading to a decline in the share of employees covered by a collective wage agreement.

Although wage bargaining in Germany has been only intermediately centralised at the sectoral level, the German industrial relations system had been traditionally characterized by high coordination among social partners. In fact, Germany constituted the exemplar of a “coordinated market economy”. As Goldthorpe (1984) in his seminal work “Order and conflict in contemporary capitalism” argued, in neocorporatist societies such as Germany, trade unions exchanged wage moderation with welfare expansion, high employment and low inequality. Furthermore, the work councils played a pivotal role by

ensuring the implementation of the collective agreements at the plant level, thus making it difficult for the companies to pursue a strategy of low wages/low prices and forcing them to instead search for other ways to create comparative advantage (Streeck 1987; Soskice 1994). More specifically, general labour agreements are made at the national level by national unions and national employer associations and then firms at the respective regions meet with works councils to adjust these national agreements to local circumstances. Work councils have co-determination rights regarding hiring, firing, training or overtime work (for further info see Section 87 of the BetrVG). They don't have to be union members; works councils can also be formed in companies where neither the employer nor the employees are organized. Their basic purpose and role is to facilitate the application of the collective agreements to the regional and company level and to further protect workers who face special circumstances. This is in stark contradiction to Italy, where regional trade unions have traditionally undermined the collective agreements decided at the central level. Contributing to that, the dual training system (one of the most important and distinctive institutions of the German model) produced a "workforce with the level of technical skills necessary to maintain a system of manufacturing production based around incremental customization rather than Fordist mass production" (Culpepper 1999).

However, this is not true anymore for Germany. During the last ten years the latter experienced a large decline in trade union density and collective agreement coverage. This demise in unionization is only partly attributable to external forces that have confronted unions in many advanced European countries such as globalization and compositional changes in the workforce (shift from manufacturing to the services sector). There are as well German-specific factors accounting for it such as the dissatisfaction with the very low wages in the services sector (this for example explains why the United Services Union, Ver.di, has experienced the largest fall in membership compared to all other DGB affiliates) and the transition process in post-communist East

Germany (Addison, Schnabel, and Wagner 2007). For a more detailed examination of all the factors accounting for the decline in union density see Fichter (1997), Ebbinghaus (2003), and Schnabel (2005). This fall in trade union power and the coverage of collective bargaining has been considered as one of the reasons for the introduction of the statutory minimum wage in Germany for the first time in 2015.

Figure 5.4 depicts the evolution of the trade union power in Germany between 1990 and 2010. Analogously to the Italian chapter, this is operationalised through an own indicator, weighted average of 3 indices: (a) the union density, (b) the involvement of trade unions in economic decisions and social policy and (c) the industrial action in the country. An equal weight of $\frac{1}{3}$ is applied and a higher number of the indicator indicates higher trade union power. During this 20 year period, although union density increased immediately after the reunification (since some of the East Germans have become trade union members), it decreased sharply afterwards as explained above and it has remained below 20% since 2007, reaching the historically low level of 18,9% in 2010. This is in contrast to Italy, where trade union density also decreased since the mid-90s, but nevertheless it remained at clearly higher levels and since 2007 it has even increased. With regards to striking activity, it is remarkable that although trade unions have been quite powerful, industrial relations have been surprisingly cooperative and not confrontational. With the exception of the reactions to the Hartz reforms, strike activity has been rather infrequent in Germany. This is an important difference between Germany and other countries. For example, Germany lost on average 11 days of work each year per 1.000 employees by strikes and lock-outs between 1991 and 1999 and only 5 days per 1.000 employees between 2000 and 2007. These figures compare to 40 and 32 days per 1.000 employees, respectively in the US; 73 and 103 days, respectively in France; 93 days and 30 days, respectively in the UK; as well as 158 and 93 days, respectively in Italy (Lesch 2009). Finally, the involvement of trade unions in economic decisions and social policy increased

substantially in 1998 to a high level of “regular and frequent involvement of the trade unions” (ICTWSS database) but fell again in 2002 after the election of Gerhard Schröder and the Hartz reforms. All these changes account for the changes in the overall indicator of trade union power.

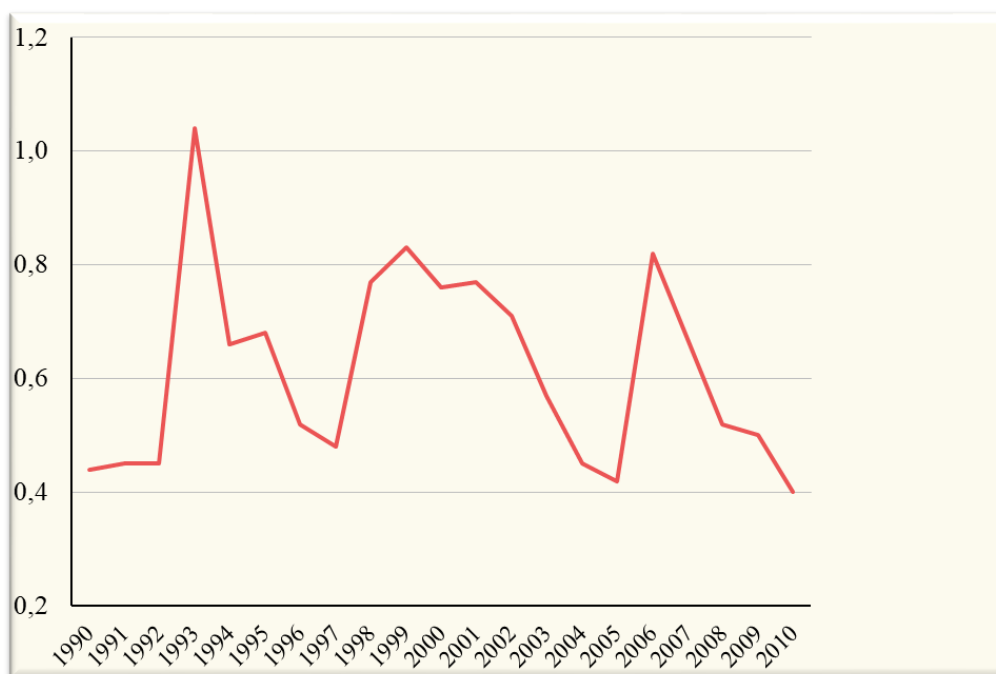


FIGURE 5.4. The evolution of trade union power in Germany between 1990 and 2010
Sources: OECD, EIRO, and Federal Employment Agency (BA); own calculations.

5.2.5 Trade union fragmentation

Probably, a more appropriate title for this paragraph would be “Trade union coordination” and not fragmentation, given that Germany has traditionally constituted the exemplar of trade union coordination. More precisely, a distinctive characteristic of the union structure is that different political and ideological wings are amalgamated in one association (known as the “principle of amalgamated unions”). This means that within the union movement there is no political or ideological fragmentation. Furthermore, in Germany traditionally trade unions negotiate wages and working conditions not only for their members but for all workers in the industry. Coverage by industrial

agreements has always exceeded trade union membership turning the collective agreement into a public good for all workers in the sector. The ICTWSS dataset has classified Italy as a labour market with “sharp (political, ideological, organisational) cleavages among union confederations associated with conflict and competition”, whereas Germany as a labour market with “low cleavages and limited competition among union confederations” and “no cleavages within confederations/among the trade unions of the same confederation”. This remarkable lack of cleavages has remained constant and equal to 1,3 throughout the whole 1990–2010 period as depicted in Figure 5.5. Again, trade union fragmentation is operationalised through an own indicator, weighted average of 4 indices: (a) the Number of Union Confederations (NUCs), (b) an index for demarcations between union confederations, (c) an index for demarcations within union confederations in the country and (d) an index for the power that the confederation has over its affiliates (e.g., in strikes). All 4 indices are obtained through the ICTWSS database and equal weights of $\frac{1}{4}$ are applied.

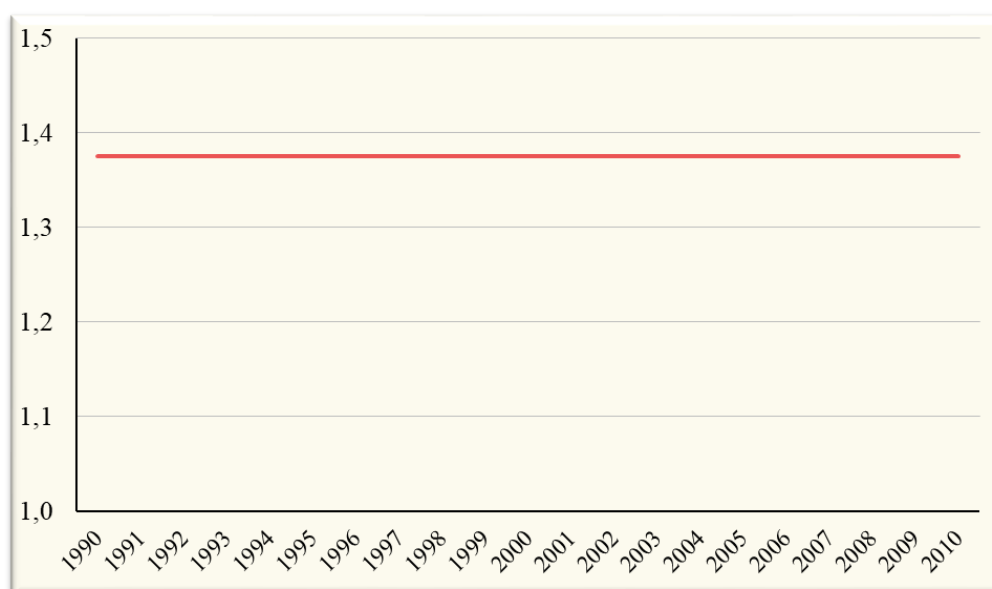


FIGURE 5.5. The evolution of trade union fragmentation in Germany between 1990 and 2010

Source: ICTWSS; own calculations.

5.3 Data, Methodology, and Variables

5.3.1 Data

For the purposes of this chapter I use longitudinal data from the German Socioeconomic panel (GSOEP). The GSOEP started in 1984 as a longitudinal survey of private households and persons in the Federal Republic of Germany. It constitutes the longest-running longitudinal study in Germany, starting with 6.000 households in 1984 and including more than 12.000 households today. I have constructed my dataset using the files BIOJOB and PBIOSPE which contain detailed occupational biographies and combined them with individual socioeconomic characteristics from the core files. To ensure comparability with the ISTAT and the BHPS datasets I have restricted my dataset to the period 1990–2010. Furthermore, since I focus only on the labour market, I have excluded those disabled and those below 15 or above 65. This final dataset consists of 93.543 individuals. Out of them 50.585 have at least one job episode in their life course until the day of the episode and they experience in total 73.015 job changes. The maximum number of job episodes that an individual has in his life course is 15. Finally, as analysed in Section 3.3.1 and in Section 5.2, for the labour market institutions I have constructed my own indicators using data from the OECD and ICTWSS databases.

5.3.2 Descriptive analysis and statistics

What kind of labour market transitions do we observe in Germany, how many jobs per worker in his/her work life and who holds these jobs?

The German labour market seems more mobile and dynamic than the Italian one. In contrast to Italy where the maximum number of job episodes in the life course of an individual in the sample was 9, in the German sample the maximum number of job episodes in the sample is 15 job episodes, however the latter is quite rare. From Table 5.3 which depicts the maximum number of

job episodes accumulated in the working lives of the subjects until the survey date, we can see that only 0,02% of the sample had more than 11 job episodes. However, in Germany only 38,12% of the individuals in the sample had only one job in their lifetime as opposed to 49,41% of Italians (see Chapter 4). Furthermore, 85,6% of the German sample had a maximum of 3 job episodes in their working lives as opposed to the 90% of the Italian sample.

TABLE 5.3. Number of job episodes accumulated in the lifetime

Number of job episodes	Percentage of people (%)
1	38,12
2	31,51
3	15,97
4	7,56
5	3,76
6	1,65
7	0,81
8	0,33
9	0,15
10	0,07
11	0,04
12	0,01
13	0
14	0
15	0,01

Source: GSOEP; own calculations.

Tables 5.4 and 5.5 demonstrate the types of labour market episodes obtained in the individual life course and their maximum duration, respectively. Compared to the Italian, the German labour market seems to perform worse in terms of the types of labour market episodes but better in terms of their duration. In particular, Germany has had overall more employment episodes

(62,35% as opposed to 55,50% in Italy). Nevertheless, it has also a substantially higher percentage of both unemployment episodes (18,62% as opposed to 17,12%) and inactivity episodes (11,4% as opposed to 7,90%). This can be accounted by the fact that Italy has a disproportionately higher number of pensioners and people on disability benefits that were ultimately excluded from the analysis. Nevertheless, given that Germany experienced a big shock in the labour market after the reunification and also given that the datasets differ with regards to the number of people in different birth cohorts, no conclusions can be drawn if we don't see who had these episodes, when did they occur and how they have evolved over time.

With regards to the duration of the spells on the other hand, Germany seems to perform better than Italy. The average duration of employment and unemployment episodes is 10 years and 1 year, as opposed to the 2,5 years and 2 years in Italy, respectively. The average duration of inactivity spells in Germany is 20 months as opposed to the 4 years in Italy.

TABLE 5.4. Labour market episodes

Type of labour market episode	Percentage (%) of total labour market episodes
Employment	62,35
Unemployment	18,62
Inactivity—working age	11,4

Source: GSOEP; own calculations.

TABLE 5.5. Duration of labour market episodes

Cumulative percentage (%)	Employment spells duration (months)	Unemployment spells duration (months)	Inactivity spells duration (months)
10	1	2	1
25	12	3	7
50	60	12	20
75	180	24	120
90	372	60	300
99	427	148	428

Source: GSOEP; own calculations.

Exactly as in Italy, women have on average a higher number of job episodes in their working lives. More precisely, as we can see from Table 5.6 only 23,70% of women in the sample had only one job in their working lives as opposed to the 50,99% of men and 11,77% of women had 4 job episodes as opposed to only 3,80% of men. Furthermore, the percentages of women with 5 and 6 job episodes in the sample equal 4 times the respective percentages of men, while the percentage of women with 7 job episodes is 7 times the respective percentage of men. Table 5.6 demonstrates that women are clearly more volatile in the German labour market. Table 5.7 depicts the number of labour market episodes by sex and age and Tables 5.8 and 5.9 do the same by birth cohort.

TABLE 5.6. Number of job episodes by sex

Number of job episodes	Men (%)	Women (%)
1	50,99	23,70
2	31,83	31,15
3	10,78	21,78
4	3,80	11,77
5	1,57	6,22
6	0,66	2,76
7	0,22	1,48
8	0,09	0,59
9	0,01	0,31
10	0,02	0,12
11	0,02	0,07
12	NA	0,03
13	NA	0,01
14	NA	NA
15	NA	0,01

Source: GSOEP; own calculations.

TABLE 5.7. Labour market episodes by sex and age

Type of labour market episode	Men (%)	Women (%)	Old (>35) (%)	Young (≤ 35) (%)
Employment	68,05	58,61	41,56	72,71
Unemployment	18,38	10,49	18,17	11,38
Inactivity— working age	3,75	24,74	17,57	15,84

Source: GSOEP; own calculations.

We can see that—similar to Italy—less women are employed but also less women are unemployed compared to men. Furthermore, exactly as in Italy, the “inactivity” status is much more prevalent among women than men but this is likely to have changed over time. This is why below I conduct the same analysis among cohorts to check whether the aforementioned results capture simply cohort effects. When we distinguish on the basis of age, unemployment

is more prevalent among older ages. Thus, someone must be careful when comparing labour market outcomes among different cohorts since these are not observed for the same age spans in the sample. Furthermore, in the two youngest birth cohorts there are almost no pensioners at all, but this is totally expected given that these people were all below the age of 45 when the interview was conducted and thus below the legal retirement age. More generally, the youngest cohorts had not yet reached the age of the oldest and thus we don't know their labour market episodes and outcomes at the equivalent ages as well as the accumulated number of job episodes, and any comparison might simply capture cohort effects. For this reason, in order to enable the comparison, I restrict all cohorts at the age of 35 and compare their job and labour market episodes until that age, since all cohorts are observed until that age. From Table 5.8 and Table 5.9, we can observe the same pattern as in Italy over time. There has been an increase in Germany over time in terms of the number of jobs episodes as we move from younger to older birth cohorts as well as an increase in unemployment but also a decrease in employment and inactivity episodes below the age of 35.

TABLE 5.8. Number of job episodes until the age of 35 by birth cohort

Number of job episodes	Birth Cohort 1945–49 (%)	Birth cohort 1955–59 (%)	Birth cohort 1965–69 (%)	Birth cohort 1975–79 (%)
1	56,27	49,06	35,46	33,40
2	30,08	31,8	35,72	31,31
3	9,48	11,88	16,09	17,82
4	2,78	4,60	7,36	8,90
5	0,82	1,67	3,22	4,67
6	0,35	0,55	1,20	2,07
7	0,15	0,27	0,51	1,05
8	0,03	0,09	0,16	0,43
9	0,01	0,05	0,15	0,19
10	NA	0,01	0,07	0,09
11	NA	0,02	0,06	0,05
12	NA	NA	0,01	0,02

Source: GSOEP; own calculations.

TABLE 5.9. Labour market episodes until the age of 35 by birth cohort

Type of labour market episode	Birth cohort 1945–49 (%)	Birth cohort 1955–59 (%)	Birth cohort 1965–69 (%)	Birth cohort 1975–79 (%)
Employment	77,58	72,02	70,07	69,78
Unemployment	4,51	10,61	15,38	19,72
Inactivity—working age	17,91	17,38	14,54	10,50

Source: GSOEP; own calculations.

5.3.3 Methodology and variables

As described in Chapter 2, a multiple-events exponential model is the most appropriate for the analysis of labour markets transitions (Blossfeld and Rohwer 1995, 1-32). Thus, I estimate a piecewise constant exponential model for the effect of labour market institutions on the number of job episodes and labour market transitions. This is a competing risks model, since the transition from employment to unemployment competes with other possible destination states, such as inactivity. I use two different state spaces: one comprising tran-

sitions among job episodes and another one comprising labour market transitions. In both cases the process time is continuous.

I specify the rates of exit from a job or a labour market status as a function of time-constant (X_1) and time-dependent covariates ($X_2(t)$) (see Blossfeld et al. 1989; Blossfeld and Huinink 1991; Tuma and Hannan 1984):

$$r(t|X_1, X_2(t)) = \exp(\beta_1 * X_1 + \beta_2 * X_2(t))$$

In an exactly similar way to Chapter 4, to introduce the time-dependent labour market institutions into the rate equation, I use the method of episode-splitting every 12 months since the institutions change on average values at an annual basis. The other explanatory variables include measures of age, education, sex, geographical region and labour market experience. Given that the study examines different cohorts, one has to also control for the fact that when the survey was conducted (2009) each of the cohorts was examined over different age spans and until different ages. To do so, I create 4 different birth cohort dummies: one for those who were born in 1975–79 and thus can be observed until the age of 30; those who were born in 1965–1969 and thus can be observed until the age of 40; those who were born in 1955–59 and thus can be observed until the age of 50 and finally those who were born in 1945–49 and thus can be observed until the age of 60.

5.3.3.1 First state space: Job-to-job transitions

With this state space the risk set includes all those at the risk of losing their current job i.e. all those who are currently working. The process time is continuous and the job time is defined by the job entry. Every job episode starts at the time relative to labour market entry and the first job episode by default starts at time zero, when the subject enters the risk set for the first time. With this state space individuals are not in the risk set in the period within job episodes, they are not exposed to the risk of an event (job-to-job transition). In total there are 50.597 individuals with at least 1 job episode in their lives and

they experience in total 73.015 failures i.e. job-to-job transitions. This is a larger number than the one in the Italian sample (14.997 individuals with a total number of 58.452 job-to-job transitions). Every person in the risk set has on average 1,44 job episodes in his life with a maximum of 15 job episodes. The average job change in the sample is observed after 88 months (i.e. approximately 7 years), whereas the last exit from a job is observed after a duration of 400 months (i.e. approximately 33 years). Figure 5.6 depicts the Kaplan-Meier survivor function for the average person in the sample, while Figure 5.7 depicts the Kaplan-Meier survivor functions of men and women separately. Similarly to the Italian case, there are statistically significant differences in the job-to-job transitions of men and women, with the latter having a lower rate of such transitions.

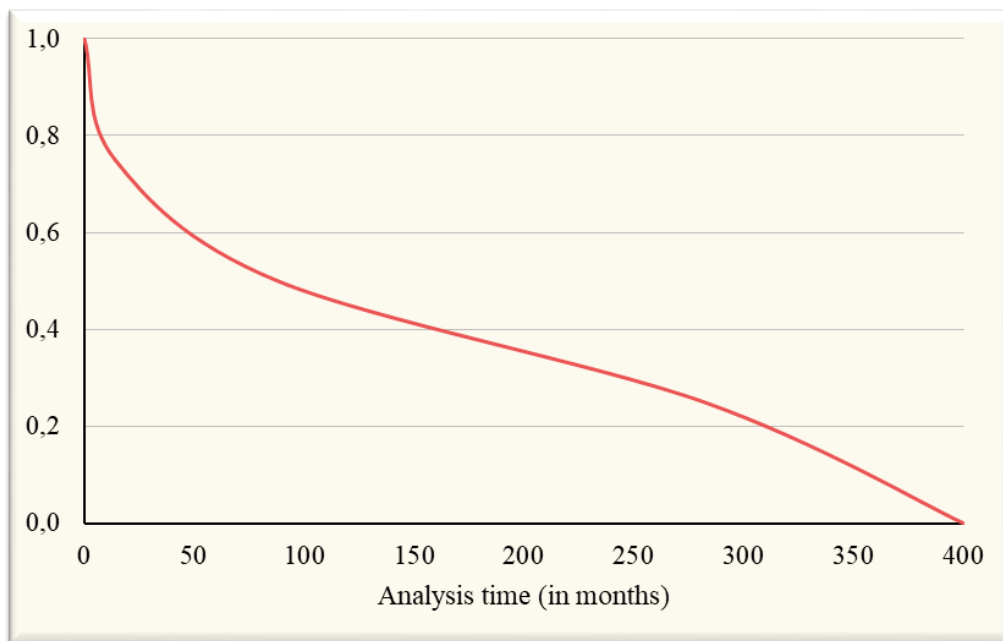


FIGURE 5.6. Kaplan-Meier estimates of the survivor function for the job-to-job transitions of the average worker in the sample

Source: GSOEP; own calculations.

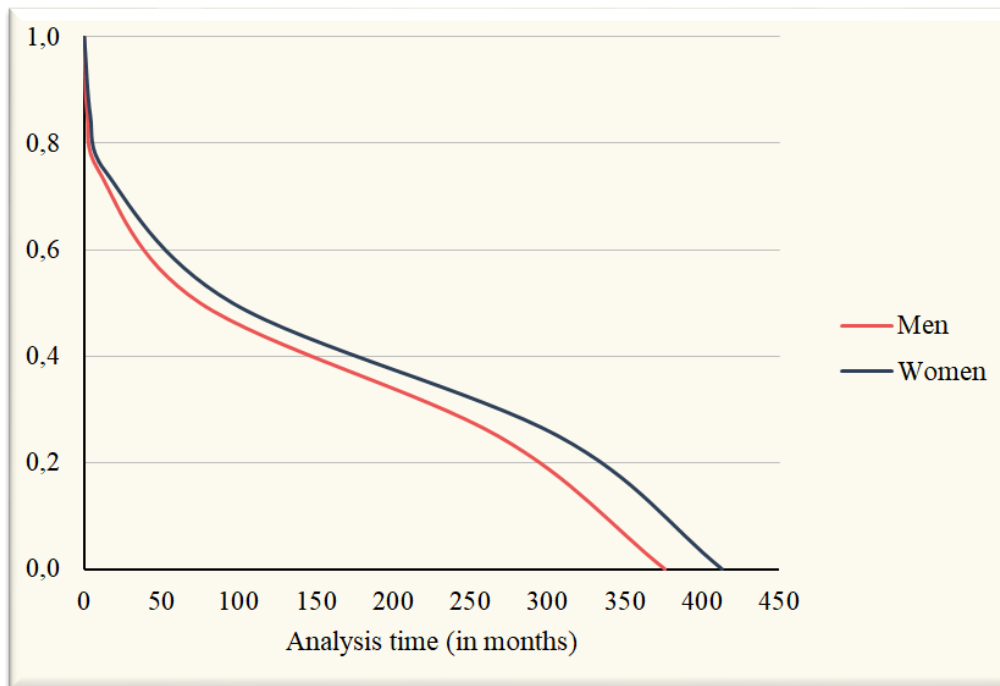


FIGURE 5.7. Kaplan-Meier estimates of the survivor functions for the job-to-job transitions of men and women separately

Source: GSOEP; own calculations.

5.3.3.2 Second state space: Labour market episodes and transitions in the labour market

Exactly as in Chapter 4, the second state space comprises 3 transitions within the labour market i.e. transitions from employment to unemployment and vice versa as well as transitions from inactivity to employment.

Transitions from employment to unemployment. This risk set contains all those who are currently employed. This amounts to 47.346 individuals with 8.366 failures i.e. transitions from employment to unemployment. The average transition to unemployment in the sample is observed after 54 months (i.e. 4,5 years) in employment while the maximum time for this transition in the sample is after 427 months (i.e. approximately 35 years) in employment. Figure 5.8 depicts the Kaplan-Meier survivor function for the average person in the sample, while Figure 5.9 depicts the Kaplan-Meier survivor functions of men and women separately.

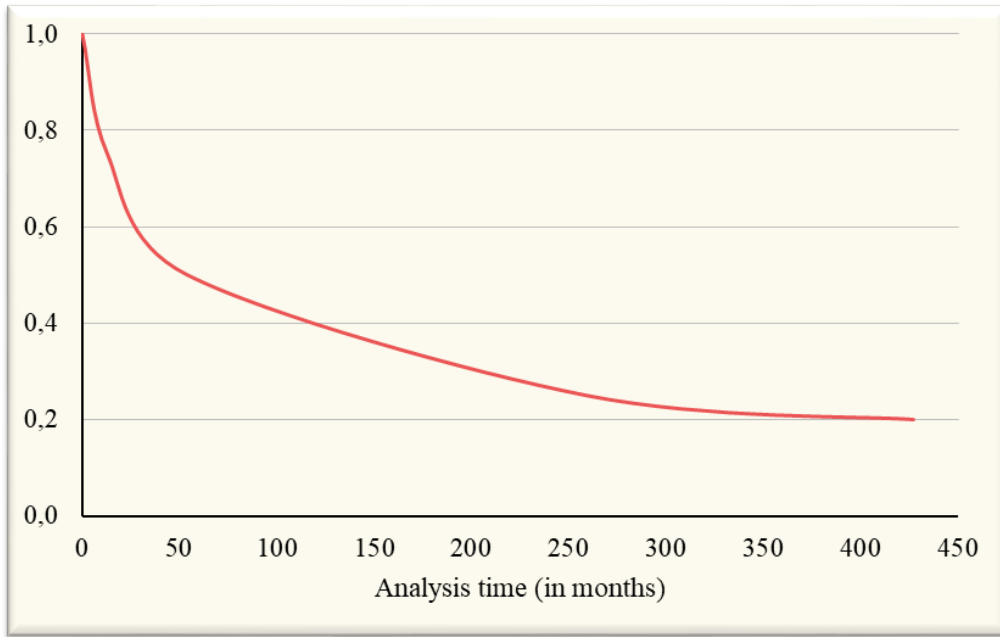


FIGURE 5.8. Kaplan-Meier estimates of the survivor function for the transition from employment to unemployment of the average worker in the sample

Source: GSOEP; own calculations.

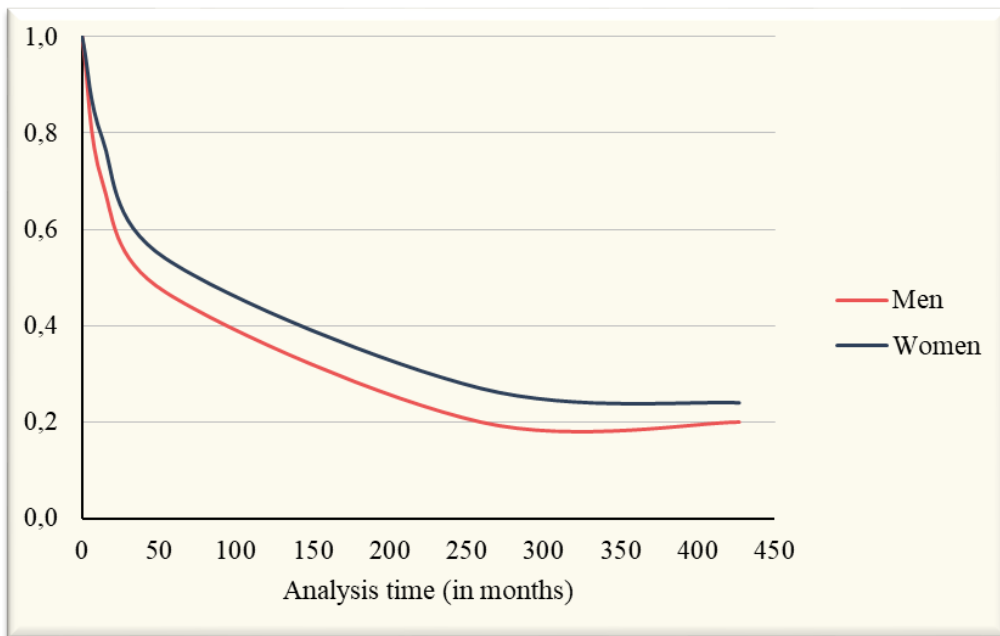


FIGURE 5.9. Kaplan-Meier estimates of the survivor functions for the transition from employment to unemployment of men and women separately

Source: GSOEP; own calculations.

Transitions from unemployment to employment. This risk set now includes all those that are currently unemployed. This amounts to 12.741 individuals with 4.828 failures i.e. transitions from unemployment to employment. The average transition in the sample is observed after 1 year in unemployment while the maximum time for this transition in the sample is after 148 months (i.e. approximately 12 years) in unemployment. Figure 5.10 depicts the Kaplan-Meier survivor function for the average person in the sample, while Figure 5.11 depicts the survivor functions of men and women separately. Again there are large differences between men and women, with women being less likely to find a job when being unemployed.

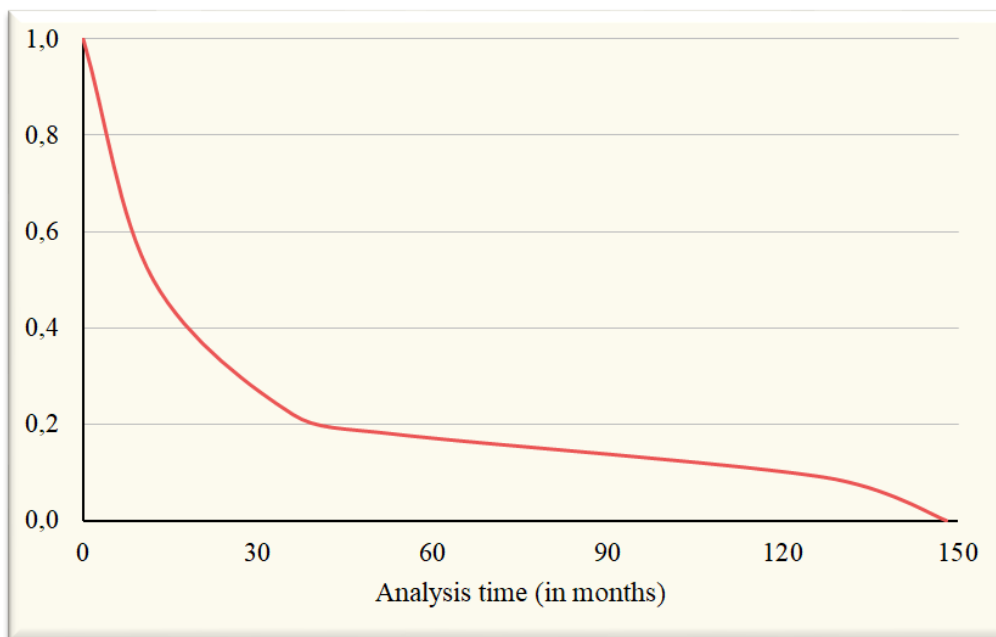


FIGURE 5.10. Kaplan-Meier estimates of the survivor function for the transition from unemployment to employment of the average worker in the sample

Source: GSOEP; own calculations.

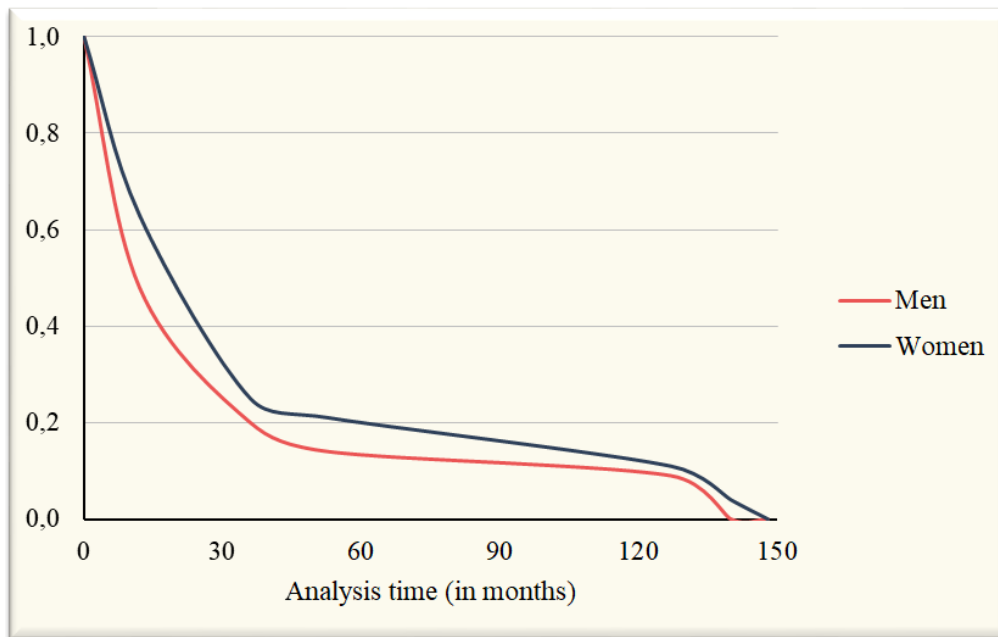


FIGURE 5.11. Kaplan-Meier estimates of the survivor functions for the transition from unemployment to employment of men and women separately

Source: GSOEP; own calculations.

Transitions from inactivity to employment. In this risk set there are 14.198 individuals with 3.215 failures i.e. transitions from inactivity to employment. The average transition to employment in the sample is observed after 20 months (i.e. approximately 2 years) in inactivity while the maximum transition is observed after 301 months (i.e. approximately 25 years) in inactivity. Figure 5.12 depicts the Kaplan-Meier survivor function for the average person in the sample, while Figure 5.13 depicts the Kaplan-Meier survivor functions of men and women separately. As opposed to the previous state space now women seem more likely to move to employment than men. Nevertheless, one cannot compare men to women in this risk set given that the number of the former is too small. Among those who made the transition only 3,48% are men and 96,52% are women.

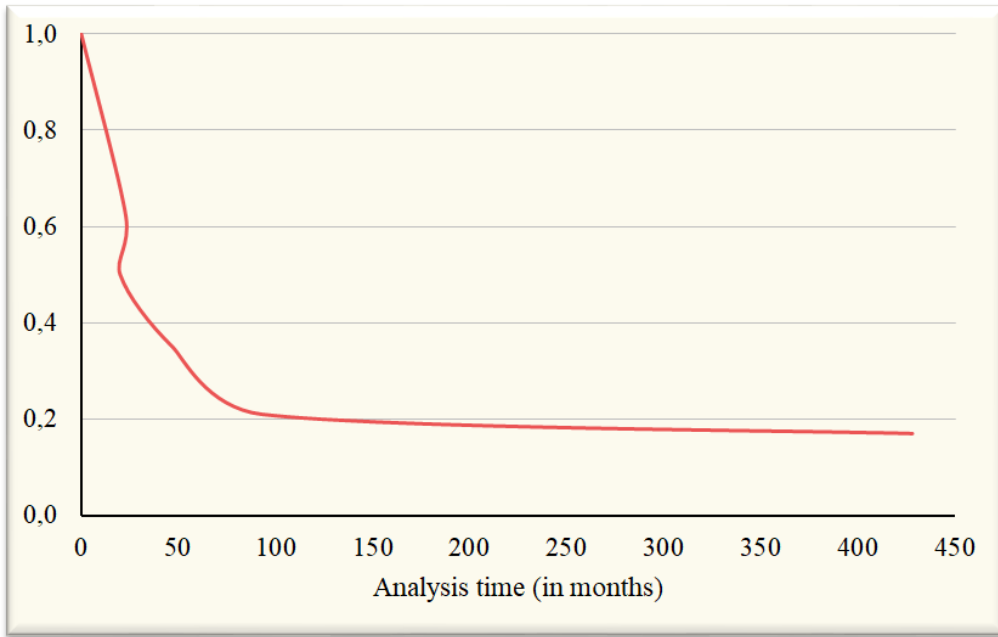


FIGURE 5.12. Kaplan-Meier estimates of the survivor function for the transition from inactivity to employment of the average worker in the sample

Source: GSOEP; own calculations.

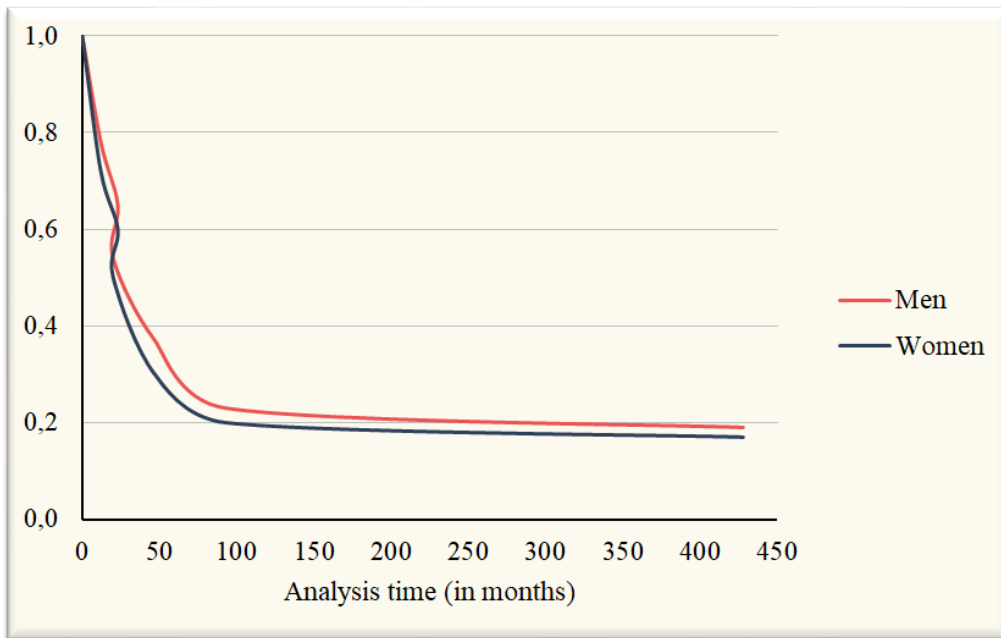


FIGURE 5.13. Kaplan-Meier estimates of the survivor functions for the transition from inactivity to employment of men and women separately

Source: GSOEP; own calculations.

In conclusion, we can see that in comparison to Italy, people in the German sample move more quickly both from employment to unemployment but also from unemployment back to employment. Furthermore, in both countries women are not more likely than men to move to unemployment but they are much more likely to exit the labour market and become inactive.

5.4 Estimation Results

Before proceeding to the estimation results it should be mentioned that, as opposed to the other 2 countries, the effect of trade union fragmentation in Germany cannot be estimated since this institution has remained constant throughout the whole period examined and there is no variation in it.

Overall, the results presented below as opposed to the case of Italy, in Germany they only partly confirm the research hypotheses formulated in Section 2.3. More precisely, the results for EPL are fully aligned with all the research hypotheses and as opposed to Italy, now EPL has also a negative effect on the transition from inactivity to employment, as expected. The positive effect of the unemployment benefit on the transition from unemployment back to employment in contrast to Italy is also aligned with our hypothesis that conditionality and activation in conjunction with high PES efficiency can play a pivotal role in bringing the unemployed back to work. In support of our research hypothesis the wage bargaining has a positive effect on job-to-job transitions but it has no statistically significant effect on all other transitions. Finally, trade union power has no statistically significant effect in any of the four transitions. Again, as in the case of Italy, this does not necessarily mean that our research hypotheses were wrong and should be rejected but it could be attributed to low degrees of freedom and/or on the low variation in labour market institutions over time. Chapter 7 will amend this by pooling all the 3 countries together and thus increasing the number of observations and the variation over time.

5.4.1 First state space: Job-to-job transitions

Table 5.10 depicts the results from the estimation of the PCE model on job-to-job transitions. The negative and highly statistically significant effect of the two oldest birth cohorts (1945–49, 1955–59) implies that the youngest cohort (1975–79) is more mobile (i.e. has a higher number of job-to-job transitions). Furthermore, job mobility increases with age and previous number of jobs and these effects are statistically significant. Younger people have fewer exits from jobs. Women are also less likely than men to move to another job.

With regards to labour market institutions, trade union power and the unemployment benefit system have no statistically significant effect on job-to-job transitions. EPL and the wage bargaining both reduce job-to-job transitions, supporting my research hypotheses. More precisely and similarly to Italy, higher EPL as expected decreases the incentives of a job change. This however, is an average effect that may “mask” substantial differences among typical and atypical workers and thus, it should be interpreted with caution. Furthermore, in accordance with my research hypothesis, in a country with a sectoral and highly concentrated and coordinated wage bargaining such as Germany, an increase in wage bargaining would lead to less potential wage gains from job changes and thus to lower job-to-job transitions.

TABLE 5.10. The effect of labour market institutions on job-to-job transitions. Estimated coefficients from a piecewise constant exponential model.

Labour Market Institutions	EPL	-0,260*** (-4,98)
	Trade union power	-0,00104 (0,72)
	Wage bargaining	-2,041*** (-6,71)
	Unemployment benefit	-0,629 (-1,19)
Individual Characteristics	Birth cohort 1945–49	-0,417*** (10,93)
	Birth cohort 1955–59	-0,249*** (8,49)
	Birth cohort 1965–69	0,00154 (0,07)
	Number of previous job episodes	0,190*** (62,41)
	Female	0,0563** (-3,03)
	Young	-3,441*** (-14,11)
Macroecon. Variables	GDP growth rate	0,0608 (0,10)
	Unemployment rate	1,711*** (3,34)

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

5.4.2 Second state space: Labour market episodes

The effect of labour market institutions on the transition from employment to unemployment and vice versa. Table 5.11 depicts the results from the estimation of the PCE model on the 2 aforementioned transitions in the labour market. Gender has a highly statistically significant effect on both transitions: women are less likely than men to become unemployed if they are employed and they are more likely to find a job if they are unemployed. Young people are also more likely to become unemployed but they are more

likely as well to find a job if they are unemployed. In accordance with economic theory higher unemployment leads to less transitions both from employment to unemployment and from unemployment back to employment.

With regards to labour market institutions, trade union power decreases both the probability of a transition from employment to unemployment but—as opposed to Italy—has not statistically significant effect on the reverse transition. This could be attributed to the high coordination among trade unions in Germany as opposed to the fragmentation in Italy. Similarly, employment protection legislation has a negative effect on both transitions but only the effect on the transition from employment to unemployment is statistically significant. The effect of the wage bargaining system is not statistically significant on neither of the two transitions in the labour market. Surprisingly, and in contrast to my research hypothesis, the unemployment benefit has no statistically significant effect on the transition from employment to unemployment but it has a positive effect on the transition from unemployment back to employment. In contrast to economic theory a higher unemployment benefit provision does not provide disincentives to people. This however, could be accounted by the operationalisation of the unemployment benefit indicator which captures not only the replacement rate and the duration but also conditionality and activation. Germany is a country with high conditionality and activation, thus a further increase will lead to more people exiting unemployment (or to people exiting unemployment quicker).

TABLE 5.11. The effect of labour market institutions on the transitions from employment to unemployment and vice versa. Estimated coefficients from a piecewise constant exponential model.

		Origin state: Employment	Origin state: Unemployment
		Destination state: Unemployment	Destination state: Employment
Labour Market Institutions	EPL	-0,857*** (-5,15)	-0,0569* (-2,08)
	Unemployment benefit	-8,338 (-0,62)	2,491** (03,28)
	Wage bargaining	-0,111 (-1,74)	-0,034 (-0,69)
	Trade union power	-7,281*** (-3,99)	-1,568 (-1,11)
Individual Characteristics	Birth cohort 1945–49	0,0208* (2)	-0,099 (-1,04)
	Birth cohort 1955–59	0,0416 (0,36)	0,222** (2,85)
	Birth cohort 1965–69	-0,626*** (-7,64)	-0,182** (-2,71)
	Female	-0,254*** (-5,90)	0,1** (2,61)
	Young	0,689*** (9,78)	0,577*** (12,73)
Macrocon. Variables	GDP growth rate	-0,118 (-0,05)	3,039 (1,61)
	Unemployment rate	2,01* (2,31)	-0,745*** (-6,33)

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

The effect of labour market institutions on the transition from inactivity to employment. Table 5.12 presents the results from this estimation. Like in the previous chapter, the same caveat applies i.e. that the most important factor, family policies cannot be controlled for over time since such an indicator does not exist. Furthermore, exactly as in the Italian case—with the exception of EPL—none of the other labour market institutions has a statistically significant effect. Quite surprisingly, EPL increases transitions from in-

activity to employment. This contradicts my research hypothesis, according to which, more stringent EPL will make it more difficult for inactive to enter the labour market. The indicator for the unemployment benefit is dropped due to multicollinearity.

TABLE 5.12. The effect of labour market institutions on the transition from inactivity to employment. Estimated coefficients from a piecewise constant exponential model.

		Origin state: Inactivity
		Destination state: Employment
Labour Market Institutions	EPL	-0,549* (-2,28)
	Unemployment benefit	Dropped due to collinearity
	Wage bargaining	0,106 (1,6)
	Trade union power	-1,89 (-1,01)
Individual Characteristics	Birth cohort 1945–49	-0,319* (-2,14)
	Birth cohort 1955–59	0,0877 (0,91)
	Birth cohort 1965–69	-0,078 (-1,26)
	Female	-0,487*** (-6,50)
	Young	0,676*** (11,33)
Macroecon. Variables	GDP growth rate	2,049 (0,84)
	Unemployment rate	2,401 (0,84)

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

United Kingdom

“There are significant differences between the American and European version of capitalism. The American traditionally emphasizes the need for limited government, light regulations, low taxes and maximum labour-market flexibility. Its success has been shown above all in the ability to create new jobs, in which it is consistently more successful than Europe.”

—Margaret Thatcher, *The Path To Power*

6.1 Introduction: The UK Labour Market from Thatcherism to the New Labour

The UK is a large, well performing economy with a good business environment. It ranks 7th globally in the World Bank’s “ease of doing business” index (World Bank 2016) and it is the third largest economy in the EU after Germany and France. It has always lied much closer to the American version of capitalism as delineated in Thatcher’s “The Path to Power” (introductory quote) with its low levels of regulation in product and labour markets and high flexibility, rather than to the European. More precisely, the UK has the highest job mobility across Europe with 1,16 million job changes in 2013 and over 10 million people moving between unemployment, employment and inactivity each year (Eurostat). Despite the variation in typologies and controversy in the scholarly literature, there is remarkable consensus in the classification of the UK as a “liberal market economy”, which compared to all other European countries in general and Germany in particular, is characterized by low levels of employment protection and limited social security, decentralised wage bargaining and lack of coordination (Hall and Soskice 2001); flexible employment and low trade union power (Pendleton and Gospel 2005); and a low-skill

base of the production sector (Finegold and Soskice 1988). The latter can be—at least partly—attributed to the non-developed vocational training, as opposed to Germany where vocational training is very developed and plays a crucial role. In that sense, the UK is closer to the liberal market economy of the US than to the other European countries.

In addition to that the UK is characterized by high-quality public administration, deep capital markets, and strong universities. These factors are conducive to economic efficiency, good labour market performance and a high employment rate. The employment rate has been increasing since 1977 and reached a record high of 77,3% in 2017, slightly below the German rate of 77,9% and substantially above the Italian rate of 64,9% (Eurostat). The UK has also the highest youth employment rate among the three countries (equal to 58,4% in 2017). The unemployment rate has declined substantially since the late 1970s and it is now at its lowest level, equal to 4,3% in 2017, slightly above the 4,1% in Germany and far below the 11,7% in Italy (Eurostat). With regards to youth unemployment, the UK rate stood at 7,6% in 2017 i.e. above the German of 3,5% but below the Italian of 10% (Eurostat).

This Chapter examines in depth the labour market institutional setup of the UK and its evolution over time as well as its effect on labour market transitions. It is organized as follows: Section 6.2 presents an overview of the historical evolution of the UK labour market from the Thatcher era until today. Section 6.3 presents the five labour market institutions of interest and their evolution throughout the 1990–2010 period. Section 6.4 presents the data as well as some descriptive statistics, while Section 6.5 presents the findings from the estimations and concludes.

6.2 Historical Evolution of the UK Labour Market

“The UK welfare state germinated in the social thought of late Victorian liberalism, reached its infancy in the collectivism of the pre—and post—Great War statism, matured in the universalism of the 1940s and

flowered in full bloom in the consensus and affluence of the 1950s and 1960s. By the 1970s it was in decline, like the faded rose of autumn. Both UK and US governments are pursuing in the 1980s monetarist policies inimical to welfare.”

—Derek Fraser, *The Evolution of the British Welfare State*

If Bismarck is lying behind the ideological premises and the institutional architecture of the German welfare system, then Beveridge is clearly the one behind the British one. His vision for the welfare state was thoroughly outlined in his 1942 report “Social Insurance and Allied Services” (known as the “Beveridge Report”). This served as the basis for the British post-World War II welfare state, put in place by the Labour government elected in 1945.

Beveridge’s main aim was the provision of basic income security. He recommended that the government should find ways of fighting the five “Giant Evils” in society: squalor, ignorance, want, idleness, and disease, and proposed widespread reform to the system of social welfare to address them. According to his proposal, all people of working age would pay a weekly national insurance contribution and in return, benefits would be paid to those who are sick, disabled, unemployed, retired or widowed.¹⁷ Beveridge opted for a welfare system that would provide a minimum standard of living “below which no one should be allowed to fall”.

In the 1945 general election, the Conservative Party under Winston Churchill was defeated and the new Labour Prime minister, Clement Attlee, implemented the welfare state outlined in the Beveridge Report. This included the set up of a National Health Service in 1948 with free medical treatment for all. A national social security system was also introduced for the first time with flat rate benefits for each category of employee and flat rate contributions which had to be paid by the employee, the employer and the state. This scheme was complemented by a means-tested safety net of social assistance.

¹⁷ <https://www.sochealth.co.uk/national-health-service/public-health-and-wellbeing/beveridge-report/>.

Risks were pooled across the whole social spectrum and everybody paid and received the same benefits.

Nevertheless, after the implementation of the Keynesian policies problems arose in the British economy by the late 1950s. Britain was growing more slowly than any of its competitors. The government in the early 1970s, convinced that traditional Keynesianism did not work, proceeded to retrenchment and cuts. Unemployment grew to one million. Britain's economy was so weak that the newly elected Prime Minister Callaghan told his Cabinet members in 1974 that "If I were a young man, I would emigrate" (Beckett 2009, 175). His government continued a fight against inflation upon election in February 1974 but still inflation peaked at 26,9% in August 1975. As part of the campaign to bring down inflation, the government introduced an incomes policy setting a maximum threshold for pay rises of 5%. The trade unions rejected the limit and insisted on a return to free collective bargaining as they were promised. Unexpectedly, on 7 September, Callaghan announced that he would not be calling a general election that autumn but was seeking to go through the winter with continued pay restraint so that the economy would recover. This led to the notorious Winter of Discontent, during which there were widespread strikes by trade unions demanding larger pay rises. The government's inability to contain the strikes and the social unrest contributed to a large extent to Margaret Thatcher's Conservative victory in the 1979 general election and its consequent legislation to restrict unions.

6.2.1 The Thatcher period

An overhaul of the whole labour market and welfare system followed with the rise of Thatcher in power in 1979. The new government's first White Paper began with the bold statement that "Public expenditure is at the heart of Britain's present economic difficulties". In Thatcher's own words: "The majority of the population should be encouraged to provide for themselves and their welfare needs through the market. Those who are temporarily unable to

fend for themselves and their families should be helped back to self-reliance by subtler and more realistic measures than the welfare state has ever managed to provide” (Mau 1994). Furthermore, as Thatcher herself wrote in her “Path to Power” (1994):

“As Prime Minister between 1979 and 1990 I had the opportunity to put these convictions into effect in economic policy. We intended policy in the 1980s to be directed towards fundamentally different goals from those of most of the post-war era. We believed that since jobs (in a free society) did not depend on government but upon satisfying customers, there was no point in setting targets for ‘full’ employment. Instead, government should create the right framework of sound money, low taxes, light regulation and flexible markets (including labour markets) to allow prosperity and employment to grow.”

Indeed, under Thatcher the UK introduced a major program of labour market deregulation that rendered the UK one of the least regulated labour markets in the OECD (Sharp and Walker 1991). As outlined above, her reforms aimed at a more flexible labour market, where wages depended on company and individual performance rather than on a pre-agreed wage and where labour was highly mobile and firms responded rapidly to market signals.

A series of measures (8 major Acts between 1980 and 1995) imposed several restrictions on industrial action, trade union activities and organisation and trade union power. The reasons for which unions could legitimately engage in industrial action were now tightened: industrial action must first be approved by secret ballot and if approved, seven days of notice should have been given before the industrial action was initiated. Secondary action, including picketing, became illegal. In perhaps the most important provision, unions became now liable for fines and civil damages arising out of industrial action. Closed shops were abolished by the legal recognition of the right not to belong to a trade union. The period following 1979 saw a dramatic fall in union membership in the UK: from 11,7 million union members in 1979, its

highest level ever, to 7,2 million in 1996. This represents a decline in union density from 50% to 31%.

Another set of measures introduced by Thatcher were measures to enhance self-employment, privatisation of public companies, reduction of unemployment benefits and other social receipts relative to wages as well as tax breaks to increase use of private pensions. Blanchflower and Freeman (1993) find that the Thatcher reforms succeeded in their goal of reducing union power, marginally increased employment and significantly increased self-employment. Furthermore, they were accompanied by a substantial improvement in the labour market position of women. But the reforms failed to improve the responsiveness of real wages to unemployment, they were associated with a slower transition from unemployment to employment for men, a loss in full-time jobs for male workers and dramatic increases in wage inequality (ibid).

6.2.2 The New Labour. What's "new" about the New Labour?

“There will be no going back. The days of strikes without ballots, mass picketing, closed shops and secondary action are over.”

—Tony Blair, *Fairness at Work*

The Labour party under Tony Blair elected in 1997 had the opportunity to reverse all the reforms carried out by the Thatcher and Major governments. However, it did not do so and chose instead a “middle path between the two extremes of trade union strength in the 1970s and Thatcher’s across-the-board deregulation in the 1980s” (Emmenegger 2013, 208). Unlike the 1970s, the trade unions were not in a position to coerce the government to enact trade union-friendly policies. The electoral victory of Tony Blair in 1997 and the return to office (after 18 years) of the Labour Party did not lead to a radical change in labour market policy. In fact, Blair used the name “New Labour”, to distance the Party from policies which it had been traditionally associated with in the past, such as high income taxes to finance high public expenditure.

Although under Blair the New Labour indeed did not proceed to income tax rises and adhered to the previous, Conservative spending, the Party did enact important, socially progressive legislation. In 1999 the “Employment Relations Act” and the “Unfair Dismissal and Statement of Reasons for Dismissal Order” were introduced which contained a series of important measures such as the re-introduction of the statutory recognition of trade unions, the reduction of the qualifying period for general unfair dismissal rights from 2 years to 1 and the large increase in the compensation for unfair dismissal (from £12.000 to £50.000). The 2000 part-time workers regulations prohibited the less favourable treatment of part-time workers compared to full-time ones.

Arguably the most important policy in the labour market during the first New Labour government were the New Deal Programmes, still in place until today. A long-standing issue facing the UK labour market have been skills mismatches. To address this, the New Deals were workfare programmes introduced in 1998 with the main target of moving people from social security benefits into work through training and subsidies for employers. In the most comprehensive statement of its views on welfare, the March 1998 Green Paper, stated that: “The new welfare state should help and encourage people of working age to work where they are capable of doing so” and the relevant chapter entitled “The importance of work” starts with the statement that, “The Government’s aim is to rebuild the welfare state around work”. Although originally targeting the young unemployed (18- to 24-year-olds), the New Deal programmes subsequently extended to other groups. In 2002 the New Deal was £1,3 billion and included: (a) the New Deal for Young People (NDYP) which received by far the greatest proportion of New Deal funding; (b) the New Deal 25+ which targeted those equal or older than 25 and unemployed for 18 months or more; (c) the New Deal for Lone Parents; (d) the New Deal for the Disabled and (e) the New Deal 50+ targeting those above 50.

By extending the New Deals to the disabled and lone mothers the government aimed at addressing the issue that on a cross-OECD comparison the

UK displayed very high inactivity rates due to disability and lone parenting. Thus, for the provision of the Incapacity Benefit for the disabled, a Personal Capability Assessment (PCA) was introduced. The second group of claimants identified in 2006 as requiring further governmental attention were the approximately 750.000 lone parents on income support. The employment rate of lone parents was only 56,6% i.e. much lower than the 75,5% employment rate of the whole UK population but also lower than any other EU Member State with the exception of the Netherlands. According to the new legislation every lone parent entitled to the benefit was subject to attending a work-focused interview every six months. Furthermore, a premium of £20 per week was introduced for lone parents taking up a work activity proposed in the work-focused interview.

Another important measure in the labour market was the introduction of the national minimum wage (NMW) in 1998. The initial NMW was set at £3,60 per hour for those aged 22 and over and at £3 for those aged 18–21, as from April 1999, and there was no automatic indexation. The government estimated that 2 million workers benefited from the initial introduction of the NWM and a significant proportion (68% of all beneficiaries) were women. Despite the absence of indexation the NMW has been increasing every year, following the recommendations of the Low Pay Commission. More precisely, in 2005 it stood at £5,05 for those 22 and over, and £4,25 for those 18–21, in 2010 it had increased to £5,93 for those 22 and over and £4,92 for those 18–21, while today it stands at £7,20 for those below 25 and is replaced by the National Living Wage for those 25 and above.

The New Labour did not believe in the centralisation or coordination of wage bargaining as a way to control inflation and thus did not opt for wage moderation as in Germany. Instead, they promoted increased flexibility in the setting of employee rewards that relate pay to performance and defended tight monetary policy as the best way to control inflation.

The “Third Way”, described as the ideological underpinning of the New Labour, bringing market models to public services and modernising welfare and the labour markets proved to be highly efficient. By 2003 the UK was the only EU Member State with an unemployment rate at 5%, an employment rate among the working age population at 75% and an employment rate among older workers at 50% or above (Eurostat).¹⁸ As opposed to Germany and Italy, the New Labour government inherited an economy of good macroeconomic performance (low inflation, low deficit, high GDP) from its predecessors and committed to a continuation of this policy, keeping public debt at a stable level and refusing to run substantial budget deficits in order to finance public expenditure.

6.2.3 The post-crisis period and the Brexit

The Conservative-Liberal Cameron–Clegg coalition in May 2010 was the first coalition government in the UK since the Churchill government. In March 2012 it enacted the Welfare Reform Act 2012 which changed largely the rules concerning the provision of a number of social benefits. The most important changes were: the introduction of Universal Credit, the reform of the Housing Benefit including the introduction of under-occupancy penalty (known as “bedroom tax”), the reform of the Employment and Support Allowance as well as changes to child support.

The Universal Credit replaced six of the main means-tested benefits and tax credits: income-based Jobseeker’s Allowance (from the Jobseekers Act 1995), the income-related Employment and Support Allowance (from the Welfare Reform Act 2007), the Income Support (from Social Security Contributions and Benefits Act 1992), the Housing Benefit (from the 1992 Act), the Council Tax Benefit (from the 1992 Act), the Child Tax Credit and the Work-

¹⁸ The Netherlands had a lower unemployment rate but had an employment rate among older workers of only 42% while Sweden had better employment rates but had an unemployment rate of 5,6%.

ing Tax Credit (both from the Tax Credits Act 2002). The aim was to create a single benefit/payment to claimants to improve the incentive to work by making it easier for people who have temporary, low-paid work to move in and out of employment without losing benefits, and to simplify the benefits system by bringing together several benefits into a single payment. The system has some similarities to a negative income tax but it is not the same as a basic income guarantee as payments are conditional on availability and means-tested. Furthermore, after the Act, Housing Benefit criteria for social housing now take into consideration the number of rooms and number of people occupying a property and restrict payments to allow for one bedroom per person or per couple; all children under 10 years of age are expected to share a room; children under 16 of the same gender are also expected to share. If it is deemed that there are too many rooms in a rented dwelling for the number of occupants, an “under-occupancy penalty” is applied to the housing benefit payment, reducing it by 14% for one extra room, and by 25% for two or more extra bedrooms. Finally, the Act now limits the total amount of money available to social security claimants. Total benefits paid to a single person now cannot exceed £350 per week; the maximum available to families (single parents and couples with children) is £500 per week. The European Commission Country Report 2017¹⁹ finds that the Universal Credit system is less generous than its predecessor (Tax Credits) for those in receipt of in-work benefits. The Country Report 2017 further finds that inequality before taxes and social transfers which had narrowed prior to the Welfare Reform Act 2012, increased in 2014 onwards and today remains high. That said, the tax-benefit system currently performs quite well in alleviating inequality. The UK is above the EU average for inequality before taxes and transfers (Gini coefficient: UK 55,5, EU 51,8), but redistribution moved it much closer to the EU average after taxes and transfers (Gini: UK 32,4, EU 31,0).

¹⁹ <https://ec.europa.eu/info/sites/info/files/2017-european-semester-country-report-united-kingdom-en.pdf>.

After the Welfare Reform Act 2012, another important reform was the introduction of the new statutory national living wage (NLW) on April 2016. It will be phased in over the course of four years and will eventually reach 60% of median earnings in the UK by 2020. The NLW will only apply to workers aged 25 and over and will be paid at a rate of £7,20 an hour. This is £0,50 more than the current adult rate of the UK national minimum wage. Workers under the age of 25 will continue to be eligible for the national minimum wage. The UK's Low Pay Commission will recommend annual increases to the NLW. An IFS impact assessment estimates that around 1,7 million workers will benefit from the NLW in 2016 and that a further 4,2 million higher-earning workers will benefit from the knock-on effects of this.²⁰ The greatest impacts are expected to be found in the retail, hospitality and healthcare sectors. The TUC has welcomed the NLW, stating that it has been campaigning for higher minimum wages for a long time.

The European Commission Country Report emphasizes two areas of concern in the labour market currently: (1) skills shortages and skills mismatches and (2) the labour market participation of women. More precisely, with regards to the former, the high proportion of people obtaining only low-level qualifications remains a concern, both for labour market needs and for progression potential for individuals. One study (CIPD 2016) contends that around 60 % of graduates in the UK are working in non-graduate jobs. A statistical report (ONS 2016) notes that one-sixth of workers are overqualified for their current position, and a similar proportion are under-qualified. As a response to these skills challenges, the Department for Education published the Post-16 Skills Plan in July 2016. With regards to the labour market outcomes of women, women have a lower unemployment rate compared to men (4,1% as opposed to 4,4% in 2017). This is very close to the German rates of 4,5% and 3,8% respectively and much below the Italian rates of 10,9% and 12,8% respectively. Nevertheless, it can be partly attributed to the relatively low la-

²⁰ <https://www.ifs.org.uk/publications/9205>.

bour market participation of women. The employment rates of men and women in 2017 were 82,5% and 72,2%, respectively. This is close to the German rates of 82,2% and 73,6% in 2017 and much higher than the Italian rates of 74,8% and 55,2%, respectively (Eurostat). We can see that a substantial gap of 10 percentage points remains. According to the European Commission's Country Report, for workers aged 20–64, the proportion working part-time is four times higher for women (39,7 %) than for men (9,7 %) and the female overall part-time employment rate in the UK is 8,1 percentage points higher than the EU average. The report links the higher occurrence of female part-time employment to gaps in the provision of childcare and social care. In 2014, 29% of children under three years attended formal childcare, although only 4% did so for more than 30 hours per week. The Childcare Act 2016 plans to double the free, currently part-time childcare for 3 and 4 year olds in England to 30 hours per week for 38 weeks per year. Although it constitutes an important step to improving the availability and affordability of full-time childcare, data for 2015 shows that average full-time working hours in the UK were much longer (41,3 per week). Thus, the new childcare provision may not be compatible with many full-time jobs. Furthermore, this measure applies only to England and it does not address the low participation of children under three years in formal childcare.

Whether these challenges will be aggravated or alleviated with Brexit remains an open question. The overall impact of Brexit on the UK labour market will depend on migration flows as well as on broader economic factors such as trade and business location decisions. The full impact will take time to emerge and will not become clear until the negotiations conclude.

6.3 The Labour Market Institutional Configuration of the UK

Section 6.3 focuses on the five labour market institutions of interest and analyses in more depth their historical evolution as well as their current situation and values.

6.3.1 Employment protection legislation

6.3.1.1 Fixed-term and temporary contracts

There exist no restrictions on the use of standard, fixed-term contracts (FTCs) in the UK and there is no limit in their maximum number (initial contract plus renewals and/or prolongations). There is however a maximum aggregate duration of successive standard FTCs: 4 years, after which the employee will be treated as an open-ended one. With regards to temporary work agency employment, there exist no restrictions on neither the number of renewals and/or prolongations nor the maximum cumulated duration.

6.3.1.2 Regular (open-ended) contracts

The legislation provides that there are only five fair reasons for fair dismissals: (a) misconduct, (b) poor performance, (c) redundancy, (d) because it would be illegal to continue to employ the individual in his current capacity (e.g., if a driver is disqualified from driving) and (e) some other substantial reasons justifying dismissal (e.g., if an employee refuses to accept a necessary change to their terms and conditions of employment). Employees have the right to not be unfairly dismissed if they have worked for an employer for over 2 years. No qualifying service is allowed only for dismissals for the following reasons: trade union activity, health and safety, whistleblowing, pregnancy or maternity, and the national minimum wage.

If an unfair dismissal is established, compensation may consist of three different elements: a basic award (up to £12.900); a compensatory award (up to £72.300); and additional awards (up to £22.360). The basic award is calculated in the same way as a statutory redundancy payment and is based on the employee's age, salary and length of service. The compensatory award will be such as the Tribunal considers "just and equitable" given the loss suffered by the employee as a consequence of the dismissal. In practice, it is equal to the employee's loss of earnings arising out of the dismissal (including the value of any loss of benefits). If the employee has not found another job by the time of the Tribunal hearing, the Tribunal will calculate the compensatory award by estimating how long it will take the employee to find another job at a similar salary. Compensation is unlimited if the dismissal is connected with health and safety matters or whistleblowing. The median compensation in the UK in 2013 was approximately £4.500 (OECD). Taking all this into account, the average compensation of someone with 20 years of service who is earning close to the median salary would reach about 8 months' of pay. Since July 2013, fees have been introduced for individuals wishing to bring cases to an employment tribunal. There is an initial £250 fee when submitting a discrimination claim, and £950 for having a hearing. Some people on benefits or on a low income are entitled to a reduction in or exemption from fees. This has resulted in a decrease in the numbers of claims being brought to employment tribunals.

For fair dismissals, the length of notice period depends on the different tenure durations: 0 notice period for less than 1 month of tenure, 1 week notice for less than 2 years of tenure, plus one additional week of notice per year of service up to a maximum of 12 weeks. There is no severance pay paid for high tenure durations. Severance pay is legally required only for redundancy cases with 2 years of tenure: half a week per year of service (age up to 21); 1 week per year (ages 22 to 40); 1,5 weeks per year (ages 41 to 64), limited to 30 weeks and £464 per week. This is in contrast to Italy where upon dismissal, the employer must always pay a contribution equal to 41% of the monthly un-

employment benefit ceiling for each of the first three years of tenure. On the other hand in Germany, there is no right to severance pay in cases of dismissal for personal reasons, although severance pay may be provided through collective agreements or social plans.

Collective dismissals in the UK (defined as “dismissals for a reason not related to the individual concerned” by section 195 of the Trade Union and Labour Relations Act, TULRA), are dismissals of more than 20 employees within 90 days. Dismissals may not take effect until 30 days after notifying the Department for Business, Innovation and Skills (BIS) if 20–99 workers are involved, and 45 days when more than 99 workers are involved. Again, this is in stark contrast to Italy where a collective dismissal is defined more leniently as a dismissal of at least 5 employees over a period of 120 days. In Germany a collective dismissal is defined as a dismissal of more than 5 employees within 30 days in firms with 21–59 employees; 10% or more than 25 dismissals in firms with 60–499 employees and more than 30 dismissals in firms with more than 499 employees.

Figure 6.1 depicts the evolution of EPL for the period 1990–2010. In accordance with chapters 4 and 5, I have created two separate indicators one for regular (open-ended) contracts (EPR) and one for temporary contracts (EPT). From the figure we can see that both indicators follow similar patterns, being steady with a slight increase and then again steady. Both EPT and EPR in the UK are below those in Germany and Italy.

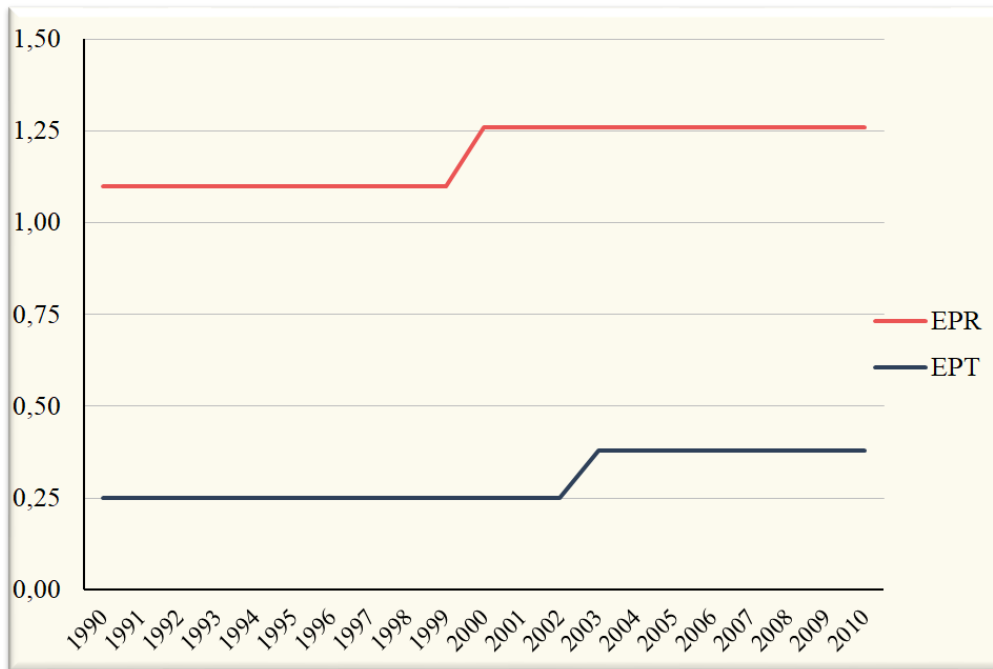


FIGURE 6.1. The evolution of employment protection legislation in the UK between 1990 and 2010

Source: OECD; own calculations.

6.3.2 Wage bargaining system

Collective bargaining in the UK is highly decentralised: most bargaining occurs at the company level, with relatively little multi-employer bargaining, mainly occurring at the public sector. Furthermore, since the 1990s there has been an ongoing decline in the coverage of collective bargaining: from 47% in 1990 to 36,4% in 2000 to 26,3 in 2016 (OECD). Collective bargaining agreements at the sectoral level hardly exist in the private sector and no legal extension mechanism is available. Nevertheless, collective bargaining remains relatively prevalent in the public sector, with 75% of employees covered by collective bargaining agreements and more than 33% of workplaces covered by multi-employer bargaining.

The national minimum wage has been in place in the UK since 1997. The rate is set by the Secretary of State following the Low Pay Commission's (LPC) recommendation. This Commission comprises an independent chair

and 9 members (3 employers, 3 employees and 3 independents). There are 4 tiers of national minimum wage rates: the full adult rate; a rate for younger adults aged 18–20; a rate for workers aged 16–17; and a rate for apprentices. The rates for young workers and apprentices are lower. More precisely, the current national minimum wage rates (as of 1 October 2015) per hour are: £6,70; £5,30; £3,87 and £3,30 for adults, those 18–20 years old, those 16–17 years old and apprentices, respectively.

Nevertheless, the European Commission Country Report 2017 finds that the number of low-wage earners remains substantial and this is anticipated to increase in 2018. The Resolution Foundation forecasts that about 15% of all employees are likely to be on a minimum wage by 2020, with much higher proportions in certain regions and occupational sectors such as hospitality and the social care sector, where employee pay is the major cost.

Figure 6.2 depicts the evolution of the bargaining system in the UK between 1990 and 2010. As explained in Chapter 2, this is operationalised through an own indicator, weighted average of the bargaining level and the coverage of collective agreements. Both indices are obtained through the ICTWSS database and equal weights of $\frac{1}{2}$ are applied. A higher level of the indicator implies a more centralised wage bargaining and/or higher coverage of collective agreements. From Figure 6.2 we can see that the—already low—wage bargaining has declined further over time and is substantially lower than both the Italian and the German ones. This is due only to the decline in the coverage of collective agreements as the level of wage bargaining remained constant throughout the 30 year period and equal to 1, corresponding to “uncoordinated, fragmented wage bargaining, confined largely to individual firms or plants” (Visser 2016). On the other hand, the level of wage bargaining has decreased largely during this period. As explained in Section 6.2.1 when Thatcher came to power, she transformed the existing centralised bargaining to sectoral/industry level. The New Labour 20 years later further decentralised it to the firm/plant level, where it has remained since then.

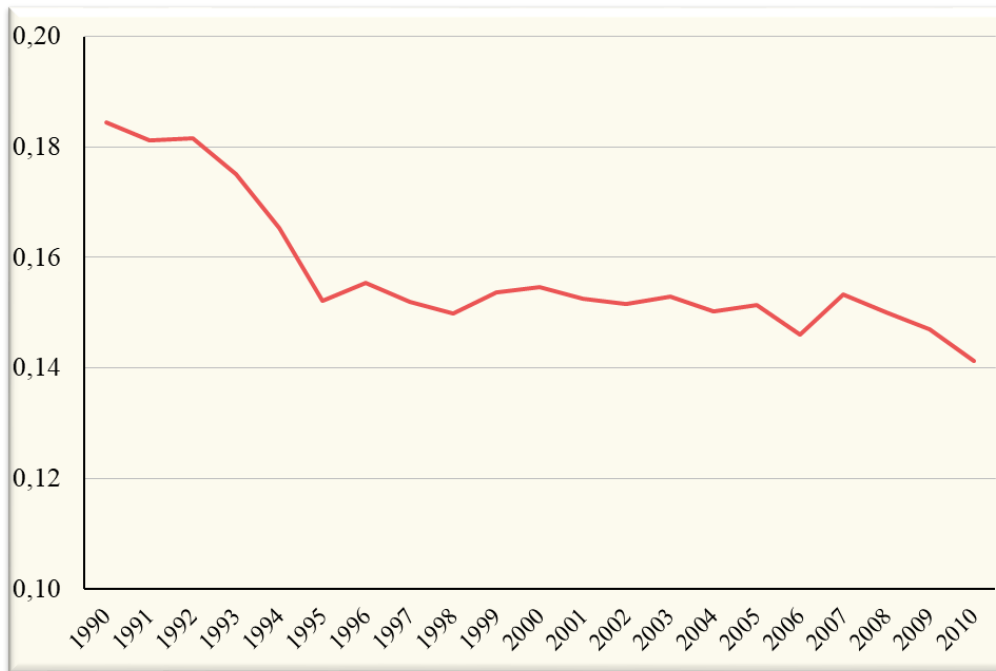


FIGURE 6.2. The evolution of the wage bargaining system in the UK between 1990 and 2010

Source: ICTWSS; own calculations.

6.3.3 Unemployment benefits system

The first unemployment benefits in the UK were introduced in 1911 under the “National Insurance Act”. The maximum amount payable was 7 shillings a week and these payments were made only to those who had paid a sufficient number of insurance contributions. Furthermore, the benefits were only paid for up to 12 months, by which time a claimant had to have regained work. The Unemployment Insurance Act of March 1921 introduced a “seeking work” clause which required claimants to actively seek work and be willing to accept employment paying a fair wage. After the Second World War, the National Assistance Act 1948 was passed, allowing anyone of working age on a low income to apply for social support. National Assistance was replaced by the Supplementary Benefit in November 1966 and unemployed people could receive this after their entitlement to the unemployment benefit had expired. Supplementary Benefit was then replaced by Income Support in April 1988.

Finally, in October 1996 the Job Seekers' Allowance (JSA) was introduced with the Jobseekers Act constituting the main unemployment benefit still in place today.

The JSA replaced the previous UK Unemployment Benefits (UB) and Income Support (IS) system. UB represented unemployment insurance, was based on previous social security contributions and was not means-tested. JSA comprised two parts: a contributory benefit (contJSA) based on insurance contributions of a minimum of 2 years, and a means-tested component (incJSA), which replaced IS. There was also still a benefit called IS, but it is not job-search related, and provides means-tested welfare to selected demographic groups, most notably lone parents and carers of dependants with disabilities.

This was a major reform and it was generally perceived as a toughening of the unemployment compensation regime. UB had a maximum entitlement period of 12 months, and this was halved to 6 months under JSA. In 1996 UB was £48,25 per week for single persons, with a £29.75 adult dependant supplement, while IS was £47,90 for single persons aged 25+, £37,90 for single persons aged 18–24, and £75,20 for couples in which at least one spouse was aged 18+. Thus, UB and IS payments were very similar except for young people, who received about 20% less under IS than UB. When JSA was introduced it was initially payable at exactly the same rates and conditions as IS. Consequently, the only category who saw their benefits cut in the new JSA regime were the youth eligible for UB under the old regime.

The most significant change with respect to the previous UB/IS regime was the substantial increase in job search requirements for eligibility. Claimants now have to sign a Jobseeker's Agreement in which they agree to actively seek work and commit to a number of specific search steps such as the minimum number of employers they are going to contact every week. They are required to keep a detailed diary of search steps undertaken, such as each phone call made to a potential employer, the maximum commuting time he/she will accept, how many times they will search the DirectGov website's job section

each week, how many companies they will personally visit each week, whether they will use any magazines/newspapers to find jobs and that they will not work paid or unpaid for more than 16 hours a week. As opposed to Italy, there is strict monitoring and sanctioning. The search diary is then checked against the initial agreement at fortnightly interviews with the Employment Service. If a claimant is still unemployed after 13 weeks, he is required to broaden his search and may not turn down job offers outside his main occupation. Failure to meet the above requirements is threatened with temporary sanctions or disqualification. In that respect the JSA introduction represented a marked change in entitlement rules and in required interaction with the Employment Service. These new eligibility requirements applied not only to the new claimant inflow, but also to the existing stock of unemployed claimants as well. Manning and Petrongolo (2006) finds strong positive effects of the JSA on the claimant outflow. Official evaluations of the JSA carried out by the Department for Work and Pensions show that the JSA increased the number of people stopping claiming benefits. Those who were not serious about searching for a new job were removed from benefit reciprocity. Their findings also show that the average claimant increased his efforts to find a new job. Of course, it is possible that as less serious claimants were pushed away, only claimants who were trying to find a job remained. Thus, it could be that the remaining claimants were the ones who were always more motivated, rather than being motivated by the JSA directly.

Payments for the means-tested JSA were reduced if the claimant had savings between £6,000 and £16,000. In 2016 under the Welfare Reform and Work Act 2016, the rate of the contJSA has been frozen for four years to the weekly flat rate of £73.10. Furthermore, as discussed above, a new benefit was introduced in 2016, the Universal Credit, which replaced all means-tested benefits for working-age households including the Income-based Jobseeker's Al-

lowance.²¹ Universal Credit is arguably the most radical restructuring of the benefits system since the 1940s, introduced by the 2010–2015 Coalition Government with the Welfare Reform Act in 2012 in the attempt to streamline the British social security system.

From a historical point of view, the UK unemployment benefit system has changed a lot over time. In the 1950s, the UK benefit system was primarily contributory: the number of people receiving contributory unemployment benefits was three or more times the number on National Assistance (the general means-tested benefit of last resort) until 1959. This trend continued until the late 90s when the real policy shift came. Figure 6.3 demonstrates this focus of the unemployment benefit system on income support in the early 90s. In 1995, 0,76% of GDP was on income support as opposed to 0,18% of GDP that was on PES. Nevertheless, a shift in policy took place in the 2000s and in 2010, only 0,27% of GDP was devoted on income support while the amount devoted to PES increased to 0,34% of GDP. The big change in PES came in 2002 with the creation of the Jobcentre Plus (JCP). This new agency provided a single point of delivery for cash benefits and employment services for about 4,5 million working-age claimants (OECD 2014). The objective was to create an employment-first front-line service. Nearly all claimants are required to attend a work-focused Interview with a Personal Adviser. The task of the Personal Adviser is to assess employability, identify barriers and provide employment assistance. This may include matching and submitting the individual to vacancies. Personal Advisers have recently been renamed to Work Coaches and the government has invested a lot in up-skilling them to ensure JCP staff have the right skills to develop individual action plans with claimants and review the effectiveness and quality of claimants' job-search efforts (OECD 2014). In her classification of unemployment benefit indicators Langenbacher (2015) classifies the UK as one of the most strict countries in the OECD in

²¹ For further information please look here: <https://www.gov.uk/government/publications/universal-credit-at-work-december-2015>.

terms of monitoring, where the unemployed participate in fortnightly job search reviews, to ensure they are actively seeking work and remain entitled to benefits.

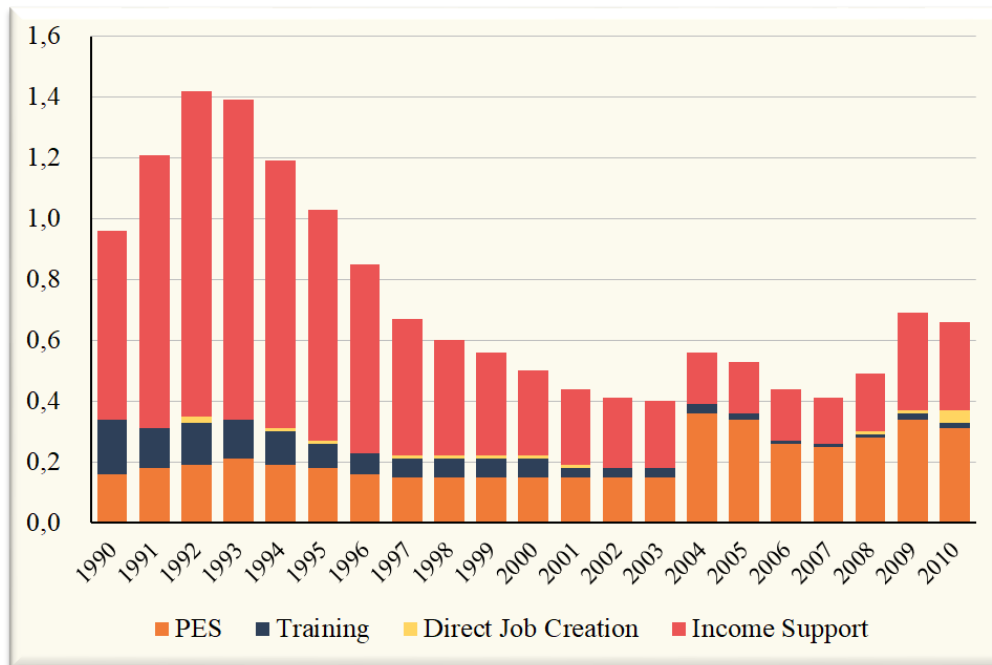


FIGURE 6.3. Public expenditure on active and passive (income support) labour market policies for the unemployed as a % of GDP in the UK between 1990 and 2010

Source: OECD; own calculations.

6.3.4 Trade union power

Coderre-LaPalme and Greer (2017) start their paper on the UK trade unions with the opening sentence “British unions have a reputation for being in crisis”. At their 1979 peak they had 13 million members, density of over 50% and 30 million lost work days due to industrial disputes. After the winter of discontent and the concomitant rise in power of Margaret Thatcher, union membership decreased dramatically together with the incidence of strikes. Today trade union membership is 27% (Eurostat) while employer organisation density in the UK is estimated at around 30–40% (Eurofound 2016).

A distinctive characteristic of the UK trade unions as opposed to their Italian counterparts is their attempt to be more inclusive of people outside their traditional core clientele, including women, minorities, young people and workers with precarious terms of employment (Martínez, Lucio, and Peretti 2009). Furthermore, trade union density is much higher in the public sector than in the private. According to the latest available data trade union density in the public sector rose from 54,3% in 2014 to 54,8% in 2015 whereas in the private sector in the same period it fell from 14,2% to 13,9% (BIS 2015). Furthermore, in 2015 union membership among male employees stood at 22% whereas the rate for females stood at 28% (BIS 2015). It is the higher proportion of women working in the public sector that largely explains why a higher proportion of women are union members. Finally, the percentage of trade union members aged below 50 has fallen since 1995, with 39% of trade union members being above 50 years old in 2015 (ibid).

The main legislation covering British labour law today is the Trade Union and Labour Relations (Consolidation) Act 1992, which defines trade unions and how they operate. Statutory trade union recognition procedures were introduced with the Employment Relations Act in 1999, through which trade unions can seek recognition from employers with at least 21 workers for collective bargaining purposes. The closed shop has been illegal in the UK since the Employment Act of 1990. As explained in Section 6.3.2, collective bargaining is not regulated by the UK labour law as such. Parties may enter into collective agreements voluntarily. A union seeking recognition must first make a written recognition request to the employer identifying the bargaining unit (i.e. the group of employees within the company for which the union is seeking recognition for collective bargaining purposes). If the parties reach agreement within 10 working days then the union is deemed to be recognised. If the employer does not accept the request but agrees to negotiate then the parties have a further 20 day period in which to reach agreement. However, if the employer either rejects or fails to respond to the recognition request (or if

negotiations break down within the further 20 day period) then the union may make an application to a body called the Central Arbitration.

A further piece of legislation by the Conservative government, elected in May 2015, covering strike ballots came into force in May 2016: the Trade Union Act. This limits the cases under which striking activity may take place. According to it, a strike ballot must have a simple majority of those voting; in addition, at least 50% of eligible workers must vote in a ballot in order for the ballot to be valid; in the case of certain “important public services” including health, education of those under 17, fire, transport, nuclear decommissioning and border security, an additional 40% of eligible workers must vote i.e. 90% of eligible workers. Furthermore, the length of notice that trade unions are required to give before a strike was doubled from 7 to 14 days, unless the employer agrees that 7 days is enough. Finally, the Trade Union Act stipulates that ballot mandates will expire after 6 months (or 9 months if the employer agrees). After this time, the union will need to seek a new ballot for any proposed industrial action. Prior to the Act, industrial action could had been taken indefinitely, provided that the dispute remained ongoing.

Figure 6.4 depicts the evolution of the trade union power in the UK between 1990 and 2010. As explained in Chapter 2, this is operationalised through an own indicator, weighted average of 3 indices: (a) the union density, (b) the involvement of trade unions in economic decisions and social policy and (c) industrial action in the country. An equal weight of $\frac{1}{3}$ is applied and a higher number of the indicator indicates higher trade union power. During this 20 year period, trade union density has decreased (from 38% in 1990 to 27% in 2010). It is substantially higher than the German index, nevertheless German trade unions are in practice more powerful due to their high involvement in economic decisions and social policy. On the contrary the latter index for the UK has remained equal to 0 throughout the whole 20-year period examined. The sharp fluctuations in the overall indicator of trade union power depicted in Figure 6.4 can be accounted by the changes in the index of industrial

action. This is slightly higher than the German one but significantly lower than the Italian one. According to the UK Office for National Statistics, in 2015, a total of 170.000 days were lost to strike action, compared with 788,000 in 2014. The 2015 figure was the second lowest annual total since records began in 1891. The decrease of working days lost in 2015 was mainly attributable to a number of large-scale public sector strikes in 2014. The main cause of industrial action in the past 10 years was pay, apart from in 2009 and 2010, when the main cause was redundancy. The public and private sector saw the same number of disputes in 2015, however, the public sector had more working days lost than the private sector.

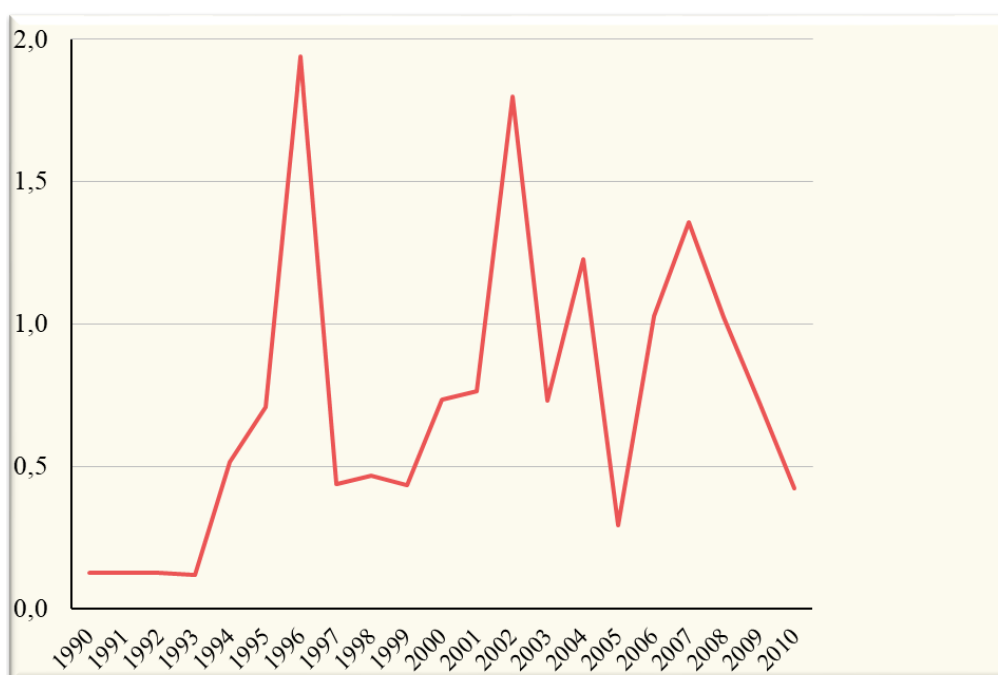


FIGURE 6.4. The evolution of trade union power in the UK between 1990 and 2010
Source: ICTWSS, Eurostat, and Office for National Statistics (ONS); own calculations.

6.3.5 Trade union fragmentation

My indicator for trade union fragmentation based on 4 different indices of Visser's ICTWSS database, has remained constant throughout the entire period and equal to 0,5, as can be seen in Figure 6.5. It is below the German

and the Italian indicators of trade union fragmentation. In particular, both the Number of Trade Union Confederations (NUC) and the Number of Employers Confederations (NECfs) in the ICTWSS database have remained constant over time and equal to 1. Furthermore, both the indicator for external demarcations between union confederations (DEME) and the indicator for internal demarcations within union confederations (DEMI) are equal to 0 for the whole period indicating “no cleavages, united confederation” and “no internal demarcations within union confederations”.

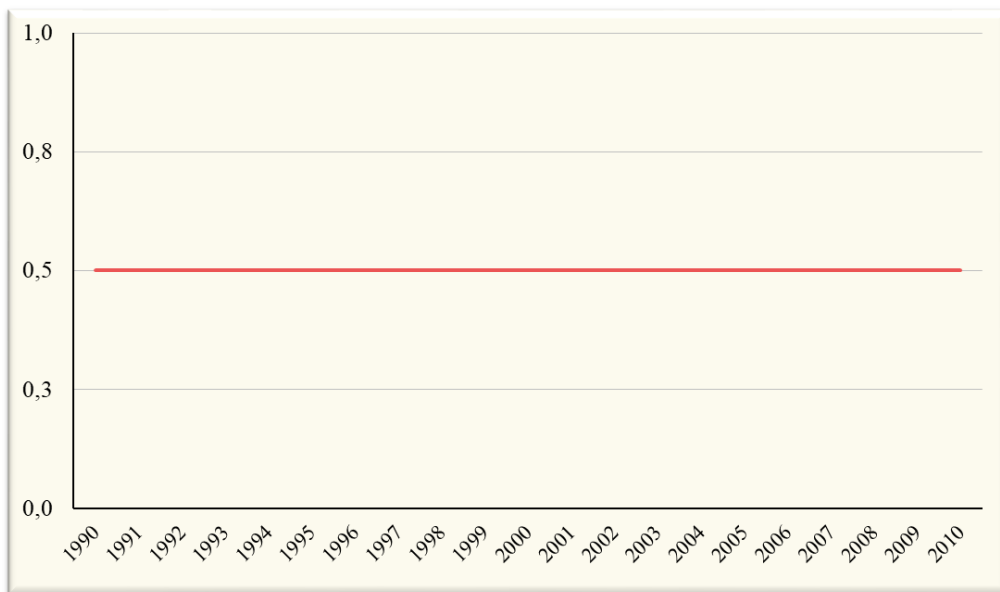


FIGURE 6.5. The evolution of trade union fragmentation in the UK between 1990 and 2010

Source: ICTWSS; own calculations.

The main trade union confederation in the UK is the Trade Union Congress (TUC). The TUC website notes that there are 52 trade unions affiliated to it with a total of about 6,5 million members in 2015. The TUC was founded in 1868 while the General Federation of Trade Unions (GFTU) was formed in 1899. For some years it was unclear which body (the GFTU or the TUC) would dominate as the national trade union confederation. However, it was soon agreed among all the major unions that the TUC should take the leading role and that this would be the central body of the organised Labour

Movement in the UK. The GFTU has continued its existence until today and remains a federation of small trade unions. In response to falling numbers there have been several union mergers in the last decade, resulting in the formation of some large broader unions. In 2001, four large unions representing a range of blue-collar and white-collar members merged into the general union AMICUS, which in 2007 merged with the T&G union to form Unite. Today Unite is the largest union in the UK. It had 1,407,399 members in January 2012 in almost every sector of the economy, including motor manufacturing, printing, finance, road transport, and the health service. It is stronger in the private than the public sector. UNISON, the second largest union with 1,317,500 members, organises primarily in the public sector. The third largest union is the GMB, which states in its website to have today 639,000 members. Like Unite it is a general union with members in many industries, although they are more likely to be manual workers. These three unions account for 56% of total TUC membership and the two largest unions on their own account for 46%. The next group of TUC affiliated unions by size are smaller and are more linked to specific industries and occupations. They are: USDAW (412,441), which primarily organises shop workers but has members in other areas, two teaching unions, the NUT (324,387) and the NASUWT (293,855), PCS (280,547), which organises civil servants in central government, and the CWU (204,419), which covers postal and telecommunications workers, although not management grades. There are only two significant unions, in terms of membership, which are not affiliated to the TUC—or any other body—and these are the RCN, which organises nurses and has 415,019 members, and the BMA, which organises doctors and has 144,428 members.

The TUC is paralleled on the employers' side by the Confederation of British Industry (CBI). Like the TUC, the CBI has no mandate to collectively bargain and bind its affiliates. Its membership comprises approximately 240,000 businesses in the UK. Other employers' organisations operating in the UK include the British Chambers of Commerce (BCC), the Federation of

Small Businesses (FSB) and the Forum of Private Business (FPB). These organisations represent smaller businesses and provide them with business advice and support.

6.4 Descriptive Analysis and Statistics

For the purposes of this chapter I use longitudinal data from the British Household Panel Survey. I have constructed my dataset using the files BIOJOB and PBIOSPE which contain detailed occupational biographies and combine them with individual socioeconomic characteristics from the core files. Furthermore, since I focus only on the labour market, I have excluded those disabled and those below 16 or above 67 (legal retirement age). Finally, as analysed in Section 3.3.1 and in Section 6.3, for the labour market institutions I have constructed my own indicators using data from the OECD and ICTWSS Databases.

What kind of labour market transitions do we observe in the UK, how many jobs per worker in his/her work life and who holds these jobs?

The UK labour market seems more mobile and dynamic than both the Italian and the German ones. In contrast to the 2 other countries where the maximum number of job episodes in the life course of an individual in the sample was 9 and 15 job episodes respectively, in the UK the maximum number of job episodes in the life course of an individual is 17. From Table 6.1 which depicts the number of job episodes accumulated in the life course of the subjects until the survey date, we can see that only 5,79% of the sample had only one job episode in their lifetime as opposed to the 38,12% of the individuals in Germany and 49,41% of the individuals in Italy. Furthermore, only 17,60% of the individuals in the UK sample had 3 job episodes in their working lives as opposed to the 85,6% of the German sample and the 90% of the Italian sample. Overall, almost 50% of the UK sample had more than 4 jobs in their life course.

TABLE 6.1. Number of job episodes accumulated in the lifetime

Number of job episodes	Percentage of people (%)
1	5,79
2	14,17
3	17,60
4	17,33
5	13,00
6	10,01
7	6,97
8	4,86
9	3,43
10	2,24
11	1,54
12	1,28
13	0,66
14	0,59
15	0,14
16	0,22
17	0,16

Source: BHPS; own calculations.

Tables 6.2 and 6.3 demonstrate the types of labour market episodes obtained in the individual life course and their duration, respectively. The UK labour market seems to perform better than the Italian and German ones in terms of both the types of labour market episodes and their respective durations. Quite surprisingly, given its flexible labour market, the UK has overall a higher occurrence of employment episodes (67,19% as opposed to 62,35% and 55,50% in Germany and Italy, respectively); a lower occurrence of unemployment episodes (15,35% as opposed to 18,62% and 17,12% in Germany and Italy, respectively); and a lower occurrence of inactivity episodes (8,41% as opposed to 11,4% and 9,90% in Germany and Italy, respectively). Further-

more, the UK has also the lowest duration of all three types of spells compared to the other 2 countries. In particular, the average duration of employment spells is less than 2 years as opposed to the 5 years and the 2,5 years in Germany and Italy, respectively. The average duration of unemployment spells is 4 months as opposed to the 1 year and the 2 years in Germany and Italy, respectively, while the average duration of inactivity spells is 1 year as opposed to the 20 months and 4 years in Germany and Italy, respectively. The maximum duration of employment, unemployment and inactivity spells in the UK sample is 25 years; 9,4 years and 12,5 years, respectively.

TABLE 6.2. Labour market episodes

Type of labour market episode	Percentage (%) of total labour market episodes
Employment	67,19
Unemployment	15,35
Inactivity—working age	8,41

Source: BHPS; own calculations.

TABLE 6.3. Duration of labour market episodes

Cumulative percentage (%)	Employment spells duration (months)	Unemployment spells duration (months)	Inactivity spells duration (months)
10	2	0	2
25	18	1	8
50	32	7	9
75	59	19	88
90	130	42	107
99	204	113	150

Source: BHPS; own calculations.

Nevertheless, given that the datasets differ with regards to the number of people in different birth cohorts, no conclusions can be drawn if we don't see who had these episodes, when did they occur and how they have evolved over time.

TABLE 6.4. Number of job episodes by sex

Number of job episodes	Men (%)	Women (%)
1	4,19	7,43
2	12,00	16,40
3	16,09	19,16
4	16,94	17,74
5	12,90	13,09
6	10,83	9,17
7	8,31	5,60
8	5,82	3,88
9	4,05	2,80
10	2,94	1,51
11	2,02	1,04
12	1,64	0,91
13	0,60	0,73
14	0,77	0,40
15	0,14	0,14
16	0,44	NA
17	0,31	NA

Source: BHPS; own calculations.

TABLE 6.5. Labour market episodes by sex and age

Type of labour market episode	Men (%)	Women (%)	Old (>35) (%)	Young (≤35) (%)
Employment	68,14	61,16	65,83	70,19
Unemployment	19,22	11,88	15,12	16,64
Inactivity—working age	2,87	6,90	7,66	9,67

Source: BHPS; own calculations.

We can see that a more or less similar pattern of labour market episodes is observed in all 3 countries with more men being employed and unemployed and less men being inactive compared to women. Furthermore, when distinguishing job episodes and labour market episodes by birth cohort, it is

evident that similarly to the other 2 countries younger birth cohorts have a higher number of jobs than older ones. However, 2 interesting results arise: first, the increase in the labour market mobility over time is much more pronounced in the UK than in Germany and Italy and second, all 4 birth cohorts in the UK have a higher number of jobs compared to those in Germany and Italy. In particular, as Table 6.6 demonstrates, 8,07% of those born in 1945–49 had 1 job episode in their life course as opposed to only 0,56% of those born in 1975–79. Furthermore, 12,67% of those born in 1945–49 had 3 job episodes in their life course and only 0,79 had 16 job episodes as opposed to 3,51% and 4,37%, respectively for those born in 1975–79. From the above we can conclude that the UK labour market has been traditionally more dynamic compared to Germany and Italy and it has become even more dynamic over time.

Nevertheless, given that the analysis includes different cohorts, one needs to be cautious and control for the fact that each of the cohorts is examined over different age spans and until different ages. The youngest cohort has not yet reached the age of the oldest and thus we don't know their labour market episodes at the equivalent ages as well as the accumulated number of job episodes. Therefore, one should be very cautious when comparing them and drawing conclusions. This can also account for the fact that in the last two birth cohorts there are almost no pensioners at all, given that these people are all below the age of 45 when the interview was conducted.

TABLE 6.6. Number of job episodes by birth cohort

Number of job episodes	Birth cohort 1945–49 (%)	Birth cohort 1955–59 (%)	Birth cohort 1965–69 (%)	Birth cohort 1975–79 (%)
1	8,07	4,19	2,50	0,56
2	12,28	7,18	4,18	4,41
3	12,67	11,10	6,14	3,51
4	14,26	10,24	7,16	8,31
5	10,54	9,38	9,57	5,91
6	8,27	11,45	11,75	7,84
7	8,51	9,21	11,02	5,10
8	7,28	8,94	9,43	14,05
9	3,12	5,60	7,16	7,62
10	2,62	4,78	7,98	8,91
11	3,12	5,19	5,66	6,47
12	3,37	4,13	5,50	6,90
13	1,83	3,20	3,18	3,77
14	2,52	1,38	2,73	5,65
15	NA	1,51	2,27	3,47
16	0,79	2,51	1,89	4,37
17	0,74	NA	1,89	3,17

Source: BHPS; own calculations.

TABLE 6.7. Labour market episodes by birth cohort

Type of labour market episode	Birth cohort 1945–49 (%)	Birth cohort 1955–59 (%)	Birth cohort 1965–69 (%)	Birth cohort 1975–79 (%)
Employment	65,18	73,22	73,6	67,76
Unemployment	14,81	14,53	13,37	26,03
Inactivity—working age	7,81	11,12	12,94	6,07

Source: BHPS; own calculations.

6.5 Methodology and Variables

Exactly as in the previous chapters of the other two case studies, I estimate again a piecewise constant exponential model for the effect of labour

market institutions on job-to-job transitions as well as on labour market transitions. I use exactly the same model and the same covariates in order to facilitate a comparison of the results. The covariates include apart from the labour market institutions of interest, measures of age, education, sex, geographical region and labour market experience. Given that the study examines different cohorts, one has to also control for the fact that when the survey was conducted (2009) each of the cohorts was examined over different age spans and until different ages. To do so, I create 4 different birth cohort dummies: one for those who were born in 1975–79 and thus can be observed until the age of 30; one for those who were born in 1965–1969 and thus can be observed until the age of 40; one for those who were born in 1955–59 and thus can be observed until the age of 50 and finally one for those who were born in 1945–49 and thus can be observed until the age of 60. Finally, I use 2 different state spaces: one comprising job-to-job transitions and another one comprising labour market transitions. In both cases the process time is continuous.

6.5.1 First state space: Job-to-job transitions

With this state space the risk set includes all those at the risk of moving to another job i.e. all those who are currently working. The process time is continuous and the job time is defined by the job entry. Individuals are not in the risk set in the period within job episodes, hence they are not exposed to the risk of an event (job-to-job transition). There are 6.409 individuals with at least 1 job episode in their lives. They experience in total 17.321 failures i.e. job changes. Every person in the risk set has on average 4 job episodes in his life with a maximum of 17 job episodes. This is much higher than both the German and the Italian sample with an average of 1,44 and 2,32 job episodes, respectively and a maximum of 15 and 9 job episodes, respectively. The average job change in the sample is observed after 49 months whereas the last exit from a job is observed after a duration of 204 months i.e. the average and maximum job duration in the sample are 4 and 17 years, respectively. Figure

6.6 depicts the Kaplan-Meier survivor function for the average person in the sample, while Figure 6.7 depicts the Kaplan-Meier survivor functions of men and women separately. Exactly as in the other two countries, there are statistically significant differences between men and women, with women being less likely to change a job.

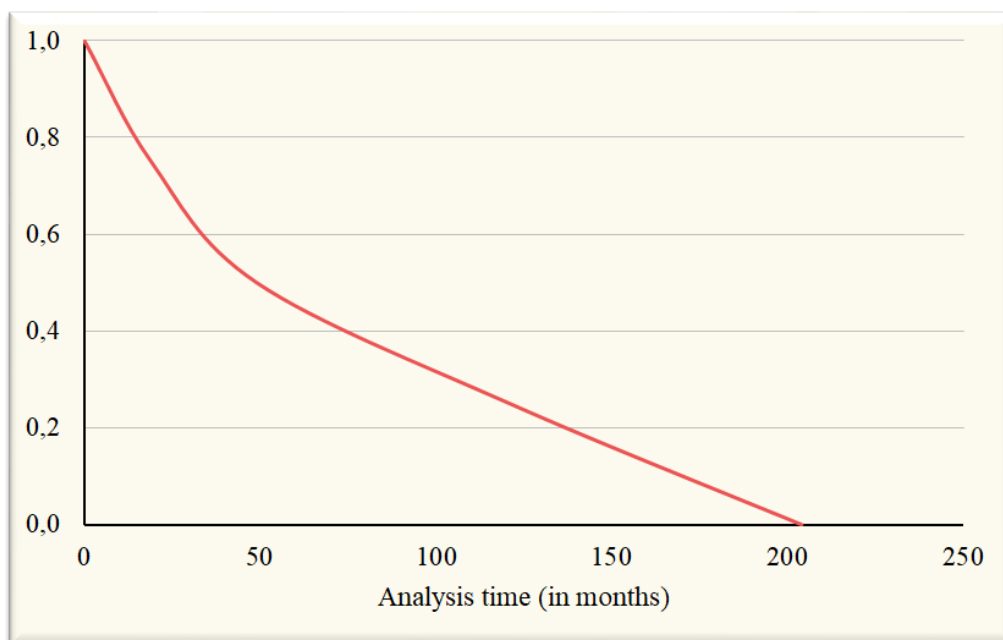


FIGURE 6.6. Kaplan-Meier estimates of the survivor function for the job-to-job transitions of the average worker in the sample

Source: BHPS; own calculations.

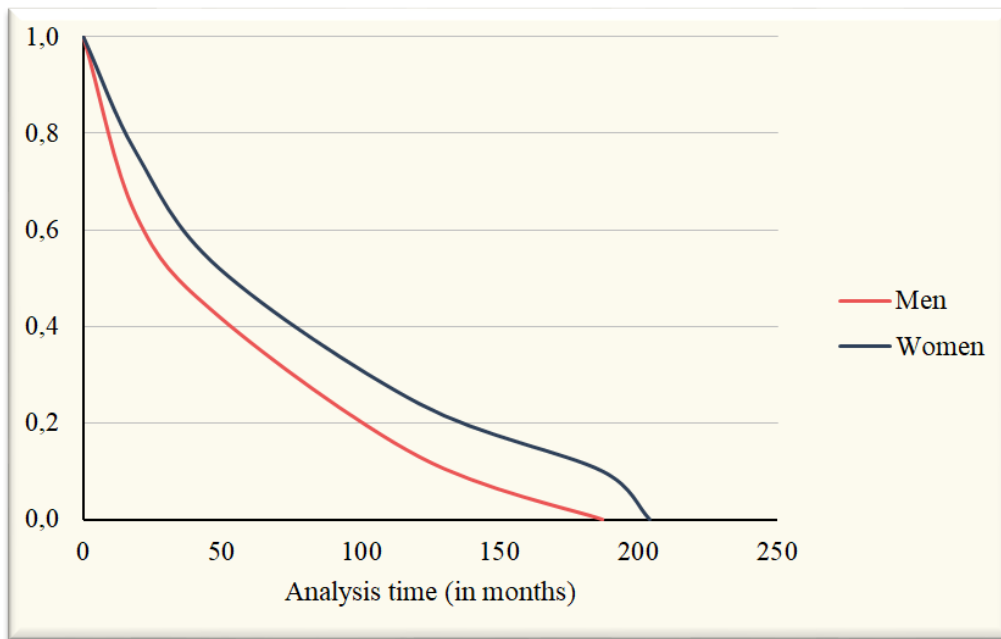


FIGURE 6.7. Kaplan-Meier estimates of the survivor functions for the job-to-job transitions of men and women separately

Source: BHPS; own calculations.

6.5.2 Second state space: Labour market episodes and transitions in the labour market

Exactly as in Chapters 4 and 5 with the other 2 case studies, the second state space comprises 3 transitions within the labour market i.e. transitions from employment to unemployment and vice versa as well as transitions from inactivity to employment.

Transitions from employment to unemployment. This risk set is restricted and contains only all those who at a specific state were employed and then either became unemployed or remained employed. This amounts to 5.190 individuals with 1.115 failures i.e. transitions from employment to unemployment. The average transition to unemployment in the sample is observed after 32 months (i.e. approximately 3 years in employment) while the maximum transition is observed after 180 months (i.e. after 15 years in employment). Figure 6.8 depicts the Kaplan-Meier survivor function for the average person in the sample, while Figure 6.9 depicts the Kaplan-Meier survivor functions of

men and women separately. Again there are statistically significant differences between men and women with women being less likely to become unemployed.

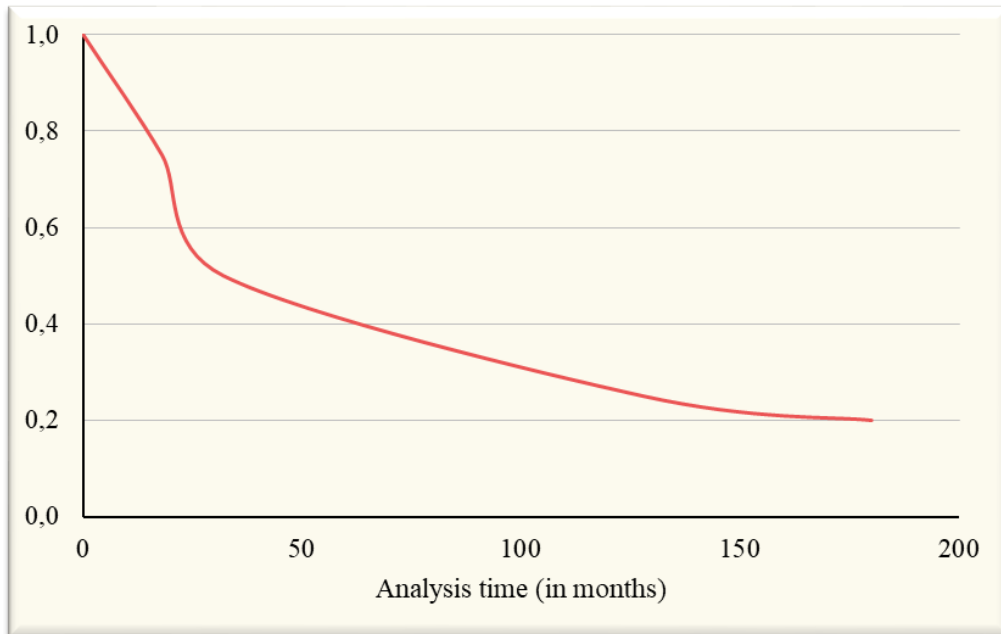


FIGURE 6.8. Kaplan-Meier estimates of the survivor function for the transition from employment to unemployment of the average worker in the sample

Source: BHPS; own calculations.

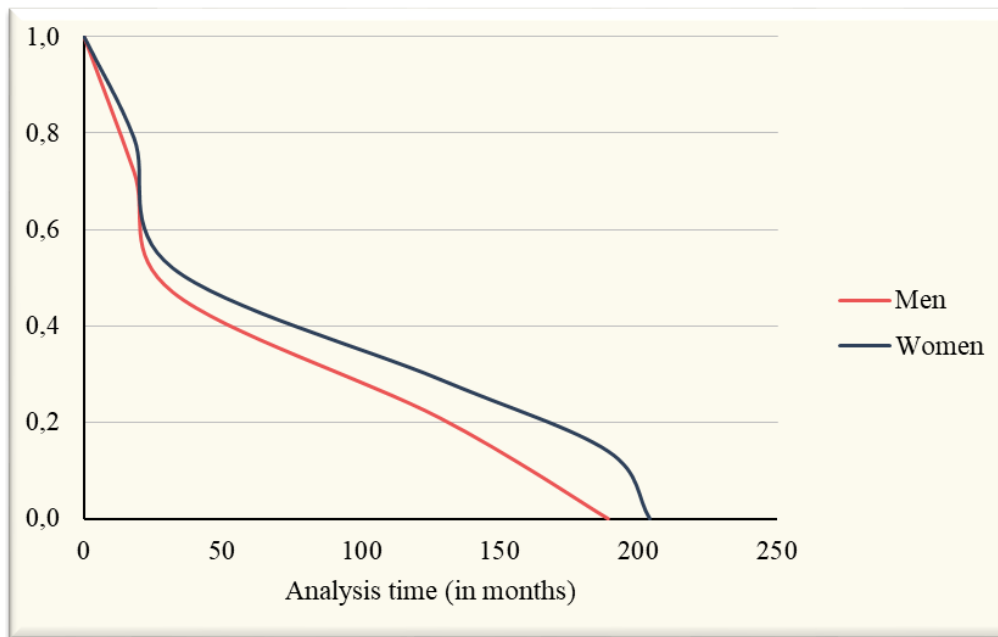


FIGURE 6.9. Kaplan-Meier estimates of the survivor functions for the transition from employment to unemployment of men and women separately

Source: BHPS; own calculations.

Transitions from unemployment to employment. This risk set now includes all those that were unemployed at some stage and either remained unemployed or found a job. This amounts to 1.783 individuals with 1.395 failures i.e. transitions from unemployment to employment. The average transition to employment is observed after 7 months in unemployment, while the maximum transition in the sample is after 113 months (i.e. 9,4 years in unemployment). This is much quicker than the Italian and German cases, indicating a more frictionless labour market. Figure 6.10 depicts the Kaplan-Meier survivor function for the average person in the sample, while Figure 6.11 depicts the survivor functions of men and women separately.

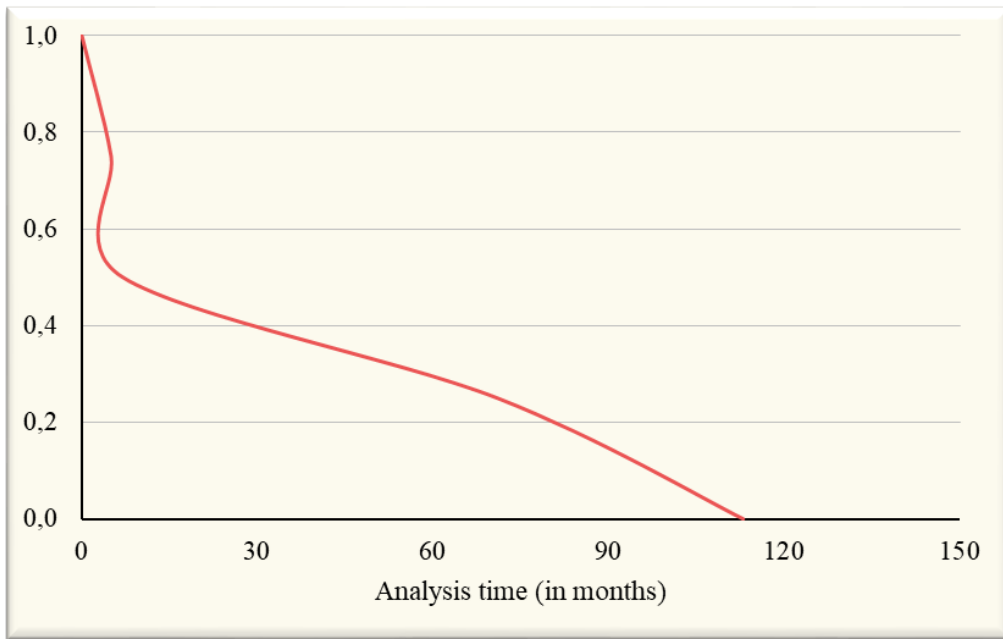


FIGURE 6.10. Kaplan-Meier estimates of the survivor function for the transition from unemployment to employment of the average worker in the sample

Source: BHPS; own calculations.

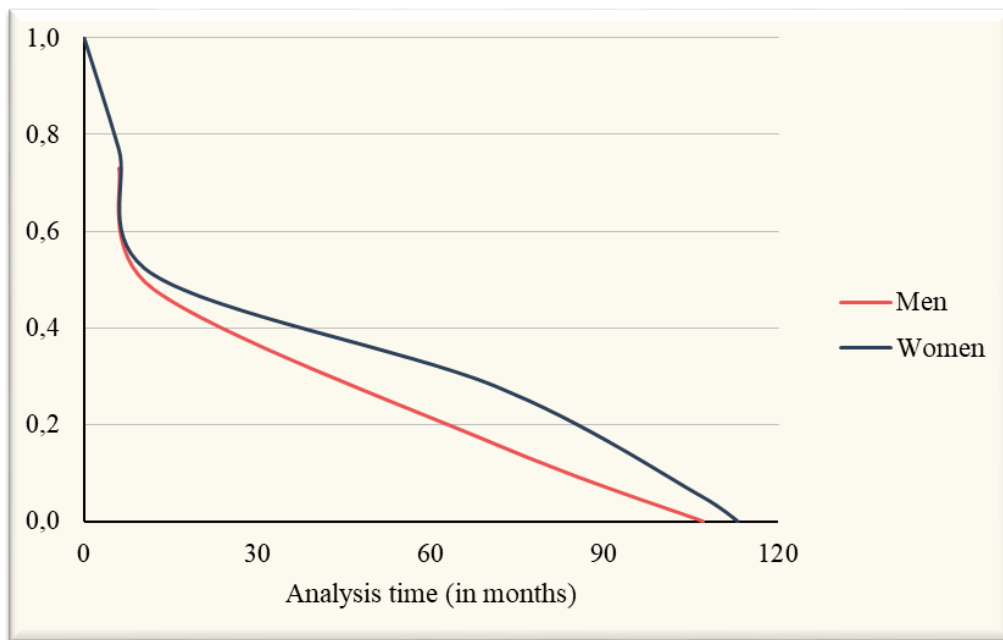


FIGURE 6.11. Kaplan-Meier estimates of the survivor functions for the transition from unemployment to employment of men and women separately

Source: BHPS; own calculations.

Transitions from inactivity to employment. In this risk set now I have 6.869 individuals with 795 failures i.e. transitions from inactivity to employment. The average transition to employment in the sample is observed after 9 months in inactivity, while the maximum transition is observed after 150 months (i.e. 12,5 years) in inactivity. Figure 6.12 depicts the Kaplan-Meier survivor function for the average person in the sample, while Figure 6.13 depicts the survivor functions of men and women separately. We can see that women have a higher transition rate than men. Nevertheless, one should take into account their relative number. It should be noted that only 3,59% of the sample in the inactivity state space are males and the rest 96,41% are females. Thus we cannot compare the rates and survivor functions of men and women.

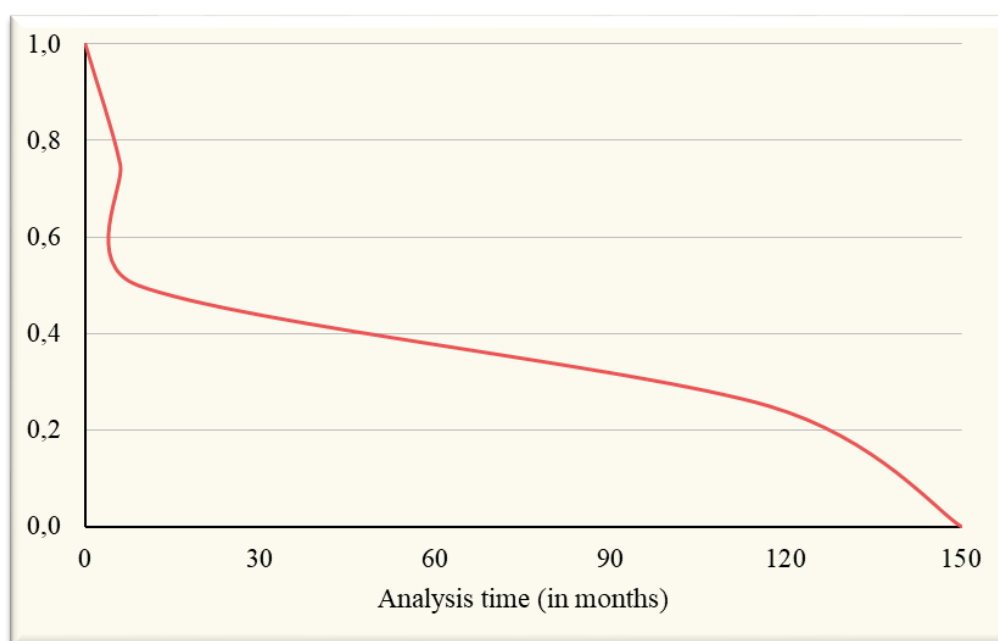


FIGURE 6.12. Kaplan-Meier estimates of the survivor function for the transition from inactivity to employment of the average worker in the sample

Source: BHPS; own calculations.

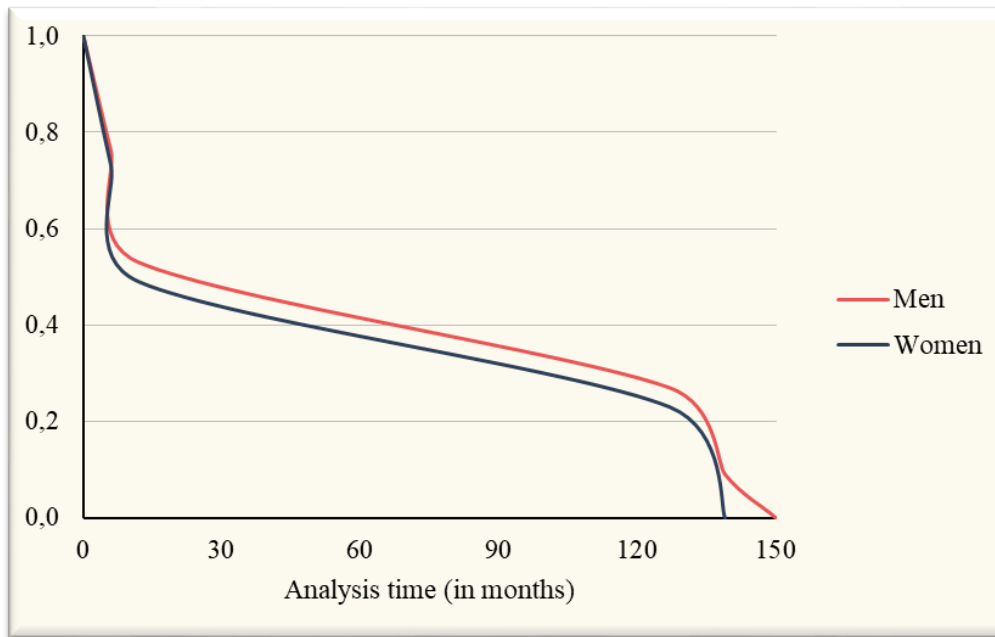


FIGURE 6.13. Kaplan-Meier estimates of the survivor functions for the transition from inactivity to employment of men and women separately

Source: BHPS; own calculations.

6.6 Estimation Results

Overall, the results presented below again only partly confirm the research hypotheses formulated in Section 2.3. As in the case of Germany, the effect of trade union fragmentation cannot be estimated since the latter has remained constant over time. The results for the wage bargaining are fully aligned with all our research hypotheses (no effect on the transition from employment to unemployment and negative effect on all other transitions). With regards to EPL, in accordance with our research hypotheses this is found to reduce job-to-job transitions as well as transitions from employment to unemployment but it has no statistically significant effects on the other two transitions. This demonstrates that EPL does not invariably hamper the labour market “outsiders” as it has been argued in the literature but its impact depends on its level and it can be zero for low levels of EPL. Neither of the other two institutions examined (trade union power and the unemployment benefit) have

statistically significant effects. However, as explained in Sections 4.4 and 5.4, this does not necessarily mean that our research hypotheses were wrong and should be rejected but it could be attributed to low degrees of freedom and/or on the low variation in labour market institutions over time. Chapter 7 will amend this by pooling all the 3 countries together and thus increasing the number of observations and the variation over time.

6.6.1 First state space: Job episodes

Table 6.8 depicts the results from the estimation of the PCE model on job episodes. With regards to the job-to-job transitions, the negative and highly statistically significant effects of the two oldest birth cohorts dummy variables (1945–49, 1955–59) imply that the youngest cohort (1975–79) is more mobile. Furthermore, this strong cohort effect remains even after controlling for age and sex. As expected, job mobility decreases with age when someone stabilizes on his career and reaches the age of family formation and this effect remains statistically significant after controlling for number of previous job episodes. This suggests that younger people at early stages of their professional career have more volatile paths and more job-to-job transitions.

With regards to labour market institutions, EPL has a negative and statistically significant effect, demonstrating that its effect remains not only in countries with relatively high overall levels of EPL like Germany and Italy but also in countries with very low EPL levels like the UK. In accordance with our research hypotheses wage bargaining also reduces job-to-job transitions.

This suggests that a more centralised (and/or coordinated wage bargaining system) will lead to lower job changes. One possible explanation for that could be the fact that in a decentralised system like the British one, where wages are negotiated predominantly at a company level, workers know that they can exit the job and obtain higher wages in other companies within the industry. On the contrary, in systems like the German and the Italian where wages are decided at the sectoral level, it is more difficult for workers to ob-

tain higher wages within the industry and thus, they have less incentives to change jobs. Still, the negative effect of wage bargaining on job-to-job transitions in Germany implies that in the presence of a more centralised wage bargaining, workers would still be able to earn some wage differentials within the sector. Both trade union power and the unemployment benefit system have no statistically significant effects on job-to-job transitions.

With regards to macroeconomic variables, as expected GDP growth leads to more job-to-job transitions whereas unemployment leads to fewer job-to-job transitions. The interpretation of these effects is straightforward: in periods of high unemployment, there are fewer vacancies available and lower labour demand and this in turn leads to fewer job changes. The opposite holds in periods of high growth.

TABLE 6.8. The effect of labour market institutions on job-to-job transitions. Estimated coefficients from a piecewise constant exponential model.

Labour Market Institutions	EPL	-0,730* (-2,01)
	Wage bargaining	-2,690*** (5,06)
	Trade union power	-1,63 (-0,54)
	Unemployment benefit	-0,44 (-0,79)
Individual Characteristics	Birth cohort 1945–49	-0,121*** (-3,97)
	Birth cohort 1955–59	0,053* (-2,02)
	Birth cohort 1965–69	0,00728 (0,26)
	Number of previous job episodes	0,0741 (0,47)
	Female	-0,0654*** (-3,57)
	Young	0,219*** (10,13)
Macroecon. Variables	GDP growth rate	0,122*** (5,83)
	Unemployment rate	-2,87*** (-8,42)

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

6.6.2 Second state space: Transitions in the labour market

The effect of labour market institutions on the transition from employment to unemployment and vice versa. Table 6.9 depicts the results from the estimation of the PCE model on the two aforementioned transitions in the labour market. In accordance with my research hypotheses, wage bargaining reduces transitions from unemployment back to employment while it has no statistically significant effect on the transition from employment to unemployment. EPL reduces transitions from employment to unemployment but

has no effect on the reverse transition. Furthermore and in contrast to my research hypothesis both trade union power and the unemployment benefit do not have a statistically significant effect on any of the two transitions. Finally, as explained above, the effect of trade union fragmentation cannot be estimated, given that the latter has remained constant over time.

With regards to individual characteristics, employed women are less likely to become unemployed than men. Young people are more likely to become unemployed but they are also more likely to become employed and both effects remain statistically significant even after controlling for different birth cohorts. In accordance with the human capital theory education reduces transitions from employment to unemployment and increases transitions from unemployment back to employment. Finally, in periods of high growth and low unemployment, there are fewer transitions from employment to unemployment and more transitions from unemployment back to employment while the opposite holds in recession periods of high unemployment and no growth.

It is worth noting that—as with the other two case studies—I included interactions among labour market institutions and re-estimated all models with both state spaces. However, when doing so the results were all statistically insignificant, most likely due to insufficient variation and low number of observations as will be demonstrated in the next chapter.

TABLE 6.9. The effect of labour market institutions on the transitions from employment to unemployment and vice versa. Estimated coefficients from a piecewise constant exponential model.

		Origin state: Employment	Origin state: Unemployment
		Destination state: Unemployment	Destination state: Employment
Labour Market Institutions	EPL	-0,603*** (-3,50)	-0,0817 (-0,53)
	Unemployment benefit	1,54 (1,03)	-3,962 (-0,42)
	Wage bargaining	0,198 (0,51)	-0,785* (-2,13)
	Trade union power	-1,28 (-0,55)	-4,64 (-1,70)
Individual Characteristics	Birth cohort 1945–49	-0,071 (-0,63)	0,0602 (0,56)
	Birth cohort 1955–59	-0,152 (-1,6)	0,108 (1,13)
	Birth cohort 1965–69	-0,274** (-2,61)	0,0252 (0,29)
	Female	-0,612*** (-9,12)	-0,0391 (-0,66)
	Education	-0,250*** (-6,17)	0,124*** (3,32)
	Young	0,395*** (5,38)	0,246*** (3,53)
Macroecon. Variables	GDP growth rate	-0,144*** (-4,84)	0,109** (2,90)
	Unemployment rate	31,82*** (7,10)	-9,897* (-2,09)

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

The effect of labour market institutions on the transition from inactivity to employment. Table 6.10 depicts the results from the estimation of the PCE model on the transition from inactivity to employment. I focus only on this transition since there is no transition at all from inactivity to unemployment in the sample. In accordance with findings from the other 3 coun-

tries, there are no statistically significant effects of institutions with the exception of wage bargaining which reduces transitions from inactivity to employment.

As expected, inactive women are highly more likely to enter the labour market and become employed compared to inactive men but, as in the other two case studies the same caveat applies: one needs to take into account the remarkably low number of inactive men in the sample. Education on the other hand has a clear-cut positive effect: among inactive people, it is the more educated that are more likely to move to employment.

TABLE 6.10. The effect of labour market institutions on the transition from inactivity to employment. Estimated coefficients from a piecewise constant exponential model.

Labour Market Institutions	EPL	-0,273 (-0,93)
	Wage bargaining	-2,015** (3,12)
	Trade union power	-1,73 (-0,91)
	Unemployment benefit	0,958 (0,26)
Individual Characteristics	Birth cohort 1945–49	0,648*** (4,18)
	Birth cohort 1955–59	0,650*** (3,38)
	Birth cohort 1965–69	0,077 (1,68)
	Female	0,144*** (3,56)
	Education	0,0153* (2,06)
	Young	0,375** (3,08)
Macroecon. Variables	GDP growth rate	-0,0614*** (-3,56)
	Unemployment rate	7,413*** (3,35)

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

Comparative Analysis

“Comparaison n’est pas raison.”

—Voltaire, *L’Enfant Prodigue*

“The pure and simple truth is rarely pure and never simple.”

—Oscar Wilde, *The Importance of being Earnest*

7.1 Pooled Countries Together

The previous within-country analysis of Chapters 4, 5 and 6 demonstrates that most of the labour market institutional effects are not statistically significant. The problem with statistical significance in general is that it depends crucially on the number of observations/sample size n . In the event history exponential model it depends on the number of events as well as on the variation of the covariates. Thus, the lack of statistically significant results could be attributed to the insufficient variability in the institutions within each country over time or to the low number of events (transitions). If this is true, we cannot make conclusions on the impacts of labour market institutions and also we cannot compare estimates of the different transitions among countries since a statistically insignificant effect in one country on a specific transition might be simply accounted by the low number of such transitions.

Given that for several transitions I got statistically insignificant results from the country analysis, in this chapter I proceed by pooling all data together in order to increase the degrees of freedom and to check whether the higher number of observations and events will lead to more robust results. First, I do not include country dummies in the model. Then, I proceed by including gradually in the model (a) country dummies in order to account for country hetero-

geneity and bias from country-specific unobserved characteristics; (b) interactions among institutions in order to account for institutional complementarities; and (c) interactions between institutions and country dummies in order to account for country-specific effects of institutions. It is worth noting that the effects of trade union fragmentation cannot be estimated for the UK and Germany since the latter has remained constant over time in both countries. Thus, the indicator for trade union fragmentation in the pooled analysis captures only the effect for Italy.

The interpretation of the effects of the interactions among institutions is not straightforward. The interaction of employment protection legislation with trade union fragmentation for example tests whether the effect of the former differs for different values of the latter and vice versa i.e. whether the effect of employment protection legislation differs for high and low levels of trade union fragmentation and whether the effect of trade union fragmentation differs for low and high levels of employment protection legislation. Adding an interaction term to a model drastically changes the interpretation of all of the coefficients. In the absence of interaction terms, the coefficient for EPL would be interpreted as the unique effect of EPL on the specific transition. In the presence of the interaction however, the effect of EPL is not limited to the coefficient of EPL, but also depends on the values of the coefficients of the interactions. The unique effect of EPL is represented by everything that is multiplied by EPL while the coefficient of EPL alone can now be interpreted as the unique effect of EPL when trade union fragmentation equals zero.

7.1.1 Job-to-job transitions

Table 7.1 presents the effects of labour market institutions on job-to-job transitions when all three countries are pooled together. The first column presents the results of the model estimation without country dummies while in the second column country dummies are added as well in the model. From the second column of Table 7.1 we can see that all institutional variables apart

from UI and activation have a statistically significant effect on job-to-job transitions, indicating that the statistically insignificant results were mainly due to insufficient variability in the variables and the low number of degrees of freedom. The statistically significant effects of UI and activation vanish after controlling for country dummies. The negative effect of EPL on average is in accordance with my research hypothesis and straightforward to interpret; as expected, stricter and more costly firing and hiring regulation will lead to lower job-to-job transitions. The negative effects of trade union power on average can be mainly accounted by the upwards pressure it generates on average wages and the concomitant decrease in labour demand. Although one would expect the same argument to apply to trade union fragmentation (in addition to the fact that when trade unions are highly fragmented they focus on promoting the interests of their own members in their own industry, thus impeding transitions to jobs in other industries and sectors), the effect of trade union fragmentation is not statistically significant. Finally, the negative effect of the wage bargaining system can be accounted by the fact that the more centralised/coordinated the wage bargaining, the lower the flexibility in wages and the lower the wage gains that workers can achieve by changing companies/industries. With regards to individual characteristics, the results demonstrate that women are less likely to change jobs compared to men, whereas younger and more educated people are more likely to change jobs.

TABLE 7.1. The effect of labour market institutions on job-to-job transitions. Estimated coefficients from a piecewise constant exponential model of pooled data.

	Without country dummies	With country dummies	
Labour Market Institutions	EPL	-0,127 (-1,08)	-0,629*** (-5,57)
	Wage bargaining	-0,978*** (-10,99)	-2,39*** (-4,79)
	Trade union power	-8,77*** (-4,21)	-0,341* (-2,14)
	Trade union fragmentation	2,584*** (7,59)	-1,34 (-1,28)
	Activation of unemployed	1,93* (2,06)	1,69 (1,74)
	UI	-3,503*** (-6,11)	-2,94 (-0,61)
Individual Characteristics	Birth cohort 1945–49	-0,260*** (-8,07)	-0,228*** (-7,76)
	Birth cohort 1955–59	-0,255*** (-9,31)	-0,203*** (-7,97)
	Birth cohort 1965–69	0,0376 (1,78)	-0,0142 (-0,67)
	Education	-0,120*** (-4,65)	0,013** (-2,84)
	Number of previous jobs held	-0,169*** (8,36)	-0,144*** (6,17)
	Female	-0,0343* (-2,26)	-0,219** (-2,94)
	Young	0,0785*** (3,89)	0,279*** (4,22)
Macroecon. Variables	GDP growth	-0,0498*** (-5,14)	-0,147*** (-4,99)
	Unemployment rate	3,009*** (4,91)	1,475*** (12,66)

Source: Pooled data together; own calculations; 71.682 subjects, 1.584.326 observations.

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

Tables 7.2 and 7.3 present the effects of labour market institutions on job-to-job transitions when interactions among institutions as well as interac-

tions between the institutions and the country dummy variables are included. In the latter case, Germany is used as a reference group. For reasons of parsimony I have not included the estimates for the effects of the rest independent variables in the tables, only those of the interactions of interest as well as their institutional respective terms. Nevertheless, all covariates have been included in the estimation.

The results in Table 7.2 highly support the theory of institutional complementarities. More precisely, the negative effect of EPL, trade union power and wage bargaining become all substantively larger in magnitude when these institutions are interacted between them and their interactions are statistically significant. Furthermore, although on average UI does not have a significant effect on job-to-job transitions, the negative effect of wage bargaining found above is reinforced in the presence of high UI. Their combination leads to lower wage benefits from a potential job change, making unemployment a more appealing option than an immediate transition to a new job. Thus, the famous finding of Tobin on job search (1972) that workers who wished to switch jobs would not first quit and become unemployed in order to search but would rather search while on the job, does not always hold, but depends on the overall institutional setting and the incentives it generates.

TABLE 7.2. The effect of labour market institutions on job-to-job transitions. Interactions among institutions. Estimated coefficients from a piecewise constant exponential model of pooled data.

	With country dummies
EPL	-0,128*** (-4,81)
Wage bargaining	-0,928* (-2,51)
Trade union power	-0,966*** (-4,32)
Trade union fragmentation	-2,068 (-0,21)
UI	-3,699 (-1,16)
Wage bargaining * UI	-1,19*** (-3,64)
EPL * Trade union power	-2,1*** (-3,99)
EPL * Trade union fragmenta- tion	-1,29 (-1,89)
EPL * Wage bargaining	-2,07*** (-4,52)
EPL * UI	-2,3*** (-4,97)
UI * Activation	-1,85 (0,34)
Wage bargaining * Trade union fragmentation	-0,27 (-1,06)
Trade union power * Trade un- ion fragmentation	-1,34 (-1,74)

Source: Pooled data together; own calculations; 71.682 subjects, 1.584.326 observations.

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

TABLE 7.3. The effect of labour market institutions on job-to-job transitions. Interactions of institutions with country dummies. Estimated coefficients from a piecewise constant exponential model of pooled data.

	With country dummies
EPL	-2,959*** (-8,07)
Wage bargaining	-0,568 (-0,54)
Trade union power	-3,932*** (-10,92)
Trade union fragmentation	-3,36 (-0,01)
Activation of unemployed	2,781*** (4,22)
UI	-2,781*** (-5,24)
EPL * UK	0,0602* (2,31)
EPL * IT	-0,910*** (5,16)
Wage bargaining * UK	-1,971*** (-6,91)
Wage bargaining * IT	1,505 (0,55)
Trade union power * UK	-0,693 (-1,49)
Trade union power * IT	-3,73*** (-10,21)
UI * UK	-0,129 (-0,82)
UI * IT	-1,665* (-2,38)

Source: Pooled data together; own calculations; 71.682 subjects, 1.584.326 observations.

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

Considering as effects only those that are statistically significant, we can see that although EPL reduces job-to-job transitions in all three countries, the effect is smaller in the UK, larger in Germany and even larger in Italy. The

effect for the UK is not statistically significant. On the contrary, wage bargaining has no effect in Italy but reduces job-to-job transitions in the UK and Germany. Trade union power has no statistically significant effect in the UK but it has a negative effect in Germany and an even larger negative effect in Italy. Finally, with regards to the unemployment benefit system, activation has no effect in none of the three countries whereas UI has a negative effect in Italy.

7.1.2 Transitions from employment to unemployment

Tables 7.4–7.6 present the effects of labour market institutions, (a) without interactions, (b) with interactions among institutions and (c) with interactions between labour market institutions and country dummy variables for the transition from employment to unemployment. Again, for reasons of parsimony only the institutional interactions and their respective terms are presented in the tables. We can see that only EPL, trade union power and activation have a statistically significant effect, both reducing transitions from employment to unemployment. In accordance with the theory, more stringent EPL with higher firing and hiring costs and regulations as well as more powerful unions protecting their members, will lead to lower job destruction. Furthermore, as Table 7.5 demonstrates, these negative effects of EPL and trade union power are reinforced in the presence of each other. Activation policies increasing the human capital of the participants are found to lead indeed to more stable jobs and less job destructions. The positive effect of UI vanishes after controlling for country dummies and activation. Thus, as opposed to what has been often argued in the theoretical literature, a higher replacement rate on average does not incentivize people to become unemployed. With regards to individual characteristics, women and more educated workers are on average less likely to become unemployed compared to men and the less educated.

TABLE 7.4. The effect of labour market institutions on the transitions from employment to unemployment. Estimated coefficients from a piecewise constant exponential model of pooled data.

		Without country dummies	With country dummies
Labour Market Institutions	EPL	-0,667*** (-7,49)	-0,127*** (-4,08)
	Wage bargaining	-0,107 (-1,83)	-0,145 (-1,46)
	Trade union power	-0,715*** (-9,20)	-1,039*** (-5,81)
	Trade union fragmenta- tion	-2,677*** (-5,03)	3,073 (1,02)
	Activation of unem- ployed	-0,915*** (-3,73)	-0,614* (2,32)
	Replacement rate	0,561* (2,27)	0,997 (1,31)
Individual Characteristics	Birth cohort 1945–49	-0,0492 (-0,64)	-0,0392 (-0,51)
	Birth cohort 1955–59	-0,0485 (-0,74)	0,005 (0,16)
	Birth cohort 1965–69	-0,247*** (-3,16)	-0,261*** (-4,20)
	Education	-9,474*** (-7,16)	-9,27*** (-6,71)
	Female	-0,364*** (-8,94)	-0,384*** (-9,45)
	Young	0,114 (1,89)	0,116* (2,52)
Macroecon. Variables	GDP growth	-0,0931*** (-5,43)	-0,142*** (-8,04)
	Unemployment rate	-2,641 (-1,59)	4,191* (2,17)

Source: Pooled data together; own calculations; 43.658 subjects, 469.490 observations.

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

TABLE 7.5. The effect of labour market institutions on the transitions from employment to unemployment. Interactions among institutions. Estimated coefficients from a piecewise constant exponential model of pooled data.

	With country dummies
EPL	-1,45** (-2,80)
Wage bargaining	-2,856 (-1,28)
Trade union power	-5,57*** (-7,24)
Trade union fragmentation	6,33 (1,81)
UI	1,576 (1,13)
Activation of unemployed	-0,131* (-2,06)
Wage bargaining * Activation	1,576 (0,13)
Activation of unemployed * UI	-0,213 (-0,27)
EPL * Trade union power	-3,97** (2,72)
EPL * Wage bargaining	-0,313 (-1,77)
EPL * UI	2,376 (1,49)
Wage bargaining * Trade union fragmentation	-4,037 (-1,23)
Bargaining level * Trade union fragmentation	1,396 (0,92)
Trade union power * Trade un- ion fragmentation	1,25 (1,17)

Source: Pooled data together; own calculations; 43.658 subjects, 469.490 observations.

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

TABLE 7.6. The effect of labour market institutions on the transitions from employment to unemployment. Interactions of institutions with country dummies. Estimated coefficients from a piecewise constant exponential model of pooled data.

	With country dummies
EPL	-1,290*** (-6,86)
Wage bargaining	-0,713 (-1,25)
Trade union power	-1,869** (-2,50)
Trade union fragmentation	0,175 (1,06)
Activation of unemployed	-0,315** (-2,78)
Replacement rate	6,129 (1,69)
EPL * UK	0,034* (2,28)
EPL * IT	-1,120*** (-3,66)
Wage bargaining * UK	0,151 (0,22)
Wage bargaining * IT	0,405 (1,18)
Activation of unemployed * UK	-1,29* (2,24)
Activation of unemployed * IT	-2,69*** (-5,84)
Trade union power * UK	-4,021 (-0,87)
Trade union power * IT	-6,46*** (-3,35)
UI * UK	2,98 (0,63)
UI * IT	4,134 (1,64)

Source: Pooled data together; own calculations; 43.658 subjects, 469.490 observations.

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

From Table 7.6 we can see that the average effects on the transition from employment to unemployment found above differ substantially by country. EPL has a negative effect in all three countries but this effect is higher in Italy, lower in Germany and even lower in the UK. Similarly, although activation has as well a negative effect in all three countries, this effect is more pronounced in Italy, less pronounced in the UK and even less pronounced in Germany. This implies that the institutional effects depend on the levels of the two institutions and for EPL the effect is larger in magnitude for countries with higher levels of EPL like Italy, whereas for activation the effect is higher for lower levels of activation like Italy and the UK. Trade union power has no effect in the UK, a negative effect in Germany and an even larger, negative effect in Italy. Finally, wage bargaining and UI have no statistically significant effect in none of the three countries.

7.1.3 Transitions from unemployment to employment

Tables 7.7–7.9 present the effects of labour market institutions, a) without interactions, b) with interactions among institutions and c) with interactions between labour market institutions and country dummy variables for the transition from unemployment back to employment. The findings demonstrate that EPL, trade union power and trade union fragmentation reduce transitions from unemployment back to employment on average whereas the bargaining level increases them. Furthermore, a higher replacement rate provides disincentives to unemployed to find a job quickly and thus reduces transitions to employment but this effect is counteracted by the positive effect of activation. Activation increases substantially transitions from unemployment back to employment. There are two main channels through which this effect can operate, a direct and an indirect one. Activation policies target directly the unemployed and reduce the number of people on unemployment benefits directly through the impact of their services on participants, but also indirectly because some of the benefit recipients may prefer to leave unemployment and

drop their benefit claim instead of complying with the activation policy requirements.

Table 7.8 demonstrates large institutional complementarities. In particular, the negative effects of EPL, trade union power, trade union fragmentation and the replacement rate on average are all amplified when these institutions are interacted with each other. In the presence of highly fragmented unions, where each union is trying to promote the interests of its own members and industry, neglecting the unemployed, it will be more difficult for the latter to find a job. And it will become even more difficult if trade unions are powerful and/or if EPL is more stringent stipulating high dismissal and hiring costs and/or if the replacement rate is sufficiently high to sustain the unemployment and increase their opportunity cost above the wage they can get in the labour market.

It is worth noting that in all estimations unemployed women on average are less likely compared to men to come back to employment. Thus, this thesis finds that although women on average are less likely than men to become unemployed, they are also less likely than men to find a job if unemployed.

TABLE 7.7. The effect of labour market institutions on the transitions from unemployment to employment. Estimated coefficients from a piecewise constant exponential model of pooled data.

		Without country dummies	With country dummies
Labour Market Institutions	EPL	-0,444*** (-5,40)	-0,279** (-2,98)
	Wage bargaining	0,122* (2,34)	0,135* (2,17)
	Trade union power	-4,929*** (-8,44)	-4,936*** (-6,82)
	Trade union fragmentation	-2,504*** (-6,84)	-0,433** (-3,12)
	Activation of unemployed	0,410*** (3,57)	0,362*** (4,22)
	UI	-2,113*** (-3,75)	-2,134* (-2,01)
Individual Characteristics	Birth cohort 1945–49	0,0116 (0,13)	0,271 (0,63)
	Birth cohort 1955–59	-0,264*** (-1,89)	-0,276*** (-4,70)
	Birth cohort 1965–69	-0,366 (-0,88)	-0,0351 (-0,21)
	Education	7,696*** (6,88)	2,698* (2,20)
	Female	0,178*** (4,86)	-0,163*** (-4,603)
	Young	1,140** (4,26)	0,147*** (3,34)
Macroecon. Variables	GDP growth	0,184*** (6,94)	0,208 (4,61)
	Unemployment rate	-4,948** (-2,92)	-5,774** (-2,86)

Source: Pooled data together; own calculations; 11.648 subjects, 52.490 observations.

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

TABLE 7.8. The effect of labour market institutions on the transitions from unemployment to employment. Interactions among institutions. Estimated coefficients from a piecewise constant exponential model of pooled data.

	With country dummies
EPL	-7,87** (-2,92)
Wage bargaining	3,815* (2,13)
Trade union power	-5,037** (-3,02)
Trade union fragmentation	-5,63** (-2,57)
Activation of unemployed	2,852*** (6,03)
UI	-1,141** (-2,52)
Activation of unemployed * UI	0,538** (2,35)
EPL * Trade union power	-4,98** (-3,15)
Wage bargaining * Activation	-5,98 (-1,64)
EPL * UI	-3,360* (-2,02)
Wage bargaining * Trade union fragmentation	1,144** (2,40)
Wage bargaining * UI	-3,514* (-2,51)
Wage bargaining * EPL	-3,69* (-2,14)
Trade union power * Trade union fragmentation	-7,235** (-2,93)

Source: Pooled data together; own calculations; 11.648 subjects, 52.490 observations.

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

TABLE 7.9. The effect of labour market institutions on the transitions from unemployment to employment. Interactions of institutions with country dummies. Estimated coefficients from a piecewise constant exponential model of pooled data.

	With country dummies
EPL	-0,304* (-2,10)
Wage bargaining	0,321* (2,13)
Trade union power	-8,72*** (-5,54)
Trade union fragmentation	-1,320*** (3,81)
Activation of unemployed	0,961** (2,70)
UI	-1,288* (2,14)
EPL * UK	0,293* (1,99)
EPL * IT	-1,156** (-3,12)
Wage bargaining * UK	-0,516* (-2,07)
Wage bargaining * IT	0,47 (0,99)
Activation of unemployed * UK	1,748** (2,99)
Activation of unemployed * IT	2,401*** (4,71)
Trade union power * UK	-5,078 (-0,85)
Trade union power * IT	-7,965** (-3,03)
UI * UK	-1,269* (-2,23)
UI * IT	-7,67*** (-4,02)

Source: Pooled data together; own calculations; 11.648 subjects, 52.490 observations.

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

Table 7.9 demonstrates again large diversity of the institutional impacts among countries. More precisely, EPL reduces transitions from unemployment back to employment in all three countries but the effect is more pronounced in Italy, less in Germany and even less in the UK leading to the conclusion of a hump-shaped institutional effect i.e. larger impact for higher levels of EPL. Again, the opposite holds for activation. Although activation increases transitions from unemployment back to employment in all three countries, the effects is less pronounced in Germany and more pronounced in the UK and Italy who are characterized by low levels of activation. Thus, in line with the finding for the reverse transition (from employment to unemployment), activation has a higher impact in countries with lower levels of activation. Although UI has a negative effect in all three countries the effect is less pronounced in the UK, more pronounced in Germany and even more pronounced in Italy. More interestingly, wage bargaining has opposing effects in the three countries, having no effect in Italy, increasing transitions back to employment in Germany, while decreasing them in the UK. The highly decentralised wage bargaining level of the UK implies that a move towards more centralisation would increase average wages and would make it more difficult for those unemployed with productivity below the average wage to find a job. On the contrary in Germany with a sectoral wage bargaining but low coverage, a move towards “nationally set wages” would take into account the productivity of the unemployed as well as the production costs of all firms, thus leading to a lower average wage. This would increase the probability of the unemployed finding a job. The fact that wage bargaining has no impact in Italy could be attributed to the existing high coverage of collective agreements.

7.1.4 Transitions from inactivity to employment

Tables 7.10–7.12 present the effects of labour market institutions, (a) without interactions, (b) with interactions among institutions and (c) with in-

teractions between labour market institutions and country dummy variables on the last transition examined i.e. the transition from inactivity to employment.

We can see that both EPL and wage bargaining increase transitions from inactivity to employment and these effects are amplified by the simultaneous presence of both institutions. These effects are in contrast with my research hypotheses and seem counterintuitive. They could be explained by the fact that the vast majority of inactive people in all 3 samples are women who opted to stay out of the labour force and have an alternative, family role. These are more likely to drop their care responsibilities and start working if jobs become more secure and more difficult to lose. A more centralised/coordinated wage bargaining system takes into account not only “insiders” but also “outsiders” assisting the inactive to get into the labour market. In accordance with our theory, both trade union power and trade union fragmentation reduce transitions from inactivity to employment reaffirming the finding that trade unions promote mainly the interest of “insiders” and lending credence to the theory of labour market dualisation (Rueda 2005; Emmenegger 2013; Häusermann and Schwander 2009; Eichhorst 2010; Palier and Thelen 2010).

Finally, an emerging—secondary to the research questions but still interesting—result from Table 7.10 is that in contrast to standard economic theory, the unemployment rate increases transitions from inactivity to employment whereas growth reduces them. This also seems counterintuitive as someone would expect that in periods of high unemployment it is more difficult to find a job and enter the labour market and the opposite holds in periods of high growth. Nevertheless, an important disclaimer applies. This effect could be simply accounted by the fact that in our sample almost all people in the inactivity status are women and thus likely to be secondary earners in the period 1990–2009. In periods of high growth, they have no incentive to enter the labour market. On the contrary, in periods of high unemployment where the ones more likely to be affected are the male primary earners, the women have an incentive to re-enter the labour market and find a job to assist the family,

for example a part-time job or a temporary job. The limitation of these datasets is that they don't provide any information about the nature and the quality of the jobs. It might be that inactive women are less likely to enter the labour market compared to inactive men but no such conclusions on gender-biased labour markets can be drawn here due to the insignificant number of men in the pool of inactive.

TABLE 7.10. The effect of labour market institutions on the transitions from inactivity to employment. Estimated coefficients from a piecewise constant exponential model of pooled data.

		Without country dummies	With country dummies
Labour Market Institutions	EPL	0,139*** (7,52)	0,599* (1,98)
	Wage bargaining	-0,042* (-2,54)	0,003* (2,30)
	Trade union power	-1,371*** (-6,58)	-3,073*** (-5,25)
	Trade union fragmenta- tion	-0,550*** (-6,44)	-0,044* (-2,19)
Individual Characteristics	Birth cohort 1945–49	-0,0773*** (-4,21)	-0,0531 (-1,66)
	Birth cohort 1955–59	-0,0647* (-2,03)	0,0720*** (3,92)
	Birth cohort 1965–69	0,0177 (0,87)	0,0342 (1,68)
	Education	-5,474*** (-5,41)	4,866*** (6,72)
	Female	-0,148*** (-7,30)	-0,113*** (-5,57)
	Young	0,109*** (5,92)	0,651*** (3,51)
Macroecon. Variables	GDP growth	-0,184 (-1,46)	-1,108 (-1,93)
	Unemployment rate	0,968 (-1,74)	1,98*** (7,46)

Source: Pooled data together; own calculations; 9.645 subjects, 11.692 observations.

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

TABLE 7.11. The effect of labour market institutions on the transitions from inactivity to employment. Interactions among institutions. Estimated coefficients from a piecewise constant exponential model of pooled data.

	With country dummies
EPL	1,851*** (5,03)
Wage bargaining	1,272* (2,13)
Trade union power	-6,39** (-3,18)
Trade union fragmentation	-7,465*** (-3,48)
Activation	-0,954 (-0,64)
UI	-0,46 (-0,38)
EPL * Trade union power	-0,759 (-1,76)
EPL * Bargaining level	1,290* (2,37)
Wage bargaining * Activation	0,940 (0,34)
Wage bargaining * UI	-0,854 (-0,37)
Wage bargaining * Trade union fragmentation	-1,507** (-2,62)
Trade union power * Trade union fragmentation	-6,92*** (-4,15)

Source: Pooled data together; own calculations; 9.645 subjects, 116.292 observations.

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

TABLE 7.12. The effect of labour market institutions on the transitions from inactivity to employment. Interactions of institutions with country dummies. Estimated coefficients from a piecewise constant exponential model of pooled data.

	With country dummies
EPL	0,643* (2,54)
Wage bargaining	0,271* (2,05)
Trade union power	-2,307*** (-4,65)
Trade union fragmentation	-5,73** (-2,82)
EPL * UK	1,176*** (4,41)
EPL * IT	-0,189** (-3,71)
Wage bargaining * UK	-0,485* (-1,96)
Wage bargaining * IT	0,281 (1,21)
Trade union power * UK	-2,070 (-0,53)
Trade union power * IT	-3,991*** (-5,58)

Source: Pooled data together; own calculations; 9.645 subjects, 116.292 observations.

Note: t statistics in parentheses; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

7.2 Conclusion

In conclusion, this chapter found that estimates from simple models of pooled data with country dummies but without interactions suggest that in accordance with economic theory, EPL on average reduces job-to-job transitions, transitions from employment to unemployment and transitions from unemployment back to employment. However, it increases transitions from inactivity to employment. A more centralised/coordinated bargaining system on average reduces job-to-job transitions, while it supports “outsiders” by in-

creasing transitions from unemployment and inactivity back to employment. Thus, wage bargaining could play a pivotal role in tackling labour market segmentation. Trade union power reduces all transitions in the labour market, while trade union fragmentation (as opposed to the wage bargaining) reduces transitions from unemployment and inactivity back to employment. UI reduces transitions from unemployment to employment but has no effect on the other three transitions. Finally, activation counteracts the negative effect of the UI as it increases transitions from unemployment back to employment and it reduces transitions from employment to unemployment through better matching and upskilling.

When including interactions among institutions as well as interactions between institutions and country dummies, some of the aforementioned results are reinforced while others change. The findings from this chapter support strongly the idea of institutional complementarities and the fact that the effect of one institution depends on the other institutions in the labour market. The negative effects of trade union power and trade union fragmentation on job-to-job transitions, transitions from unemployment back to employment as well as on transitions from inactivity to employment are exacerbated in the simultaneous presence of the two institutions. Similarly, the negative effect of EPL on transitions from employment to unemployment and unemployment back to employment is exacerbated by higher levels of wage bargaining and trade union power. Furthermore, although UI itself does not affect job-to-job transitions on average, it does affect them negatively in the presence of high EPL and/or high wage bargaining. Finally, we find that activation reduces substantially the adverse effect of UI on transitions from unemployment back to employment and actually the combination of a high UI with high activations increases these transitions, although it does not have an effect on the other three transitions examined.

When including interactions of institutions with country dummy variables, the average effects found above differ substantially among countries.

Germany has been used as a reference group in the estimation. This means that the effects of the single institutional variable (without an interaction term) refer to Germany while the interactions of the institutional variables with the two country dummies should be interpreted in relation to Germany. Furthermore, since trade union fragmentation in the UK has remained constant over time and there is no variation at all in the variable, there is only one interaction term with Italy. Indeed, as Oscar Wilde aptly wrote, there is no one pure and simple truth for all countries.

Results and Findings

What have we learned

“Give your evidence, said the King; and don’t be nervous, or I’ll have you executed on the spot.”

— Lewis Carroll, *Alice’s Adventures in Wonderland*

8.1 Introduction

This chapter discusses the overall findings of this thesis. I must immediately clarify that I do not claim to have found the solution to unemployment and/or to low employment and labour force participation, neither the “ideal” labour market institutional configuration. Nor I am going to give “one size fits all”, unequivocal policy choices. What this thesis claims to do is to firstly understand how the different labour market institutional frameworks in different countries can impact on labour market transitions and patterns and secondly, to present a series of trade-offs to be considered when designing policies, in order to optimise outcomes.

Individuals (both as workers and as employers) react to the incentives (and disincentives) they receive by the different institutional frameworks and the latter affect the way they behave, and thus the labour market outcomes. Despite the vast scholarly literature, in 2007 Olivier Blanchard wrote: “There is fairly wide agreement among economists on what constitutes optimal or, at least, good product market and financial market institutions. There is much less agreement on what constitutes optimal or, at least, good labour market institutions”. Ten years later there is no much progress in this field. A large part of the literature has argued that labour market institutions will have adverse effects on the labour markets by limiting wage flexibility, distorting price- and wage-setting mechanisms and thus leading to deviations from la-

bour market equilibria (Layard et al. 1992; Blanchard 1999; Nickell et al. 2005). Nickell et al. (2005) argue that the “rigid European labour market institutions” were responsible for the sharp rise in unemployment in these countries. The problem with this analysis is that not all European countries have the same labour market institutions neither the same unemployment patterns. Some countries performed much better than others and unemployment and inactivity rates even fell.

Thus, a more complex and sophisticated approach is needed. Another strand of the literature (VoC) emphasizes the pivotal role of interactions between institutions as enhancing labour market performance and outcomes. According to this literature, institutional complementarities can account for the fact that more “coordinated” labour markets can produce more “favourable outcomes” despite their “inflexible” institutions (Hall and Soskice 2001; Amable 2003; Hancké et al. 2007; Eichhorst et al. 2010). This stems from the hypothesis that institutions do not work in isolation but cumulatively and different combinations of them can produce equally effective outcomes. Analysing the simple direct effect of one institution on the labour market without taking into account the overall institutional framework might lead to misleading results. Nevertheless, as Eichhorst et al. (2010) argue: “this work (VoC literature) has so far been mainly theoretical, and empirical contributions often aim at identifying national patterns rather than providing econometric evidence for their labour market impact. Modelling complex institutional networks and understanding their impact on labour market performance remains still a challenge for comparative research” (Eichhorst et al. 2010, 5).

This thesis aims to address all these issues, by examining three European countries with different labour market institutional frameworks, and how the latter have shaped and impacted on individual labour market transitions over a long time span, both in isolation and interactively.

The chapter proceeds by summarizing the main findings of the country chapters (nos. 4–6) as well as the comparative chapter (no. 7).

8.2 Institutional Effects

8.2.1 Summary of the main findings from country chapters (4–6) and comparative chapter (7)

Table 8.1 presents the main findings of the country chapters (nos. 4–6) as well as the comparative chapter (no. 7).²² Overall the findings from the comparative chapter reinforce the findings from the country chapters in all transitions examined, with the exception of (1) trade union power, (2) unemployment benefits and (3) EPL on transitions from inactivity to employment. More precisely, EPL was expected to reduce all labour market transitions and although this has been confirmed for job-to-job transitions, transitions from employment to unemployment and transitions from unemployment back to employment, it has been rejected for transitions from inactivity to employment. This could be accounted by the incentives stricter EPL provides to inactive people to get into the job market and it could be pertinent to a specific type of inactive people (women/housewives and not discouraged workers). With regards to trade union power, in the comparative chapter this has been found to have a negative effect on all labour market transitions apart from job-to-job transitions, whereas in all country studies its effect was not statistically significant. However, this does not mean that the findings contradict each other but as already explained, it has been attributed to the low degrees of freedom and the low variation over time in the variable. With regards to unemployment benefits, in the comparative chapter these have been found to have no effect on job-to-job transitions overall whereas in the country chapter these have been found to reduce them in Italy. Furthermore, as the activation has been found to increase overall transitions from unemployment to employment, whereas unemployment insurance has been found to reduce them, the

²² The effects of interactions among institutions are not presented in the table as these were not included in the final specifications of the country chapters due to insufficient variation leading to all effects being non-statistically significant.

absence of any effect in all three country chapters could be attributed to these opposing effects cancelling out.

TABLE 8.1. Summary of findings from country chapters (4–6) and comparative chapter (7)

Labour market institutions	Job-to-job transitions		Transitions from employment to unemployment		Transitions from unemployment to employment		Transitions from inactivity to employment	
	Country chapters (4–6)	Comparative chapter (7)	Country chapters (4–6)	Comparative chapter (7)	Country chapters (4–6)	Comparative chapter (7)	Country chapters (4–6)	Comparative chapter (7)
EPL	– for IT, DE and UK	–	– for IT, DE and UK	–	– for IT and DE	–	+ for IT – for DE and UK	+
Wage bargaining	– for DE and UK	–	No sse	No sse	– for UK	+	– for UK + for IT	+
Unemployment benefit	– for IT	No sse	– for IT	– for activation	No sse	+ for activation – for UI	No sse	No sse
Trade union power	No sse	–	– for DE	–	No sse	–	No sse	–
Trade union fragmentation	No sse	No sse	No sse	No sse	– for IT	–	– for IT	–

Note: No sse = not statistically significant effect.

8.2.2 Employment protection legislation (EPL)

Historically, EPL was typically designed to increase job stability and to protect employees from being unfairly dismissed. From a theoretical viewpoint, there are two main additional reasons—apart from unfair dismissal—justifying a positive EPL. Firstly, firing restrictions are justified in the presence of market failures which limit the ability of risk-averse workers to get insurance against dismissal. Similarly to unemployment benefits, in the absence of EPL, risk-averse workers will not achieve consumption smoothing. Consumption smoothing is the economic concept used to express the desire of people to have a stable path of lifetime consumption i.e. consume less in periods of high income in order to save and consume more in periods of low income, and thus to maintain stability during the lifetime. In the absence of firing restrictions, workers will give up some consumption today to insure against a potential job loss and a concomitant income and consumption loss in the future. If however all workers behave like this, then aggregate consumption will be suboptimal, leading to lower aggregate output and labour demand and entering into a vicious circle of recession.

Furthermore, the second important reason for a positive EPL is the non-contractibility of the behaviour of workers. Again, in a stochastic environment, where employment relationships end with a certain probability, and where workers choose how much effort they exert and how much they invest in firm-specific skills, EPL helps ensure higher effort and this type of investments, which would otherwise be suboptimal (Lazear and Freeman 1996; Teulings and Hartog 1998). Estevez-Abe et al. (2001) argue that EPL gives workers incentives to invest in firm-specific skills (the case of Germany), while the absence of employment protection would stimulate investments in general, portable skills (the case of the UK). In their own words: “Firm-specific skills are, *ex hypothesi*, worthless outside that specific firm, and they therefore require a high level of employment protection in order to convince

workers to invest in such skills (Aoki 1989). Since workers will only be paid the value of their non-firm-specific skills in the external market, the greater their investment in specific skills the greater the discrepancy between current wages and the wages they could fetch in the external market. In order to invest heavily in firm-specific skills, workers therefore need assurances that they can remain in the company for a long enough period to reap the returns on such investments... Because rational workers weigh higher expected income later in their career against the risks of losing their current job, the only way to encourage workers to carry a substantial part of the costs of firm-specific training is to increase job security and/or reduce the insecurity of job loss. Hence, we can interpret institutionalized lifetime employment, or subsidies to keep redundant workers within the firm, as safeguarding mechanisms for firm-specific skill investment” (Estevez-Abe et al. 2001, 150).

Nevertheless, at the same time EPL limits the firm’s ability to achieve optimal employment levels during the business cycle and by inhibiting efficient job separations, it is expected to reduce efficient job creation. Standard labour market equilibrium models describe firms’ optimal behaviour in the presence of a positive EPL and show that the best strategy for the firm is to reduce both job creation and destruction to a sub-optimal level (Bentolila and Bertola 1990; Pissarides 2001).

The findings from this thesis suggest that on average stricter EPL reduces job-to-job transitions, transitions from employment to unemployment as well as transitions from unemployment back to employment but it increases transitions from inactivity back to employment. The negative effects on job-to-job transitions, transitions from employment to unemployment as well as transitions from unemployment back to employment, on average, are in accordance with my research hypotheses as posited in Chapter 2. They are also in accordance with the findings from several previous studies demonstrating that stringent EPL hampers efficient allocation of labour resources and job mobility and reduces efficient job creation and job separation (Mortensen and

Pissarides 1999; Boeri and Jimeno 2005; Schivardi and Torrini 2008; Kugler and Pica 2008; Autor et al. 2007; Leonardi and Pica 2010). The positive effect of EPL on transitions from inactivity to employment however is in contrast with my research hypothesis. It seems counterintuitive but it could be attributed to the fact that the vast majority of inactive people in all three samples are women who opted to stay out of the labour force and have an alternative, family role. These are more likely to drop their care responsibilities and start working if jobs become more secure and more difficult to lose.

Nevertheless, this thesis demonstrates substantial country heterogeneity, as these average effects found differ significantly by country. In particular, although a one-unit increase in EPL reduces job-to-job transitions, transitions from employment to unemployment as well as transitions from unemployment back to employment in all three countries, the effects are less pronounced in the UK, more pronounced in Germany and even more pronounced in Italy. This suggests that EPL has a negative, monotonically increasing effect, i.e. its effect on job-to-job transitions, transitions from employment to unemployment and transitions from unemployment back to employment is stronger (larger in magnitude) in countries with already higher levels of EPL. On the contrary, although EPL increases transitions from inactivity to employment in all three countries, the effects are more pronounced in the UK, less pronounced in Germany and even less pronounced in Italy. Thus, EPL has a positive, monotonically decreasing effect on the transition from inactivity to employment. For low levels of EPL, the long-term benefit of a secure job surpasses the short-term cost of a higher difficulty to find a job. All effects are depicted in Figures 8.1 and 8.2. These findings suggest that, in contrast to the common belief that lower levels of EPL are associated with more dismissals, the low EPL of the UK does not lead to more dismissals compared to countries with high overall levels of EPL like Germany and Italy. In addition, it leads to more transitions from inactivity to employment.

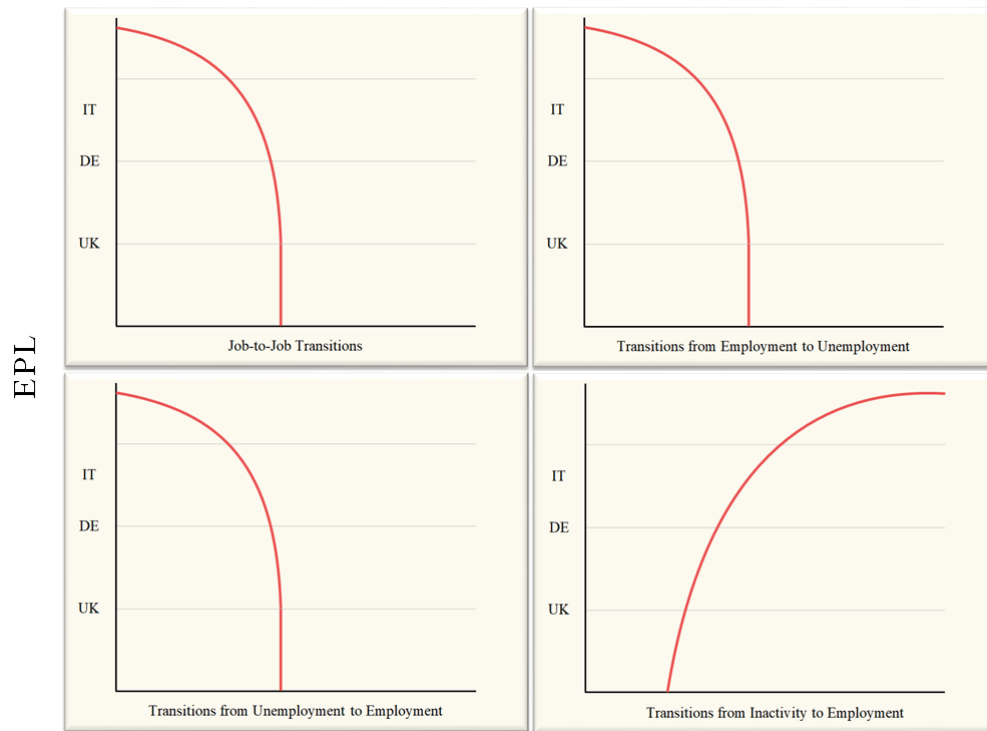


FIGURE 8.1. The estimated effect of EPL on job-to-job transitions, on transitions from employment to unemployment, as well as on transitions from unemployment and inactivity to employment²³

In conclusion, this thesis finds that on average the effect of EPL is hump-shaped and makes the case for an optimal, positive, labour market-improving level of EPL, which protects the employed from becoming unemployed and incentivises inactive to go back to the labour market. Below this level, the positive effect of EPL on worker's investments (effort and firm-specific skills) dominates the effect on separation costs. Nevertheless, as EPL increases, the marginal benefit of employment protection falls because effort and skill formation is increasingly costly and, at some point, the effect on separation costs dominates. Any EPL beyond this optimal level will lead to lower transitions from inactivity to employment and will hamper the unemployed, leading to lower transitions from unemployment back to employment.

²³ It should be noted that all figures are stylised, as the thesis can only produce three data points.

8.2.3 Unemployment benefits

Unemployment benefits have been repeatedly criticised for their detrimental effects on unemployed workers' incentives to return to work (Nunziata 2002; Nickell et al. 2005). There are a number of channels through which unemployment benefits could affect labour market transitions. To analyse these effects we distinguish between unemployment insurance (UI) and activation. Generous UI, by reducing search efforts, can increase the duration of unemployment spells and decrease the transitions from unemployment to employment. On the other hand, generous UI by raising the reservation wage and providing a buffer of time, may result in higher quality matches between the unemployed and the available job vacancies (Marimon and Zilibotti 1999). In turn, higher quality job matches are likely to last longer, thereby reducing transitions from employment to unemployment.

Nevertheless, all the available evidence suggests that the overall benefit regime (comprising requirements, activation, financial incentives and sanctions embodied in the enforcement of the unemployment benefit provision) can be even more important than UI. Some studies have found that the threat of losing benefits if an employment offer is not accepted raises the incentive to find a job (Jensen et al. 2003). Other studies have found that activation policies pushing unemployed back to work are more effective in lowering unemployment than a reduction in the replacement rate (Belot et al. 2002; Abbring, van den Berg, and van Ours 2005). Thus, conditionality and activation should be taken into consideration in any analysis trying to measure the impact of unemployment benefits on labour market transitions. In this study the indicator on activation is measured as a weighted average of both the expenditure on labour market policies for the unemployed as a percentage of GDP and of the stock participants in these policies.

The findings from this thesis suggest that on average a higher UI reduces transitions from unemployment to employment, even when controlling for activation, but has no statistically significant effect on the other three tran-

sitions examined. The negative effect on the transition from unemployment to employment is in accordance with evidence from previous studies (Katz and Meyer 1990; Card and Levine 2000; Jurajda and Tannery 2003; Farber and Valletta 2013) and it could be attributed to the effect on reservation wages and on job search intensity. Higher UI raise the quality of employee and employer matches by providing jobseekers with more time to find a well-suited job that matches their qualifications. This could ultimately decrease the probability of future job separations. Nevertheless, the evidence from this thesis does not support the prediction that a higher UI will decrease or increase transitions from employment to unemployment: After the inclusion of country dummies, UI does not have a statistically significant effect on the transitions from employment to unemployment.

On the contrary, in accordance with my research hypotheses, activation reduces transitions from employment to unemployment and increases transitions from unemployment back to employment, while it has no statistically significant effect on the other two transitions. The negative effect on transitions from employment to unemployment could be accounted by the higher quality job matches through PES guidance or by upskilling as a result of participation in training. A very interesting finding is the one on the effect of the interaction between activation and the unemployment insurance which is positive i.e. it increases transitions from unemployment back to employment. This could be attributed both to the fact that activation is more effective in bringing the unemployed back to work when unemployment benefits are more generous and to the fact that unemployment benefits are less detrimental for employment when linked to activation schemes. In particular, given that activation entails a cost (opportunity cost) for the beneficiary, we could expect that he/she will do it only if the benefit (replacement rate) is sufficiently high. On the other hand, it could also be that the disincentives provided by unemployment benefits are smaller when the latter are linked to activation.

Nevertheless, again substantial country heterogeneity is found. More precisely, after controlling for activation, the negative effects of UI on job-to-job transitions in the UK and Germany vanish. Furthermore, in a similar way to EPL, the negative effect of UI on transitions from unemployment back to employment is smaller in the UK, larger in Germany and even larger in Italy. This suggests a negative but monotonically increasing effect of UI on this type of transition, i.e. the effect is stronger in countries with more generous UI, such as Italy. As opposed to Germany and CMEs, the unemployment benefit system of Italy and SMEs is predominantly based on income support and not on activation. The UK is characterized also by low activation but the minimal benefits in the UK in conjunction with the highly flexible and efficiently operating labour market can account for the low levels and/or of short duration unemployment. Nevertheless, the findings from this thesis suggest that both the UK and Italy could profit from an increase in activation.

It is worth noting that in accordance with the average effect found above, in all three countries there is no effect on the transition from employment to unemployment, i.e. UI does not provide adverse incentives to workers to become unemployment and claim the benefit. This is in accordance with my research hypotheses, as posited in chapter 2. Finally, as expected, unemployment benefits have no effect on the transition from inactivity to employment.

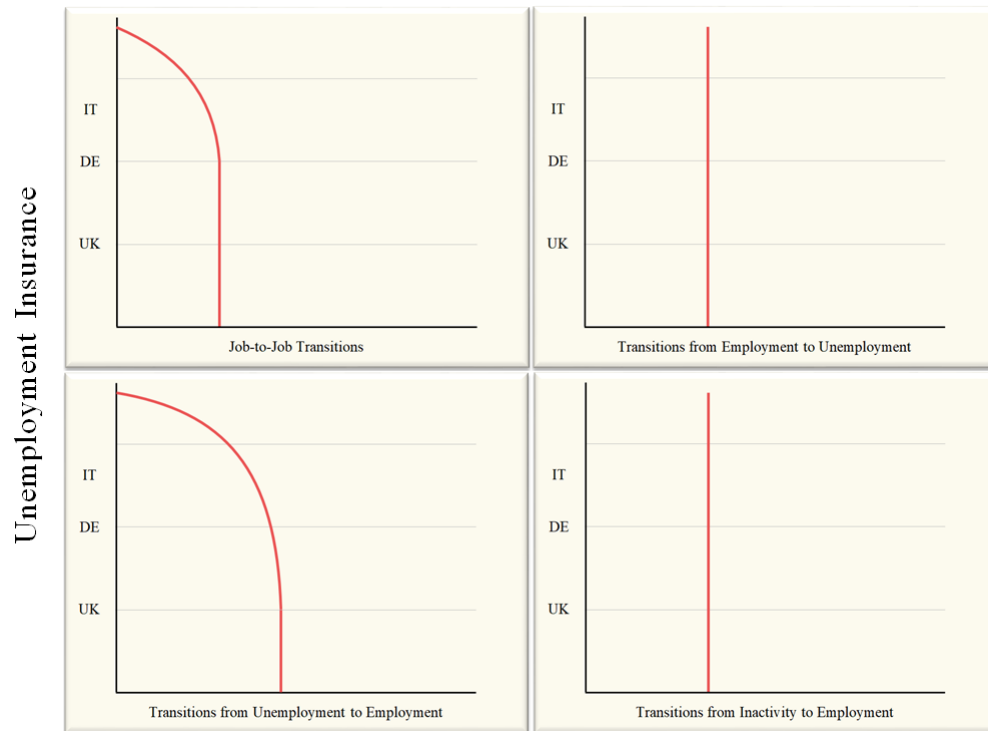


FIGURE 8.2. The estimated effect of unemployment insurance on job-to- job transitions, on transitions from employment to unemployment, as well as on transitions from unemployment and inactivity to employment

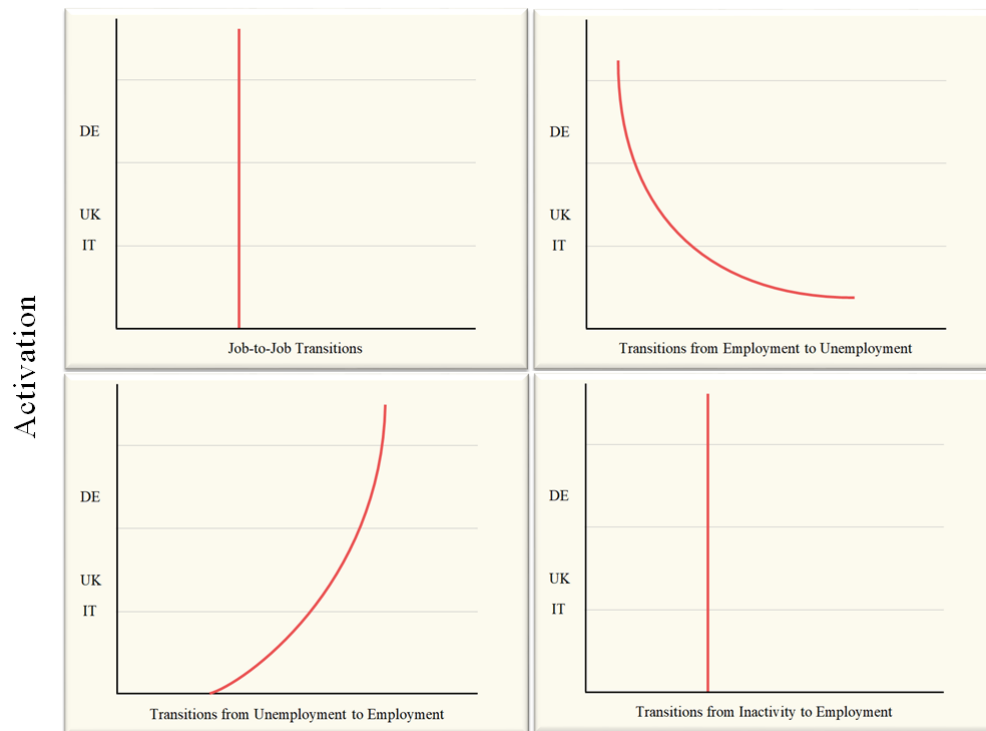


FIGURE 8.3. The estimated effect of conditionality and activation on job-to-job transitions, on transitions from employment to unemployment, as well as on transitions from unemployment and inactivity to employment

8.2.4 Wage bargaining

For the operationalisation of the wage bargaining system this study considers two aspects: the level of wage bargaining (centralised, sectoral/industry and company/plant) and the coverage of this bargaining i.e. the share of the workforce to which these collective agreements apply. Bargaining for example is decentralised in both the UK and Japan, but the two countries differ remarkably. In the UK craft unions have traditionally negotiated wages for small groups of employees within a firm or plant, whereas in Japan most unions cover all employees within a plant or company. Thus, the coverage of collective agreements plays a pivotal role. Furthermore, Japan is also characterised by high coordination whereas the UK is fully uncoordinated.

The Calmfors-Driffill hypothesis (1998) contends that both highly centralised and decentralised (at the level of firms) bargaining systems perform

better than intermediate ones (at the level of industries), the former because they are internalising wage externalities while the latter because of the market forces restraining wages when bargaining occurs at the plant level. In countries with high levels of centralisation, the effects of nominal wage increases can be easily passed to the consumers through an increase in the output price. Firms will be more willing to accept nominal wages increases in this setting, however trade unions know that as well as the fact that the nominal wage and price increases will have opposing effects, offsetting each other and leaving finally the real wage unaffected. This eliminates the incentives of trade unions to demand higher nominal wages. Therefore, an increase in the nominal wage is not likely to occur. In a completely decentralised bargaining system on the other hand, a nominal wage increase is not likely to occur but for different reasons. The firm which increases its price knows that no other firm will follow and thus, it will experience a high fall in demand. In that respect, decentralised wage bargaining systems are also expected to be conducive to wage restraint and low unemployment. On the contrary, in intermediately centralised systems firms are more willing to accept wage increases and unions will opt for them since an increase in the aggregate price is highly unlikely. Therefore, in countries with intermediate levels of centralisation nominal wage increases are likely to occur, leading to unemployment increases and the known in the literature as “hump-shaped relation” between wage centralisation and unemployment (Calmfors and Driffill 1988).

Nevertheless, several studies have argued that coordination can act as a functional equivalent and have provided evidence against the hump-shaped hypothesis (Soskice 1990; Boeri et al. 2001). While centralisation indicates the level at which collective agreements are concluded, coordination is equally important since high coordination implies that the pay policies of the distinct bargaining units are synchronized across the economy. The VoC theory argued that coordination of the distinct bargaining units matters more than centralisation, when it comes to internalising negative externalities and the latter

can actually work as a substitute for centralisation (Soskice 1990; Hall and Soskice 2001). Unfortunately, as explained in Chapter 3, coordination could not be also incorporated in the indicator, as it was dropped due to high multicollinearity with other independent variables.

This thesis finds that on average an increase in wage bargaining (either level and/or coverage) decreases job-to-job transitions, increases transitions from unemployment and inactivity to employment, while it has no statistically significant effect on the transition from employment to unemployment. The positive effect on the transitions from inactivity to employment could be attributed to the fact almost all of the inactive in my sample are women. As Blau and Kahn (2000) demonstrate, higher wage bargaining compresses the wage distribution and raises the relative wage of specific socio-economic groups (young, women, unemployed and less-educated), which results in higher relative wages for these groups and thus, raise the employment rate along a positively sloped labour supply.

Nevertheless, again these average effects differ significantly by country, suggesting that countries with decentralised bargaining like the UK will lose from an increase in wage bargaining (either level or coverage) and are better off as they are, while intermediately centralised but highly coordinated countries with low coverage, like Germany, could benefit from an increase in wage bargaining. It is worth noting that this positive effect does not apply to intermediately centralised but uncoordinated countries, like Italy. More precisely, an increase in wage bargaining will reduce job-to-job transitions in both the UK and Germany but not in Italy. Furthermore, the overall positive effect of wage bargaining on transitions from unemployment to employment as well as on transitions from inactivity to employment on average, masks large heterogeneity among countries: a positive effect in Germany, a negative effect in the UK and no effect at all in Italy. Actually, wage bargaining is estimated to have no statistically significant effect in any of the four labour market transitions in Italy. Figure 8.4 presents all these effects.

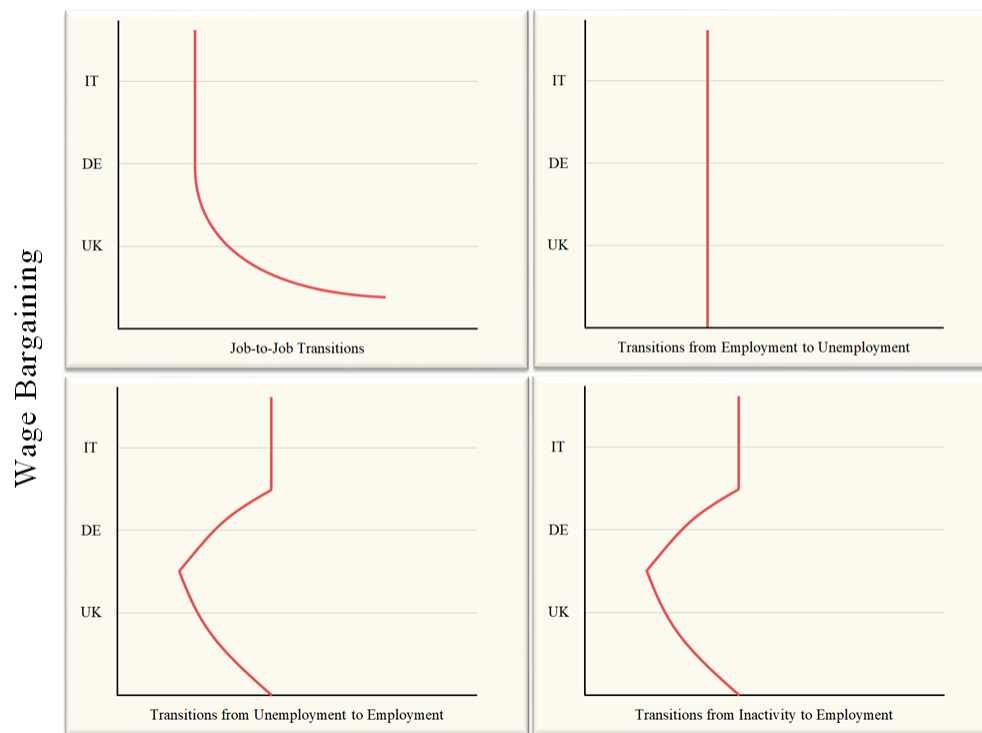


FIGURE 8.4. The estimated effect of wage bargaining on job-to-job transitions, on transitions from employment to unemployment, as well as on transitions from unemployment and inactivity to employment

The evidence provided by this thesis partly corroborates the Calmfors-Driffill hypothesis (1988), since it demonstrates that in countries with decentralised wage bargaining like the UK, an increase to an intermediate level would have adverse effects in the labour market, whereas in countries with intermediate level of wage bargaining but high coordination, like Germany, an increase to a highly centralised one would have a positive effect on the labour market. Nevertheless, this support for the Calmfors-Driffill hypothesis that extremes fare better than intermediate levels applies only to countries with high coordination and intermediate coverage and that distinction is important. The same does not hold for a country with low coordination and an already high coverage of collective agreements. This could be attributed to the fact that coordinated bargaining also entails greater wage compression, especially at the bottom of the distribution as Blau and Kahn (2000) demonstrated.

8.2.5 Trade union power

The main indicator of trade union power used in the empirical literature is trade union density, for the main reason that it has the advantage of being more easily operationalised and compared (Bryson and Forth 2010; Visser 2015). Nevertheless, it is an insufficient indicator for trade union power as it captures only one aspect of it. In alignment with the four types of trade union power defined in Section 2.3.3 (*structural, organisational, institutional and societal*), my indicator for trade union power is a weighted average of three indices: (a) trade union density, (b) the involvement of trade unions in economic decisions and social policy and (c) industrial action. Several studies have recognised that the unions' bargaining strength is enhanced by the percentage of all workers they represent, their striking capacity and their participation in policy making (Freeman and Medoff 1981; Forth and Millward 2002) nevertheless, to my knowledge, no study operationalised this and estimated its comprehensive effect.

Trade unions may affect transitions in the labour market through three different channels: by directly changing the level and distribution of wages in collective agreements, by affecting economic and social policy decisions and by opposing firings/wage moderation and calling on strikes. However, there are serious intrinsic difficulties in identifying and estimating the causal impact of unions on wages due to the missing counterfactual, i.e. what would had wages, employment and unemployment been in the absence of trade unions. The fact that union power is not randomly assigned means that it is very difficult to isolate the true causal impact of unions on unemployment. In the empirical micro literature what has been estimated so far is the difference between the *ceteris paribus* earnings of union members and those of non-members. That is, how much would wages change if an individual moved from a non-union to a union status or vice versa, holding constant their individual and workplace characteristics. Several studies have found a zero wage premium (Blanchflower and Bryson 2003) but this does not constitute a robust result,

since unions are also able to control wage outcomes in the non-union sector through the extension of collective agreements.

The findings from this thesis suggest that on average trade union power reduces all four transitions examined. Nevertheless, from the specifications with interactions with country dummies, the following pattern is constantly observed: trade union power has no statistically significant effect in any of the transitions in the UK, it has a negative effect in all transitions in Germany and an even larger negative effect in Italy. These findings can be attributed to the much higher trade union power in Italy, the intermediate trade union power in Germany and the low trade union power in the UK. As explained in Chapter 2, in the beginning of the 90s Italy and the UK had similar levels of trade union density (38–39%) but the former had a much higher involvement of trade union in economic and social policy as well as high striking activity. Furthermore, although trade union density has downward trend, it has decreased by 34% in the UK whereas in Italy only by 7%. The fall in Italy has been slower and much more contained and it is still one of the highest in the world, falling behind only those recorded in Belgium and the Nordic countries that maintain the Ghent system (ILO 2015). In Germany trade union density has always been lower than in the other two countries and is currently standing only at 17%. Nevertheless, industrial activity has been substantial and trade unions have always played a role in economic and social policy making.

The estimated effects of trade union power are presented in Figure 8.5. As the figure demonstrates, for low levels of the indicator, trade union power does not affect transitions in the labour market and the curve is vertical until a certain intermediate level of union power after which the slope becomes increasingly negative.

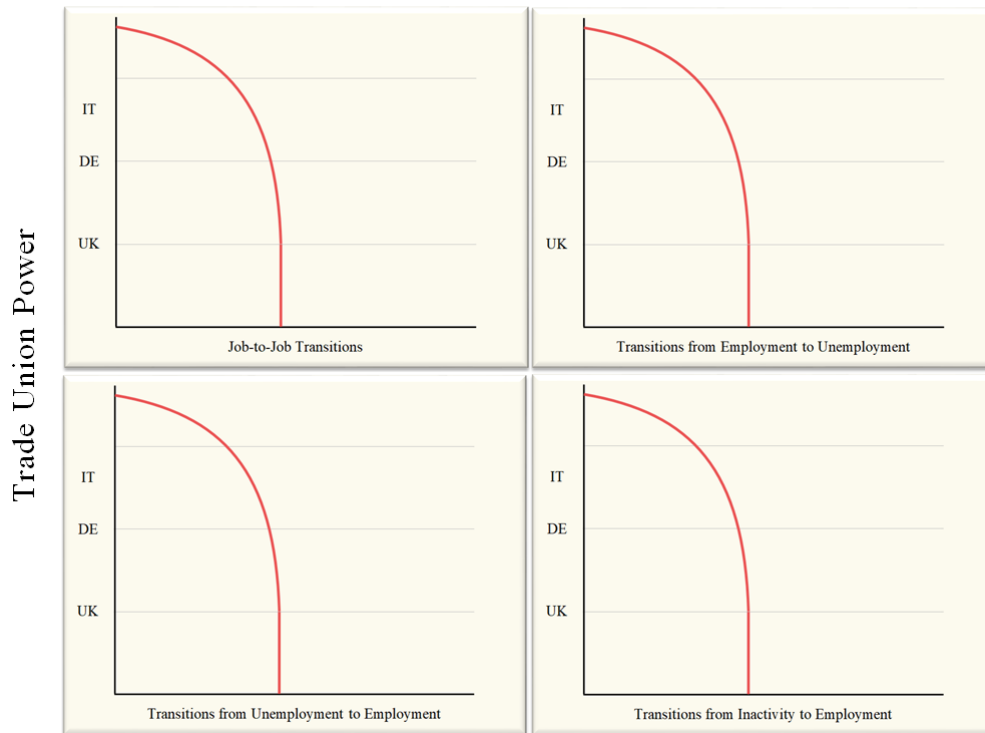


FIGURE 8.5. The estimated effect of trade union power on job-to-job transitions, on transitions from employment to unemployment, as well as on transitions from unemployment and inactivity to employment

8.2.6 Trade union fragmentation

Fragmentation refers to whether trade unions promote strictly and solely the interests of their own members without taking into account the overall interest of other trade unions and the society as a whole, or whether they collaborate (Scarpetta 1996; Soskice 1984). Low fragmentation indicates an absence of demarcations and disputes both within and among confederations and the existence of a culture of “consensus” and “concertation” among unions. To my knowledge there is currently no previous evidence on the effects of trade union fragmentation on unemployment. In this study the indicator is operationalised as a weighted average of four indices: the number of union confederations, an index of external demarcations i.e. demarcations between union confederations, an index of internal demarcations i.e. demarcations within un-

ion confederations and an index for the power that the confederation has over its affiliates.

Unfortunately, the effect of trade union fragmentation in Germany and the UK cannot be estimated as the latter has remained constant over time in both countries. This means that the estimated effect of trade union fragmentation applies only to Italy. The latter is negative and statistically significant for both transitions from unemployment and inactivity to employment. The effect on the transitions from employment to unemployment as well as on job-to-job transitions is not statistically significant. These findings are in line with my research hypotheses.

8.3 Effects of Interactions among Institutions— Institutional Complementarities

The VoC theory suggests that complementarities, with positive effects on aggregate economic performance, are embedded in institutions across sub-spheres of the political economy. Two different notions of Institutional complementarities can be distinguished within VoC literature: (i) complementarity as synergy and (ii) complementarity as supplementarity (Deeg 2005; Crouch 2005). Hall and Soskice (2001, 17), following Aoki (1994), define complementarity as a synergy where “two institutions can be said to be complementary if the presence (or efficiency) of one increases the returns from (or efficiency of) the other”. This is complementarity in the form of synergy (Deeg 2005, 3). In that sense their conjunction offers greater resilience and better performance compared to alternative configurations. In the same fashion, Estevez et al (2001, 182) chose a synergetic view, stating that the resistance of some welfare regimes is “reinforced by institutions—collective wage-bargaining systems, business organizations, employee representation and financial systems—that facilitate the credible commitment of actors to

particular strategies, such as wage restraint and long-term employment, that are necessary to sustain cooperation in the provision of specific skills”.

Nevertheless, complementarities can also take the form of “compensation” when certain institutional configurations and interactions between institutions can potentially compensate for the negative effects of each institution taken in isolation. If true, this has important policy consequences since it demonstrates that efforts to reform one labour market institution may yield zero or even negative economic results if unaccompanied by parallel reforms in other labour market institutions.

Although the importance of labour market institutional complementarities has been put forward by several studies, there has been limited empirical evidence in that respect. Most empirical studies have focused on interactions between labour market institutions and macroeconomic shocks or financial markets/corporate governance (Franzese 2001; Amable et al. 2005; Hall and Franzese 1998; Hall and Gingerich 2009); but not between labour market institutions themselves. Hall and Gingerich (2009) for example, test whether institutional complementarities occur across two major spheres of the economy, namely corporate governance and labour relations, by estimating the impact of complementarities in labour relations on growth rates. In all the models estimated, the coefficient on the interaction term is positive, of considerable magnitude, and statistically significant.

The lack of empirical evidence on labour market institutional complementarities has been attributed to the fact that labour market institutions are multidimensional and not easily operationalised. This makes it difficult to identify in aggregate panel regressions the impact of their interactions on unemployment (Arpaia and Moore 2005; Blanchard 2005; Freeman 2005). This thesis does so and confirms empirically the presence of labour market institutional complementarities, corroborating the VoC approach. The mediating effect of one institution to another is captured by introducing an interaction term

and the results from Chapter 7 were broadly robust across all different specifications.

Table 8.2 presents a summary of these estimated complementarities across all transitions. Based on this the complementarities can be distinguished into two categories: “*accumulating/reinforcing effects*”, where the effects (either positive or negative) of one institution are reinforced/strengthened by the presence of another institution, and “*compensating/offsetting effects*”, where the effects of one institution are offset/counteracted by the presence of another institution.

Accumulating/reinforcing effects comprise:

- The effects of EPL and wage bargaining. More precisely the negative effects of EPL and wage bargaining separately on job-to-job transitions and transitions from unemployment back to employment as well as their positive effects on transitions from unemployment back to employment are reinforced and increased in the presence of each other.
- The effects of EPL and trade union power. More precisely the negative effects of EPL and trade union power separately on job-to-job transitions, transitions from employment to unemployment and transitions from unemployment back to employment are reinforced and increased in the presence of each other.
- The effects of EPL and UI on job-to-job transitions and transitions from unemployment back to employment. This is quite intuitive as strict EPL reduces both firing and hiring, while UI discourages workers to search for jobs.
- The effects of wage bargaining on job-to-job transitions under the presence of high UI. This is in accordance to James Tobin (1972) who argued that a high UI in conjunction to a higher level of wage bargaining lead to less wage benefits from a potential job change, making unemployment a more appealing option than an immediate transition to a new job and thus, reducing job-to-job transitions.

- Finally, the negative effects of trade union power and trade union fragmentation on both transitions from unemployment and inactivity to employment are highly exacerbated in the simultaneous presence of the two institutions.

Compensating/offsetting effects comprise:

- The effects of wage bargaining and trade union fragmentation. Although higher wage bargaining was found to increase both transitions from unemployment and inactivity to employment, this happens to a lesser extent in countries with high trade union fragmentation, like Italy (i.e. while the estimated effect of wage bargaining remains positive and statistically significant in the presence of the interaction with trade union fragmentation, the estimated coefficient of the interaction is negative).
- The effects of wage bargaining on transitions from unemployment to employment under the presence of high UI.
- The negative effect of UI on transitions from unemployment back to employment is mitigated in the presence of activation. The existence of a positive and large in magnitude interaction between UI and activation suggests that different combinations of UI and activation are consistent with the same unemployment. In the absence of activation, generous UI may provide disincentives to the unemployed with regards to job search or in the absence of guidance, they might not be aware of the current vacancies and opportunities. Moreover, a long duration of unemployment may lead to human capital depreciation or simply the unemployed might not have all the required skills for certain jobs. On the contrary, activation policies through training for the unemployed, direct job creation, guidance from PES and conditionality address all these issues.

TABLE 8.2. Labour market institutional complementarities found by this thesis

Labour market institutions	Job-to-job transitions	Transitions from employment to unemployment	Transitions from unemployment to employment	Transitions from inactivity to employment
EPL * Wage bargaining	–***	No sse	–*	+**
EPL * UI	–***	No sse	–***	No sse
EPL * Trade union power	–**	–**	–**	No sse
Wage bargaining * Activation	No sse	No sse	No sse	No sse
UI * Activation	No sse	No sse	+**	No sse
UI * Wage bargaining	–***	No sse	–*	No sse
Union fragmentation * Wage bargaining	No sse	No sse	–**	–**
Trade union power * Union fragmentation	No sse	No sse	–**	–***

Note: No sse = not statistically significant effect; * $p < 0,05$; ** $p < 0,01$; *** $p < 0,001$.

8.4 Effects of Other Covariates

Finally, although beyond the scope of this analysis, it is worth presenting briefly the effects of other covariates and in particular: sex, education and age, as all three appear to consistently have an effect.

There is a large strand of the literature demonstrating how labour market structures and norms have impacted on female labour market outcomes (see for instance Buchmann et al. 2010; Charles 2000; Charles and Grusky 2004; Hakim 2002; Blossfeld et al. 2011). The findings from this thesis suggest that on average women are less likely to experience all four transitions, compared to men. This means that women are less likely to change job and less likely to be fired but they are also less likely to find a new job if unemployed. The findings for job-to-job transitions and transitions from unemployment to employment are in line with previous evidence. However, the lower estimated probability of becoming unemployed is in contrast to Madsen et al. (2013) who find that in all Southern European countries men are much less likely to become unemployed, with the crisis not having had any effect on this situation.

The lower estimated probability of a transition from inactivity to employment found by this thesis for women should be interpreted with caution, since the number of men in this risk set is negligible. This is true for all three countries but especially for Italy, and it could be attributed to the institutional environment in SMEs the insufficient childcare facilities and the few options for work and family reconciliation.

With regards to age, this thesis suggests that it also has a significant effect in explaining labour market transitions. More precisely, young people are more likely to experience all four transitions in the labour market. This means that they are more likely to change job and more likely to be fired but they are also more likely to find a job if unemployed or inactive. Finally, and in accordance with the human capital theory, education also has a significant effect

in all transitions. More educated people are found on average less likely to become unemployed, more likely to chance a job and more likely to find a job if unemployed or inactive, compared to less educated people.

Discussion and Conclusion

“What is the purpose of a book, thought Alice, without pictures or conversations?”

—Lewis Carroll, *Alice’s Adventures in Wonderland*

This final chapter is divided into three parts: the first part discusses the contributions of the thesis as well as the policy lessons and policy recommendations emerging from it. The second part discusses the limitations of the thesis, while the third part concludes with the potential, promising avenues for future research.

After four years working on this thesis, no conversations and no pictures included (only several technical graphs and tables), the first question that naturally needs to be answered is indeed, the one posed by Alice: what is the purpose of this thesis, what is the value added by it? What is its contribution? Given that there is already an endless list of papers on labour market institutions and their effects, what does it tell us that we did not already know?

9.1 Contributions to the Theoretical and Empirical Literature

The existing academic and policy debate on labour market institutions and labour market transitions has not exhausted the need for more evidence. Neither has my thesis of course. On the contrary, it has probably raised more questions than it has answered. Nevertheless, this thesis claims to have made three main contributions to the empirical and theoretical literature.

Firstly, its main contribution is to have shed light on how labour market institutions impact on individual labour market transitions, and thus unem-

ployment. Unemployment is a perennial policy concern with severe repercussions both at the individual and at the societal level. At the individual level, workers' human capital deteriorates during a spell of unemployment and consequently, the chances of exiting unemployment decrease with its duration. Long-term unemployment adversely affects people's mental, psychological and physical wellbeing, and it is one of the most significant causes of poverty. For the economy as a whole, unemployment leads to higher payments for unemployment benefits and lower income taxes, leading to a fiscal deficit. It also leads to lower production of goods and services and lower consumption. Apart from the economic costs, there are also equally important social costs. As several studies have demonstrated, unemployment has a positive effect on crime (Becker 1968; Krohn 1976; Phillips and Land 2012), racism and populism (Algan et al. 2017; Rodrik 2017). These issues are today more pertinent than ever.

Furthermore, unemployment is not the only form of labour market underutilization. According to a Eurofound (2017) report, in 2016 four-fifths of the jobless population in the EU28 were inactive rather than unemployed. In particular, there were 8,8 million persons in the EU28 willing to work but not seeking a job and not believing they could get one (6,7 million in the euro area). These people are defined as "discouraged workers" or "marginally attached to the labour market" i.e. they are of legal employment age, they would like to work but are not actively seeking employment or they do not find employment after long-term unemployment. This is usually because an individual has given up looking for or has had no success in finding a job, hence the term "discouraged". As a general practice, these workers are not considered part of the labour force, and are thus not counted in any of the official unemployment rates but are counted as inactive. Thus, understanding the driving forces of unemployment, inactivity and labour market transitions, as well as the extent to which labour market institutions can impact on these transitions is of utmost importance.

The scholarly literature on labour market institutions has taken a “stock” approach to labour markets (i.e. looking at the number of people with a given labour market status) (Arpaia and Mourre 2005). However, as this thesis argues, a “flow” approach (i.e. looking at the transition between two labour market statuses) can be more robust, insightful and useful. As the Commissioner for Employment, Social Affairs, Skills and Labour Mobility, Marianne Thyssen recently said: “In one generation, European workers have gone from having a job for life to having more than 10 throughout a career. By 2025, patterns of work and careers will be even more varied than they are today.” (Thyssen 2017). Nevertheless, this average rate masks substantial country heterogeneity. Bassanini et al. (2010) demonstrate that both job-to-job transitions and labour market transitions are remarkably different across European countries: in some countries annual job and worker reallocation are as large as 25% and 45%, respectively, of dependent employment. By contrast, in a number of other countries, they comprise less than 15% of dependent employment. This suggests that country-specific policies and institutions are likely to play an important role in determining these transitions.

However, there is little cross-country comparative evidence, mainly because comparable data for many countries are scarce. Previous studies have either examined the macroeconomic effects of labour market institutions on the overall unemployment levels/rates in different countries in one year or they examined the effect of one labour market institutional change in one country (Micco and Pages 2006; Haltiwanger et al. 2008; Boeri and Garibaldi 2009; Cingano et al. 2010). To my knowledge this is the first study to examine the effects of five different labour market institutions on individual labour market transitions, comparatively, in three different countries over a long-time horizon (1990–2009). It does so, by employing an event history analysis, a more sophisticated and robust method than the probit/logit regressions that have been typically used by previous studies.

The widespread belief until now has been that “rigid” labour market institutions impede labour market transitions and are the cause of high unemployment and inactivity, especially in a world where economies are increasingly globalised. This thesis demonstrates that this is too crude and misleading since strong and constraining labour market institutions can coexist with good labour market performance, provided that the former are well-designed and set the right structure of incentives for employment and participation in the labour market.

The second main contribution of this thesis is with regards to the comparative political economy literature. The latter has produced competing theoretical expectations with regards to the effects of labour market institutions on labour market transitions, from the power resource approach (Korpi 1985; Korpi and Palme 1998) to the three worlds of welfare capitalism and de-commodification (Esping-Andersen 1990), to the Varieties of Capitalism (Hall and Soskice 2001; Hancké et al. 2007). This thesis has been largely motivated and based on the theory of Varieties of Capitalism (VoC). In their seminal work Hall and Soskice (2001) demonstrated the pivotal role of industrial relations, labour market institutions, productivity, training, inter-firm relations and relations with employees. Nevertheless, their theory has never been tested empirically in the field of labour market institutions and labour market performance.

This thesis contributes to the comparative political economy literature by subjecting the VoC contention to empirical assessment and finding evidence lending credence to it in the labour market sphere. Overall, we can derive four main conclusions. Firstly, this thesis reaffirms the importance of non-pecuniary institutions such as trade union power, trade union fragmentation and wage bargaining, as put forward by the VoC. Secondly, and in accordance with the VoC, substantial institutional complementarities are found. Until now, the empirical literature had focused on the interactions of labour market institutions with macroeconomic variables and shocks. Thirdly, the thesis also

reaffirms the existence of different models of capitalism. There are significant differences between the three typologies of countries when it comes to the size and frequency of all three labour market transitions and the latter are found to be affected to a high extent by the different labour market institutional configurations. The importance of welfare regimes and models of capitalism has been overlooked in economic studies of labour market institutions and their effects. Despite the growing “converging divergences” toward a common neoliberal, deregulated labour market model pointed out by several studies (Katz and Darbyshire 2000; Baccaro and Howell 2011; Lehndorff 2015), there is still substantial institutional diversification and path dependency. Labour law has been deregulated almost everywhere. In LMEs and the UK in particular, liberalisation took the form of “deregulation” with very low EPL for all workers whereas in CMEs and much more in SMEs it took the form of “dualisation” with high protection, social security and benefits for those into typical employment, known as “insiders”, but not for those into atypical employment, known as “outsiders” (Thelen 2012; Palier and Thelen 2010; Emmenegger 2013). The picture emerging here in terms of the classification of welfare state regimes is that SMEs are quite distinct from CMEs. This study provides evidence supporting a separate typology for Southern European market economies, which had been mis-specified by Esping-Andersen as “immature Continentals”.

Lastly, the findings from this study confirm the VoC contention that CMEs do not perform worse than LMEs and there is no “winning model”. There is not one model of capitalism superior to the others and there is no single, unique “optimal” institutional setting. Both LMEs and CMEs are capable of producing good labour market performance and their labour market institutional configurations are found to be crucial adjuncts to this end. Furthermore, Italy as a “hybrid” model between the two models of capitalism underperforms and its institutions inhibit the efficient functioning of the labour market. With its Jobs Act in 2015, the Renzi government passed a large package of

labour market reforms, including among others, the abrogation of the right to reinstatement in case of unjustified dismissal, better PES, more inclusive unemployment benefits, rationalisation and simplification of inspection activities, and one single temporary contract to substitute for all the different forms of temporary and fixed-term contract previously existing in the highly segmented Italian labour market. Nevertheless, Italy avoided tackling the true causes of the weaknesses of the Italian production system, namely, the deep territorial divide and its historical dualism, the small average size of Italian enterprises (four employees on average), poor investment in R&D, public administration inefficiency, insufficient childcare facilities, trade union fragmentation as well as lack of second-level contractual bargaining, fiscal non-compliance and widespread corruption.

The third and final contribution of this thesis is at a policy level. More than 800 reforms of labour market institutions were passed between 1980 and 2007 according to Boeri and van Ours (2013). Still, most labour market reforms have been undertaken without any ex-ante and ex-post evaluation and impact assessment. Thus, it is crucial to know what works and what does not. This leads us to Section 9.2.

9.2 Policy Lessons and Policy Recommendations—Not All the Roads Lead to Rome

Because of the complexity of labour market structures and their needs and problems, a one-size-fits-all approach would be not only highly unrealistic but also inefficient. As Blanchard (2005) aptly wrote, “what may be optimal for Sweden may not be optimal for Chile” (Blanchard 2005, 367). However, it is also true that we have now drawn some key conclusions and found that several elements are common to most of the successful labour market reforms. One key policy lesson is that institutional complementarities play a pivotal

role, and thus, any reform should take into account interactions with other institutions and the overall institutional framework.

With regards to EPL, this thesis advocates for an optimal, strictly positive and intermediate level of EPL across all countries, that does not differ significantly for open-ended and temporary/fixed-term contracts. This will ensure investment in firm-specific human capital and will also encourage inactive people to re-enter the labour market. Given its decentralised wage bargaining, the UK would be better off with a higher level of EPL than the current one. On the contrary, given its sectoral wage bargaining with high coverage of collective agreements, Italy would be better off with a lower level of EPL for open-ended contracts. Germany's level of EPL for open-ended contracts on the other hand would be optimal for a higher coverage of collective agreements than the current one. In practice, increasing labour market flexibility by reducing employment protection for open-ended but not for temporary contracts has been proven difficult to achieve politically. One possible direction for reforming the EPL in CMEs and even more in SMEs is to shift the emphasis from job protection to the protection of the worker. This is the so-called flexicurity framework that has received much attention in the European political debate in the last few years. A flexicurity strategy would require loosening EPL on permanent contracts (especially when seniority is low) in order to reduce dualism and improve the efficiency of the allocation of productive resources, while at the same time improving the income of dismissed workers by improving the unemployment benefit system, increasing activation policies for the unemployment and by introducing universal minimum income provision. Asymmetries between non-standard and standard employment can be reduced by integrating non-standard contracts fully into labour law, collective agreements, social security and life-long learning, and consider making employment in standard contracts more attractive to firms. The Jobs Acts is an important step towards this direction since it substituted all the different temporary contracts existing in the labour market with one single contract.

Furthermore, the evidence from this thesis suggests that trade union power reduces all four transitions examined in Germany and even more in Italy, and these effects are exacerbated in the presence of the high trade union fragmentation in Italy. This implies that countries with high union power need to reduce it and/or create a culture of social dialogue, where social partners collaborate and take into account the overall labour market. In that respect, legislation promoting social dialogue and inclusive unions' strategies—extending, *inter alia*, representation to sectors facing obstacles to unionisation—may mitigate the negative effects on labour market transitions.

With regards to wage bargaining, many EU countries have taken steps towards decentralisation in the past two decades. Overall, decentralisation as demonstrated by this thesis will not deliver the desired outcomes in terms of higher transitions from unemployment and inactivity to employment, especially in the absence of coordination and in the presence of trade union fragmentation. This is because coordination and trade union concertation imply that collective agreements take into account the overall macroeconomic effects and do not undermine external competitiveness. Thus, countries with intermediate (sectoral) wage bargaining do not have to decentralise it but focus on increasing coordination and introducing flexibility through allowing opt-outs for firms facing problems. This system will be supported by employer associations (since it moderates wage growth) and trade unions (since it ensures high levels of employment). To be effective, coordination requires strong and self-regulated social partners as well as effective mediation bodies (OECD 2018).

With regards to unemployment benefits, and in accordance with the flexicurity paradigm, this thesis provides clear-cut evidence that UI needs to be accompanied by conditionality and activation measures for the unemployed as well as monitoring. All three countries examined would benefit from such a policy, although Italy and the UK with their currently low activation, would benefit more. Furthermore, in accordance to Tobin (1972) this thesis finds that the relatively high UI during the period 1990–2010 with low activation and

monitoring in Italy in conjunction with its higher level of wage bargaining reduced job-to-job transitions by reducing the wage benefits from a potential job change, making unemployment a more appealing option than an immediate transition to a new job. This constitutes a problem since job-to-job transitions are part of efficiency-enhancing resource reallocation: productive employers tend to expand, and less productive ones to contract. The Jobs Act of 2015 has been an important reform in that direction, not only by increasing the coverage of unemployment benefits (in a previously highly fragmented system) but also by linking the benefits to previous contributions and activation measures; as well as by streamlining the provisions governing the Wages Guarantee Fund (CIG). In particular, the Jobs Act made clear the distinction between the unemployment benefit in case of termination of the job contract (NASpI) and wage supplementation schemes in case of temporary suspension of the job contract (CIG) and linked also the latter to activation measures.

This study corroborates previous evidence that the threat of losing benefits if an employment offer is not accepted increases the incentive to find a work (Jensen, Rosholm, and Svarer 2003; Fertig and Kluve 2004). In the presence of activation, unemployment benefits will increase transitions from unemployment to employment and will also reduce future transitions from employment to unemployment. The latter effect is due to the higher quality of job matches through PES guidance or by upskilling, as a result of participation in training. Higher activation will lead to higher overall employment and lower unemployment. Thus, a key conclusion for unemployment benefits is to invest in activation in order to enhance the employment opportunities for benefit recipients, prevent long-term welfare dependence and eliminate disincentives for work. Previous evidence has demonstrated however that active job search assistance cannot properly work if the PES is performing purely administrative tasks (jobless recording and accounting) and has no knowledge of the labour market (OECD 2003). This implies that suitable training is needed to improve the ability of counsellors to better advise and assist the job seekers.

An overall policy conclusion from this thesis is the need for reductions in de-commodifying policies and the introduction of re-commodifying policies such as employment incentives. Of course, labour market institutional reform cannot occur from one day to another and entails political and social costs. At the same time it is also true that we have observed a much greater capacity for institutional reform than the one predicted by historical institutionalism and path dependency. This change can occur mainly through political discourse, international and EU pressure as well as benchmarking, policy diffusion and learning from good practices (Ferrera et al. 2000; Streeck and Thelen 2005; Seeleib-Kaiser and Fleckenstein 2009; Hemerijck 2013).

Due to various elements of its institutional setting and the heavy toll of the reunification, several scholars and studies perceived Germany as largely incapable of reform in the 90s (e.g., Kitschelt and Streeck 2004). However, Germany managed to transform from the “Sick Man of Europe” (cf. Barysch 2003) to a good economic and labour market performer, having the fourth-highest GDP in the world (after the United States, China, and Japan). This policy diffusion hypothesis has been corroborated by several studies demonstrating that learning and emulating has been the most effective diffusion mechanism for activation and flexicurity in Europe (Hall 1993; Braun and Giaraldi 2006; Bonoli 2010). In particular, as demonstrated in Chapter 5, Agenda 2010 and the reform of the PES in Germany was highly inspired by the UK approach to activation. The UK Job Centre Plus and its role of the “personal adviser” with overall responsibility for service provision and facilitation of reintegration measures was emulated by German policy-makers (Seeleib-Kaiser and Fleckenstein 2009). Policy papers on the reform of the PES in the UK and several other countries were provided and fact-finding missions to the UK and four other countries were organized (ibid).

Furthermore, as Hemerijck (2013) argued, welfare states and labour markets today are confronted with new challenges and pressures (internal and external) for reform and change. Externally, international competition is push-

ing de-commodifying labour market institutions such as unemployment benefits and minimum agreed wages to be reduced, while at the same time allocative efficiency implies that the more competitive and productive firms and sectors grow while the less ones are left to shrink. Many academic scholars believe that the increase in cross-border competition has substantially reduced the room for manoeuvre of national welfare models of capitalism and labour market institutions. In addition, the EU and the process of Europeanisation has fundamentally recast the boundaries of national labour markets through the European Semester and the issuance of country-specific recommendation in the field of labour market policy, constraining the autonomy for domestic policy options; but also opening opportunities for EU-led multi-level policy coordination.

Internally, ageing populations as a result of rising life expectancy and rapidly falling birth rates, changing family structures, increased female labour force participation, changes in work organization, and skill-biased technological change pose a large challenge to labour market institutions (Hemerijck 2013). Low and falling employment levels of many social groups, new and rising inequalities, skill-biased patterns of social exclusion, as well as immigration make the need for labour market institutional reform and exigency.

9.3 Limitations of the Thesis

When one states his contributions, he should also acknowledge the limitations of his work and in that respect, my thesis does not fall short. The average effect of a labour market institution in a country is a fictitious concept, the latter does not exist and the effects differ substantially among subgroups. A more centralised level of wage bargaining would imply a higher wage for lower productivity firms than the average in the sector, as well as for low skilled workers. When wages are negotiated at the company level like in the UK they are more aligned with the productivity of the worker. Thus, an in-

crease in the level/coverage of wage bargaining is more likely to negatively impact upon unskilled workers and low productivity firms. Similarly, a loosening on EPL for atypical contracts is also expected to affect more the young and/or unskilled without an open-ended contract. In countries where regular workers have de jure high EPL, employers will have an incentive to replace them with temporary workers. Conversely, if EPL for regular workers is very low, companies have no need to employ temporary workers. If this is true, lowering the EPL of temporary workers may make this process of substitution easier and lead to a dead-weight loss (Blanchard and Landier 2002; Kahn 2007). Furthermore, the effects of trade union power are expected to differ by sector and by worker. As the literature on labour market dualisation has demonstrated, workers with discontinuous and unstable employment patterns are not well-represented by trade unions (Ebbinghaus 2006).

The European Commission Labour Market and Wage Developments report finds that: “Strict employment protection legislation on open-ended contracts increases the chance that an individual works on a temporary contract, in particular for new labour market entrants, highly educated individuals or people working in market services. The effect of collective bargaining coverage is ambiguous and depends, among other things, on how inclusive unions are. The analysis suggests that an increase in collective bargaining coverage from low levels may lead to stronger protection of those in open-ended employment at the expense of those in temporary employment. In this case, the likelihood of temporary employment may increase. At high levels of coverage, unions are more likely to be concerned about the job security and quality of temporary as well as permanent workers” (European Commission 2017, 3). This wouldn’t constitute a problem if workers on temporary contracts had similar wages with those on open-ended ones. Nevertheless, the same report finds that: “In almost all Member States, wages of temporary workers are lower than those of permanent workers, even after controlling for individual and job characteristics that account for the productivity of individual workers. The

wage penalty—i.e. the wage gap between workers with temporary and permanent contracts—is the highest in Poland and Luxembourg where, controlling for personal and job characteristics, permanent employees earn on average respectively 19% and 17% more than temporary employees. In contrast, it is negligible in Bulgaria, Estonia, Romania and Latvia. In general, the wage penalty is found to be high in countries where the share of temporary contracts is high, which suggests rationing of permanent work. In these countries, workers search open-ended positions but employers restrain their demand on the basis of the cost advantage that hiring a temporary employee may provide. Moreover, the wage penalty for temporary workers increases with the level of education, which means that the wage gap between permanent and temporary workers is higher at high than at low levels of education” (European Commission 2017, 4).

Unfortunately, these diverse effects cannot be tested in this thesis due to the lack of data. The existing event history labour market datasets do not provide information on the type of contract and the sector. In that respect, this thesis—as every thesis—can go only as far as the data it utilizes. This has not allowed me to examine how labour market institutions have impacted on labour market segregation and inequality and check whether the average results found, differ significantly by occupational groups, types of contracts and sectors.

Finally, the results for job-to-job transitions are not straightforward to interpret as in reality these transitions could be upward, downward or lateral moves, with completely different effects of the independent variables on each of these directional moves. For example, high EPL (with seniority) could increase the upward mobility rate and decrease the downward mobility rate. Studying mobility as such is done in a crude manner, mixing up these important negative and positive relationships of labour market institutions. Thus, a more sophisticated and complex analysis is required to examine solely job-to-job transitions.

9.4 Future Research—the Way Forward

“There’s more evidence to come yet.”

—Lewis Carroll, *Alice’s Adventures in Wonderland*

Future research should investigate the labour market institutional effects on different sub-groups, on labour market segmentation as well as on equality. It is important to distinguish between the “efficiency” of an institution and its “inclusiveness” i.e. the extent to which it produces more egalitarian outcomes. According to the latest available data in 2015, the Gini coefficient (post taxes and social transfers) stood at 0,29, 0,32 and 0,36 in Germany, Italy and the UK, respectively. Thus, the interesting question is to what extent labour market institutions can account for this inequality? Institutions can further exacerbate or alleviate these problems depending on their design. While labour market institutions within a country have not changed dramatically, the contractual position of workers in European labour markets has undergone profound changes (Vlandas 2013). Part-time and temporary employment, as a share of total dependent employees, have been rising significantly across Europe since 1980. Furthermore, new flexible forms of employment have emerged in the last two decades such as freelancers, temporary agency workers, “bogus” self-employed, zero hour contracts or “on-call” jobs and mini jobs. Consequently, differential effects of labour market institutions need to be examined. New data will be required for this endeavour. Schumpeter’s (1964) famous bus metaphor is indeed more pertinent than 50 years ago: the bus might always be full but while some people leave the bus and new people enter, there is always a small percentage that can be labelled as “permanent residents” for whom the doors remain locked.

Secondly, this study has provided a comprehensive examination of the labour market institutional frameworks of three large European countries. Such a comparative approach should be expanded to other countries and wel-

fare typologies missing, namely the social democratic/Scandinavian model and the Eastern European one.

Finally, it is worth noting that my data refer to the period 1990–2009 and thus, do not capture recent developments in the labour market. The EU and its Member States are still recovering from the crisis, with employment rates returning slowly to the pre-crisis levels. In 2017, the unemployment rate reached 7,6% in the EU28 and 9,1% in the euro area, still above the 2008 pre-crisis levels. Long-term unemployment rate dropped to 4% in the EU (5% for the euro area) i.e., almost 1,5 percentage points above the 2008 level. In 2017 wages in the euro area rose by 1,2%, essentially the same rate as in the previous year; this is well below the rate implied by the pre-crisis relationship between wage growth and unemployment (Eurostat). At the same time, the EU is undergoing profound demographic and social changes requiring reforms in labour market institutions. Thus, the issue is now to determine which labour market institutions can contribute to this process towards higher employment and lower unemployment and inactivity but also, towards the creation of the right jobs, fostering inclusion, productivity and competitiveness and ensuring adequate wages for everyone.

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