

Contextualising institutional complementarity. How long-term unemployment depends on employment protection legislation, active labour market policies and the economic climate

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This study investigated if and how active labour market policies (ALMPs) and employment protection interact with each other in light of long-term unemployment reduction. We argue that how well the interaction between both labour market institutions reduces long-term unemployment depends on the level of economic growth. To improve analytical clarity, two types of ALMPs were differentiated, namely training and employment programmes. Using data on 20 European countries over 16 years, our results suggest that employment protection moderates the relationship between employment programmes and long-term unemployment. The combination of high spending on employment programmes and less strict employment protection is associated with less long-term unemployment. This moderation effect is stronger during an economic downturn. A moderation effect from employment protection on the relationship between training programmes and long-term unemployment was not found, even when the economic climate was taken into account as a contextual factor.

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The study concerns how less strict employment protection legislation (EPL) influences the effectiveness of active labour market policies (ALMPs) in combatting long-term unemployment (LTU). ALMPs are ‘a range of public programmes aimed at increasing employment, enabling people to move into jobs and achieving a better match between labour supply and demand’ (Clasen, Clegg, & Goerne, 2015, p. 22). Although ALMPs are propagated to be effective measures for decreasing long-term unemployment, at the same time they are also criticised for increasing long-term unemployment (Madsen, 2004). Empirical research does not provide a clear-cut answer on how these measures affect long-term unemployment as the empirical research outcomes are contradictory (Dahl & Lorentzen, 2005). Two reasons come to mind that could explain these contradictions.

A possible reason for these contradictory results is that ALMPs are studied within different institutional

structures. How institutions function is partly influenced by the institutional structure of which they are a part (Hall & Soskice, 2001). Hence, there may be other factors affecting the outcomes of ALMPs. Within the ‘new welfare state’ framework, activation is a central pillar and is often combined with measures that facilitate labour market flexibility (Ellison & Fenger, 2013). One measure often recommended for increasing labour market flexibility is to reduce employment protection legislation (EPL) strictness. EPL refers to different policies and laws that are devised to protect employees against arbitrary dismissal and to prevent the occurrence of costs associated with job loss (Ochel, 2005). By making employment protection less strict, the adjustment costs of employers are reduced (Holmlund, 2014), which ought to make companies more competitive (in a globalised market).

The theoretical construct of institutional complementarity may help to theorise how EPL affects

ALMPs in combatting long-term unemployment. Institutional complementarity entails the idea that the presence or specific configuration of one institution increases the returns from other institutions (Hall & Soskice, 2001). In this study, the returns refer to the lowering of the LTU rate within a given labour market. Multiple institutions are organised in such a way that they remedy the deficiencies of other institutions. As a result, the negative effects of one institution are countered by other institutions, thereby producing a higher return. Although institutional complementarity involves differences between institutions so that they complement each other, it also involves some degree of similarity between institutions so that they fit properly together (Crouch, 2010). ALMPs and low employment protection are similar in the sense that they are both aimed at increasing the probability of a successful match between labour supply and demand, and both improve labour allocation. However, they are also different in the sense that low employment protection is directed at the demand side of the labour market and ALMPs at the supply side. Hence, ALMPs and reduced employment protection can be conceived as potentially complementary in combatting LTU.

The output of the institutional structure of the labour market is also affected by external influences, such as changes in the economic environment (Simmie & Martin, 2010). As the economic environment changes, the same institution might produce another incentive due to, for example, a changed risk position. Bernal-Verdugo, Furceri, and Guillaume (2012) have studied the effects of labour market policy on unemployment in times of economic crisis. These researchers showed that more flexible labour markets initially tend to react stronger to financial crises but recover more quickly. Rigid labour markets tend to be less affected by financial crises, but the negative effects last longer. This suggests that the degree of complementarity between institutions within the same configuration varies between economic periods. To our knowledge, there is a lack of research that would shed light on the changing degrees of the institutional complementarity between two institutions that is induced by the environment of the institutions in question.

In summary, this study had two aims. The first was to sort out how the mechanisms associated with ALMPs might be influenced by low employment protection. The second was to shed light on how different levels of economic growth might influence the effects of an interaction between these two institutions. On a more abstract level, we argue that to better understand the dynamics of institutions, it is important to include other institutions in the analytical framework. Because single institutions are usually

a part of a larger institutional framework, they work simultaneously and thereby influence each other's outcomes. Studying institutions as single entities may therefore be a less fruitful endeavour. Excluding the external environment of the institution from the analytical framework may also produce less insightful results. When institutional structures stay the same but the circumstances change, it is plausible that agents within these institutional structures start to behave differently. This change in behaviour produces different results and might explain why contradictory results have been found.

Generating such insights is also valuable from a policy perspective. Since 2007, the European Commission has encouraged its member states to develop labour market policies based on the idea of flexicurity. This concept emphasises the potential of institutional complementarity between flexibility and security measures, such as ALMPs (Heyes, 2011). Hence, providing more insight into the interplay between these policy measures is beneficial for policymakers. Moreover, the financial crisis showed that certain labour markets are more resilient to economic shocks than others (Fenger, Koster, & van der Veen, 2014). It is, therefore, worthwhile to investigate how policy mechanisms work together during economic upturns and downturns, as this contributes to formulating more effective labour market policies.

This leads to the following research question: How does economic growth affect the level of institutional complementarity between less strict employment protection and ALMPs in reducing long-term unemployment? To investigate the level of institutional complementarity between low EPL and ALMPs in relation to long-term unemployment, we used panel data on 22 European countries for the period 1995–2012. In this way, we were able to include changing economic growth levels into our analysis.

This article is structured as follows. We discuss our theoretical framework in the next section. Then we describe our methodology and present our results. We conclude by answering our research question and discussing the findings.

ALMPs and long-term unemployment

Long-term unemployment is associated with low (re)employability levels of the unemployed. Due to human capital loss during the period of unemployment, the long-term unemployed become less employable. Human capital refers to 'knowledge, skills, and abilities that have economic value to the firm' (Lepak & Snell, 2002, p. 519). Another factor that contributes to lowering the level of (re)employability is the negative psychological effect caused by rejection and stigmatisation by employers. The aim

of ALMP is to lower long-term unemployment by improving the (re)employability of the long-term unemployed (Strandh & Nordlund, 2008).

Two forms of activation programmes can be distinguished, namely employment programmes and training programmes (Dahl & Lorentzen, 2005; Strandh & Nordlund, 2008). Training programmes aim to increase the amount of human capital of the long-term unemployed. The long-term unemployed often possess low or obsolete skills which prevents them from obtaining employment. Training policies attempt to optimise the matching process between the long-term unemployed and employers through upskilling. Furthermore, training policies are also used in order to lower psychological barriers to returning to work (Gilbert & Besharov, 2011) which are often the result of negative experiences during the period of unemployment (Proudfoot, Guest, Carson, Dunn, & Gray, 1997).

Another way to improve the (re)employability of the long-term unemployed is through employment programmes. These programmes aim to increase the availability of work and provide opportunities for the long-term unemployed to obtain work experience. Examples of such programmes are hiring and job subsidies for the private sector, the creation of new jobs in the public sector and financial supports for start-ups of new businesses (Rovny, 2014, pp. 299–300). The latter type not only reduces the long-term unemployment rate through people leaving unemployment as entrepreneurs, but also by increasing the demand for labour if these businesses are successful. Besides human capital accumulation, employment programmes also help the long-term unemployed to increase their social capital. Through these programmes, they have an opportunity to establish new networks and contacts. This may help them to obtain employment in the future (Strandh & Nordlund, 2008).

Both types of ALMP programmes aim to improve the labour market position of the long-term unemployed. However, both programme types do so in different ways, and may therefore produce different results. For instance, employment programmes facilitate human capital accumulation through actual work, whereas training programmes provide human capital accumulation in an artificial environment. Human capital accumulation through work might be evaluated more positively by employers. When hiring, employers use signals on a resume that indicate occupation-specific human capital. By using these signals, employers try to hire candidates who have shorter adjustment periods and lower training costs (Humburg & van der Velden, 2015). The adjustment period and training costs are probably lower for those who have participated in work programmes as they already have relevant work experience. Employers may, therefore, evaluate participants from work programmes more positively.

However, ALMPs are also criticised for decreasing the likelihood of obtaining employment as they might increase employers' perceived risk of hiring an ALMP-participant. It has been argued that ALMPs create a so-called lock-in effect. This effect occurs while the long-term unemployed are participating in activation programmes. During the period of their participation, job-search activities of the long-term unemployed are reduced. This makes obtaining new employment less likely and the length of the unemployment spell is therefore increased (Madsen, 2004, p. 197). This increased duration of unemployment could become a vicious circle. Employers see long periods of unemployment on a résumé as a negative signal indicating low productivity and poor motivation (Blanchard & Diamond, 1994). As hiring decisions are associated with a great deal of uncertainty, employers use unemployment duration as a screening tool in an attempt to reduce the uncertainty (Bonoli, 2014). Furthermore, it has also been argued that participation in ALMP programmes is also associated with possessing less desirable characteristics due to negative selection. This reduces the chances of a successful re-entry into the labour market as employers' hiring decision is negatively influenced by this stigma (Solga, 2014). Both effects might explain why ALMP could also increase LTU. Based on these arguments, it can be expected that the perceived risk of hiring the long-term unemployed increases due to a prolonged unemployment duration and stigmatisation due to ALMP participation.

Less strict employment protection as a complementary institutional configuration

The arguments provided above lead to a number of hypotheses about how less strict employment protection is complementary to ALMP. Because the notion of institutional complementarity implies that the effect of one institution is influenced by other institutions, we have refrained from formulating hypotheses on the main effect of ALMP on long-term unemployment. Instead, we focus on how the relation between ALMPs and long-term unemployment depends on EPL and how the economic environment influences the labour market outcomes induced by the interaction between ALMP and EPL.

Less strict EPL may counter the effect of a prolonged unemployment duration caused by the lock-in effect and stigmatisation. EPL influences the adjustment costs an employer has to make in order to effectively adapt to market fluctuations. The height of these adjustment costs is, among other things, influenced by the firing costs an employer has to make. EPL measures, like mandated severance pay,

influence the height of these firing costs in a direct manner. But EPL also indirectly affects the firing costs via procedural costs or induced wage hikes. Thus, EPL also influences the hiring of new employees. With strict employment protection, employers are less eager to hire new staff to avoid potentially high future firing costs (Avdagic, 2015, pp. 7–9). While it is easier to fire employees within a labour market with less strict EPL, the average duration of unemployment should be shorter. By reducing the financial risk of hiring new employees, employers are more willing to hire new staff. As a consequence, labour demand is increased and the outflow from unemployment is therefore increased too. This improves the likelihood of labour market reintegration for the unemployed with a weak labour market position. Hence, it is argued that low employment protection leads to a lower long-term unemployment rate.

It can be argued that by reducing the adjustment costs, the consequences of a prolonged unemployment period caused by the lock-in effect and stigmatisation are minimised. Their relatively long absence on the labour market adds to the perceived risk of hiring the long-term unemployed (Blanchard & Diamond, 1994; Jackman & Layard, 1991; Kroft, Lange, Notowidigdo, & Katz, 2016). Hence, even though the long-term unemployed increase their human capital, it may not be enough for employers to hire them. The stigma associated with longer periods of unemployment and ALMP-participation may still influence the hiring decision. Even though their labour market position is improved compared with the position prior to ALMP programme participation, this still results in a non-hiring decision. When employment protection is less strict, the financial risk of hiring the long-term unemployed is also reduced. As a result, hiring an ALMP participant is less risky in a labour market with less strict EPL than in a labour market with strict EPL. It is therefore expected that ALMPs are associated with lower long-term unemployment within labour markets with less strict EPL compared with those with strict EPL. Therefore, we hypothesise that EPL positively moderates the relationship between LTU and training programmes (H1a), and between LTU and employment programmes (H1b).

Institutional complementarity during economic upturns and downturns

One can expect this moderation effect to be stronger in times of economic downturn. The financial risk of hiring new staff during an economic downturn is higher due to increased uncertainty over future employment trends (Schettkat, 1996). Due to this

increased financial risk, employers can be expected to be more reluctant to hire the long-term unemployed. However, this risk is still lower in labour markets with less strict EPL due to lower adjustment costs. Moreover, the competition for employment is fiercer during an economic downturn. Consequently, the long-term unemployment risk is also higher for the unemployed who have a relatively strong labour market position. People with better qualifications become eligible for ALMP programmes, too. As a result, the quality of labour supply from ALMPs is higher in economic downturns than in upturns. ALMPs also prevent people with a relatively strong labour market position from becoming long-term unemployed and potentially unemployable during an economic downturn. Even though the quality of the ALMP labour supply is higher, hiring during an economic downturn is still riskier in a labour market with strict EPL. Thus, ALMP programmes are less effective in combatting LTU during economic downturns in labour markets with strict EPL.

Furthermore, employers need more labour during economic upturns to keep up with consumer demand (Greer, 1984, p. 324). Economic growth is often portrayed as a strong determinant in lowering the unemployment rate (van Ours, 2015). This implies that labour market incentives that are intended to ‘artificially’ increase labour demand are less strong during times of economic growth. Thus, the difference in the effectiveness of ALMP between labour markets with high and with low employment protection becomes smaller when the economic growth level increases. As a result, reducing the financial risk of hiring is more effective in increasing the outflow of ALMP participants into employment when the economy is in a downturn. Our hypotheses are that the positive moderation effect of EPL on the relationship between LTU and training programmes (H2a)/employment programmes (H2b) becomes less strong when the economic growth level increases. The conceptual model is presented in Figure 1.

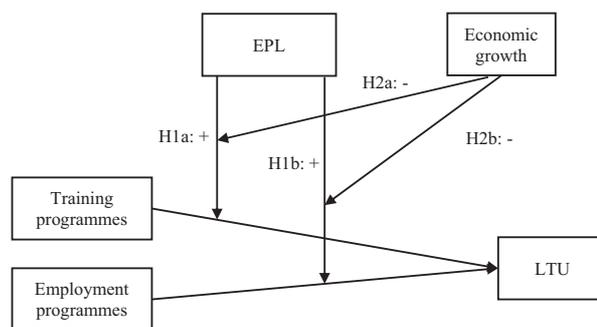


Figure 1. Conceptual model.

Data and methods

Data

For this study, we used the European Labour Market Resilience (ELMaR) dataset. This dataset was compiled for the INSPIRES (Innovative Social Policies for Inclusive and Resilient Labour Market in Europe) research project funded by the European Commission under Framework Programme 7. A publicly available dataset was devised containing cross-national and longitudinal (1995–2012) data originating from several data sources, namely the OECD, Eurostat, the Data Base on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts, and the Comparative Welfare Entitlements Data Set. ELMaR covers 30 European countries and 540 observations (Bigos et al., 2013). We selected cases with complete information about all the variables used for the analysis. After this selection, the dataset used for the analysis contained 276 observations and 20 countries. This dataset contains only data on the macro-level, which prevented us from directly modelling and testing the micro-level mechanisms. However, we were able to observe the outcomes produced by the mechanisms at the aggregate level, which enabled us to test our hypotheses. Thus, we believe it is still possible to obtain meaningful results with this data set.

Variables

The dependent variable in our model is *long-term unemployment*. Two measures are commonly used to measure long-term unemployment, namely long-term unemployment as a percentage of the total labour force or as a percentage of the total number of unemployed. We chose to use the percentage of the total labour force to measure long-term unemployment as this gives a better indication of how well a labour market performs. A labour market with a high percentage of long-term unemployment in the total labour force indicates low levels of inclusiveness and lower economic performance. However, having a high percentage of the total unemployed who are long-term unemployed does not necessarily indicate the same. When a labour market has a very low unemployment rate but a relatively high percentage of this group is long-term unemployed, this labour market can still be considered to be inclusive and economically competitive. Consequently, we measured long-term unemployment as the percentage of the total labour force. The labour force consists of the total of employed and unemployed persons. The data we used originates from Eurostat (for a full explanation, see Eurostat, 2015). To correct for a skewed distribution, we log-transformed this variable.

Within our analyses, we used four primary predictors for long-term unemployment. First, we used EPL as a predictor, using the EPL-indicator of the OECD. This indicator incorporates eight data items concerning regulations for individual dismissals over a period between 1995 and 2012 (for full details, see OECD, 2015b). Second, we included two measures of ALMPs. The first measure is how much effort a country puts in its *training programmes* over time. This was measured as the total spending on training programmes as the percentage of the total government expenditure. In addition, we included *employment programmes* as a second indicator of ALMPs, which was operationalised as the percentage of the total government expenditure on employment incentives, supported employment and rehabilitation, direct job creation, and start-up incentives. These data originate from the OECD. We lagged the institutional independent variables with 1 year as it takes a year to become long-term unemployed. Fourth, *economic growth* was measured as the percentage change between 2 years in Gross Domestic Product (GDP) per head of the population. Because a comparison across time was made, data in constant prices was used. In our analytical setting, we considered this to be more appropriate as this controls for relative price differences over time in addition to those across countries (OECD, 2015a).

We controlled for several economic, demographic and institutional factors to increase the robustness of the estimates. The wealth of a nation might be correlated with the policies used and the rate of long-term unemployed rate. The wealth of a nation was measured by *GDP per head of the population* in constant prices. Besides controlling for economic influences, we also controlled for demographic influences as they may also be correlated with both the policies used and LTU. The *ratio of older-aged people* living in a country was controlled for by using the old-age dependency ratio. The ratio is measured as the total number older-aged people who are of an age that is higher than the working age (65 and over) compared with the total number of people of working age (from 15 to 64). We also controlled for migration, which was measured as the *crude net migration rate*. The Crude Net Migration rate is the ratio of the difference between the total change of the population and the natural change of the population compared with the average population in the period of 1 year per 1,000 inhabitants. Besides economic and demographic factors, other labour market institutions might be correlated with ALMP, EPL and LTU. For this reason, we controlled for welfare generosity and trade union density. *Welfare generosity* was operationalised as the net unemployment replacement rate, which was devised by Scruggs, Detlef, and Kati (2014). It

Table 1. Descriptive statistics.

Statistic	Mean	St. Dev.	Min	Max
Log long-term unemployment rate	1.007	0.774	-1.204	2.667
Training programmes (t-1)	0.341	0.175	0.000	0.900
Employment programmes (t-1)	0.750	0.507	0.000	2.100
EPL (t-1)	2.417	0.728	1.032	4.583
Economic growth (t-1)	1.736	2.952	-8.707	10.563
GDP per capita (/10,000) (t-1)	2.839	0.807	0.970	4.914
Old-age dependency ratio (t-1)	23.258	3.605	15.800	31.400
Crude net migration rate (t-1)	3.008	3.493	-7.500	15.700
Union density (t-1)	36.757	21.111	7.548	83.138
Welfare generosity (t-1)	0.600	0.141	0.258	0.800

N = 276.

measures the rate of income from work that is replaced by welfare and unemployment benefits. The net replacement rate was calculated as the average between the replacement rate for a single person without children and for a one-income family with two children. *Trade union density* was measured as the ratio of wage and salary earners who are trade union members, divided by the total number of wage and salary earners. We also lagged the control variables with one year. The descriptive statistics of the variables are presented in Table 1.

Analyses

As the dependent variable is measured on a continuous scale, we used a linear model to test our hypotheses. Because of the hierarchical structure of our data, with time nested in countries, we used a multilevel model with two levels. In this way, we took into account that observations over time are very likely to be highly correlated. We tested the dependence assumption by first estimating¹ an empty model that consists of the dependent variable and time only to test if the variance of long-term unemployment between countries was greater than zero. It is typical for a multilevel model with repeated measures to produce incorrect estimates of the variances of both levels. To correct this problem, the occasion variable needs to be included in the model. The estimation of the variance of the subject level becomes more realistic (Hox, 2010). This empty model was then compared with the same model plus a random intercept. The random intercept significantly improved the model ($\chi^2(1) = 298.32, p < 0.001$).

Next, we performed two analyses in which we investigated two models. First, we analysed a model focusing on the interaction between training programmes, EPL and economic growth. Second, we

¹ We used the nlme-package version 3.1-122 in R to estimate our models.

Table 2. Multilevel linear regression on the log long-term unemployment rate between 1995 and 2012.

	Model 1	Model 2	Model 3
(Intercept)	4.26*** (0.69)	4.29*** (0.69)	4.21*** (0.70)
<i>Main variables</i>			
EPL _c (t-1)	-0.38* (0.15)	-0.36* (0.15)	-0.41** (0.16)
Training _c (t-1)	-0.52 (0.43)	-0.50 (0.44)	-0.49 (0.45)
Economic growth _c	-0.00 (0.01)	-0.00 (0.01)	-0.00 (0.01)
<i>Interaction variables</i>			
EPL _c (t-1)*Training _c (t-1)		0.32 (0.58)	0.20 (0.60)
EPL _c (t-1)*Economic growth _c			0.01 (0.01)
Training _c (t-1)*Economic growth _c			-0.01 (0.04)
EPL _c (t-1)*Training _c (t-1)*Economic growth _c			0.01 (0.06)
<i>Control variables</i>			
GDP per capita (/10,000) (t-1)	-1.35*** (0.12)	-1.35*** (0.12)	-1.40*** (0.13)
Old-age dependency ratio (t-1)	-0.06** (0.02)	-0.06** (0.02)	-0.05* (0.02)
Crude net migration rate (t-1)	-0.05*** (0.01)	-0.05*** (0.01)	-0.05*** (0.01)
Union density (t-1)	0.00 (0.00)	0.00 (0.00)	0.00 (0.01)
Welfare generosity (t-1)	1.81*** (0.49)	1.79*** (0.50)	1.75*** (0.51)
Time	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)
<i>Variances</i>			
Between countries	0.61	0.62	0.64
Training _c (t-1)	1.96	2.10	2.18
Within countries over time	0.05	0.05	0.05
AIC	163.81	164.77	184.55
BIC	213.98	218.46	248.78
Log Likelihood	-67.91	-67.38	-74.28
Num. obs.	276	276	276
Num. groups	20	20	20

***p < 0.001, **p < 0.01, *p < 0.05.

analysed another model concerning the interaction between employment programmes, EPL and economic growth. Based on the theoretical construct of institutional complementarity, we expected that the effects of ALMP programmes and EPL would differ between countries. For this reason, we tested including these indicators as random slopes into the model. Including training programmes as a random slope significantly improved the first analytical model ($\chi^2(2) = 14.3, p < 0.01$), while including EPL as a random slope did not ($\chi^2(2) = 2.77, p > 0.05$). Moreover, including random slopes of employment programmes ($\chi^2(2) = 52.47.32, p < 0.001$) and EPL ($\chi^2(2) = 9.02, p < 0.05$) significantly improved the second analytical model. The results of the analyses are presented in Tables 2 and 3.

Table 3. Multilevel linear regression on the log long-term unemployment rate between 1995 and 2012.

	Model 1	Model 2	Model 3
(Intercept)	6.38*** (0.72)	6.42*** (0.72)	6.23*** (0.73)
<i>Main variables</i>			
EPL _c (t-1)	-0.43* (0.19)	-0.30 (0.21)	-0.35 (0.21)
Employment programmes _c (t-1)	0.04 (0.18)	0.02 (0.18)	-0.03 (0.19)
Economic growth _c	-0.00 (0.01)	-0.00 (0.01)	-0.01 (0.01)
<i>Interaction variables</i>			
EPL _c (t-1)*Employment programmes _c (t-1)		0.31 (0.25)	0.40 (0.25)
EPL _c (t-1)*Economic growth _c			-0.01 (0.01)
Employment programmes _c (t-1)*Economic growth _c			-0.00 (0.01)
EPL _c (t-1)*Employment programmes _c (t-1)*Economic growth _c			-0.07** (0.02)
<i>Control variables</i>			
GDP per capita (/10,000) (t-1)	-1.53*** (0.12)	-1.52*** (0.12)	-1.47*** (0.12)
Old-age dependency ratio (t-1)	-0.08*** (0.02)	-0.08*** (0.02)	-0.08*** (0.02)
Crude net migration rate (t-1)	-0.04*** (0.01)	-0.04*** (0.01)	-0.04*** (0.01)
Union density (t-1)	0.00 (0.01)	0.00 (0.01)	0.01 (0.01)
Welfare generosity (t-1)	0.08 (0.44)	0.09 (0.44)	-0.18 (0.45)
Time	0.08*** (0.01)	0.08*** (0.01)	0.08*** (0.01)
<i>Variances</i>			
Between countries	1.34	1.31	1.35
Employment programmes (t-1)	0.46	0.46	0.53
EPL (t-1)	0.16	0.15	0.17
Within in countries over time	0.04	0.04	0.04
AIC	134.81	136.33	151.84
BIC	195.73	200.77	226.78
Log Likelihood	-50.40	-50.17	-54.92
Num. obs.	276	276	276
Num. groups	20	20	20

***p<0.001, **p<0.01, *p<0.05.

Because three-way interactions are notoriously hard to interpret, we plotted the significant three-way interactions for easier interpretation. We also included the confidence intervals to see if the statistical estimations we observed in the regression model also corresponded with our theoretical expectations. We present two plots of a two-way interaction between an ALMP programme and EPL. One plot portrays the moderation effect during an economic downturn (GDP growth of -3%) and one plot portrays the moderation effect during an economic upturn (GDP growth of 3%).

Results

Descriptive analyses

In Figure 2, a boxplot is presented that shows the long-term unemployment distribution per country. The white boxes represent the interquartile range (IQR), meaning the range between the 25th and 75th percentile of the data. The vertical line in the white boxes depicts the median and the horizontal lines portray the distance of the furthest data point within 1.5 times the IQR. The black dots represent data points that are beyond 1.5 times the IQR. The mean score of a country is symbolised as a white diamond shape. Figure 2 shows that the Slovak Republic has the highest mean score and Norway the lowest. Poland, Spain and Ireland show highly volatile long-term unemployment rates.

Figures 3 and 4 show the combined average scores on training and employment programme spending, and the employment protection strictness. Figure 3 shows that the Netherlands has the highest average spending on training programmes, but has an average score on EPL strictness. Great Britain scores the lowest on EPL strictness and has relatively high spending on training programmes. Figure 4 shows that Ireland and Denmark have relatively high spending on employment programmes and less strict EPL. However, Denmark has stricter EPL than Ireland, but Ireland spends less on employment programmes than Denmark does.

Regression analyses

First, we analysed if training programmes and EPL interact with each other and if the direction of this interaction might be influenced by the economic climate. The analysis is presented in Table 2. Model 1 depicts the main effects of EPL and training programmes on long-term unemployment. EPL negatively affects long-term unemployment ($b = -0.38$, $p < 0.05$), which means that higher levels of EPL are associated with a lower long-term unemployment rate. There is no direct relationship between training programmes and LTU ($b = -0.52$, $p > 0.05$). To test hypothesis H1a stating an interaction between training programmes (the first indicator of ALMPs) and EPL, we extended Model 1 with a two-way interaction term between them (Model 2). No significant two-way interaction was found ($b = 0.32$, $p > 0.05$). As a result, we rejected hypotheses H1a. Next to that, we hypothesised that the economic environment might affect the direction of the interaction between training programmes and EPL (hypothesis H2a). Therefore, we extended Model 2 by including a three-way interaction term between training programmes, EPL and economic growth. The results are summarised in Model 3. The three-way interaction between training programmes, EPL and economic growth did not have a

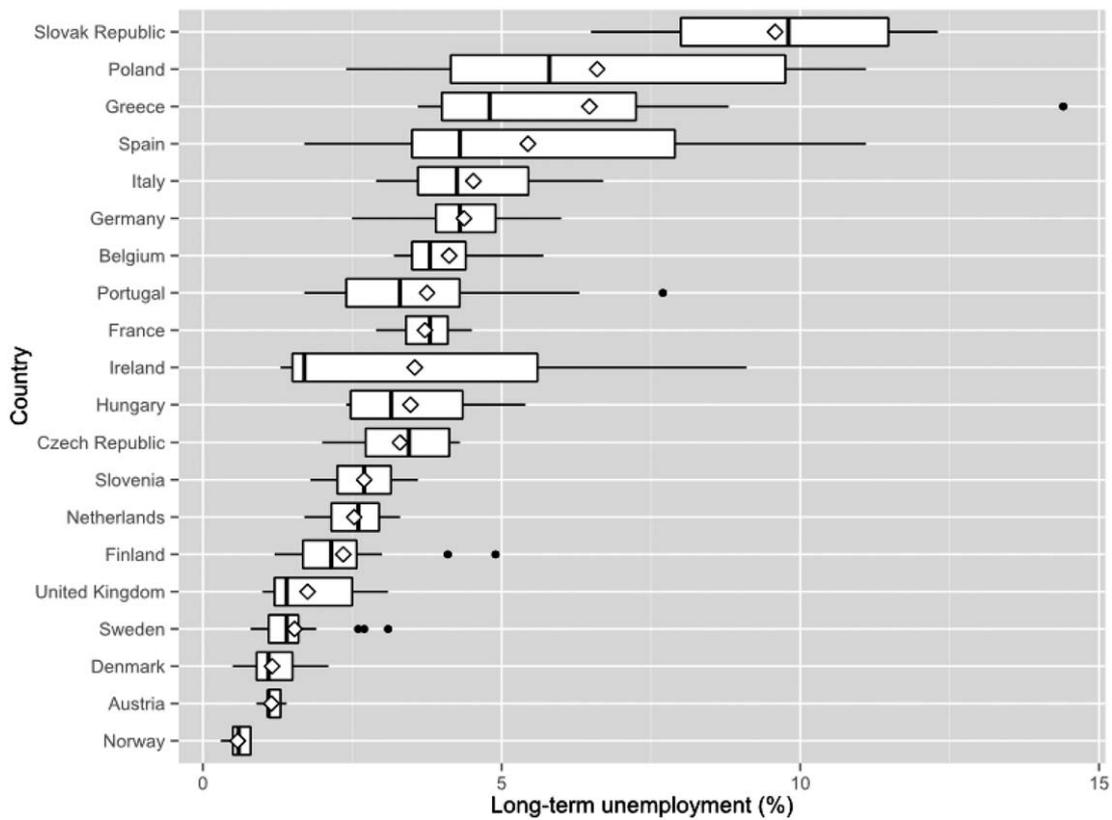


Figure 2. Boxplot of the long-term unemployment rate per country.

significant effect on long-term unemployment ($b = 0.01$, $p > 0.05$). Thus, hypotheses H1a and H2a were rejected.

Second, we analysed if the second indicator of ALMPs – employment programmes – and EPL

interact with each other and if the economic environments influence this interaction. The results of this analysis are presented in Table 3. In the first model, we estimated the main effects of employment

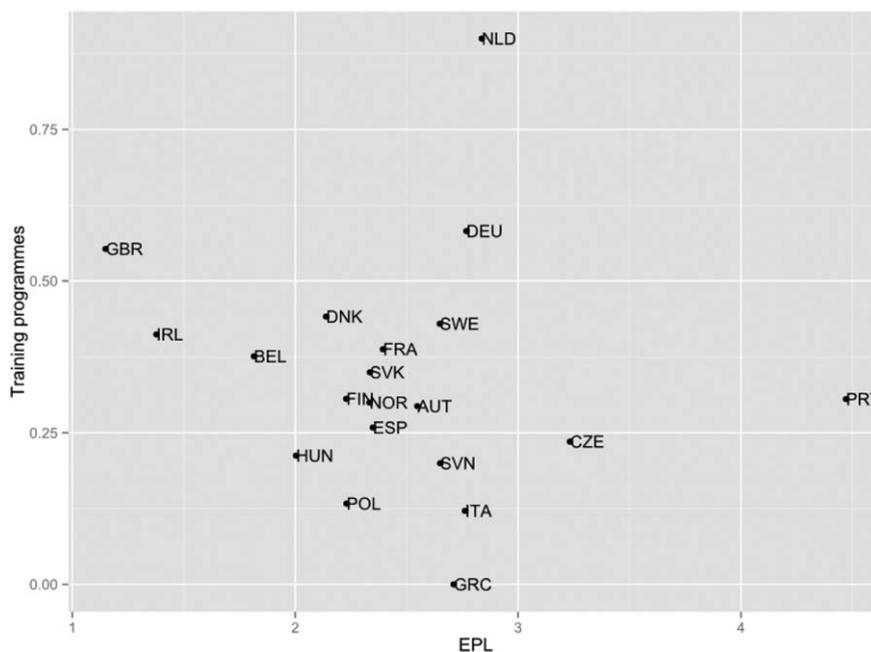


Figure 3. The average scores of training programmes and EPL between 1995 and 2011.

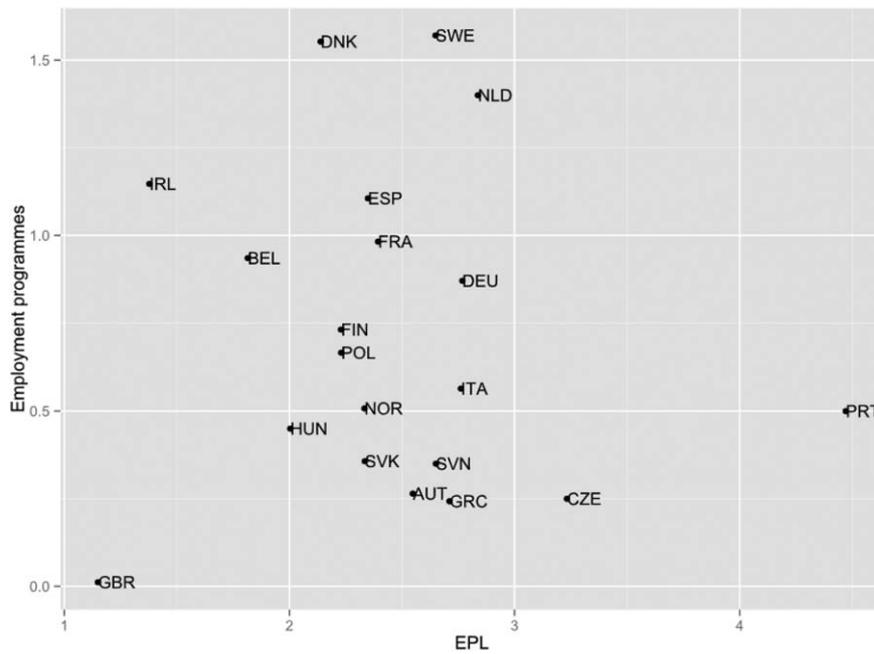


Figure 4. The average scores of employment programmes and EPL between 1995 and 2011.

programmes and EPL on long-term unemployment. Again, we found that EPL negatively relates to long-term unemployment ($b = -.043, p < 0.05$). We did not find a relationship between employment programmes and EPL ($b = 0.04, p > 0.05$). In Model 2, we extended Model 1 with a two-way interaction term between employment programmes and EPL. This enabled us to test hypotheses H1b, which holds that the two are complementarity. Our analysis implies that the interaction between employment programmes and EPL is not significantly related to long-

term unemployment ($b = 0.31, p > 0.05$). Hence, we rejected hypothesis H1b. Nonetheless, the existence of complementarity might be affected by the economic environment. To test this theoretical idea, we incorporated a three-way interaction between employment programmes, EPL and economic growth (hypothesis H2b). A significant effect of the three-way interaction on long-term unemployment was found ($b = -0.07, p < 0.01$).

Figure 5 illustrates how EPL moderates the relationship between employment programmes and long-

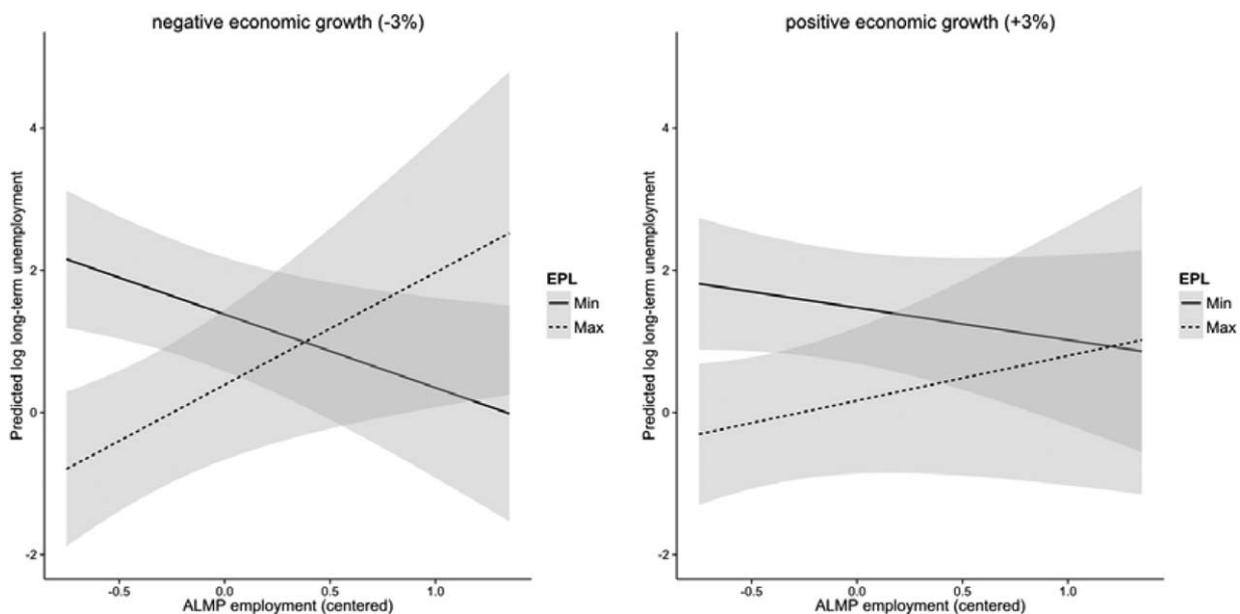


Figure 5. Predicted regression line of employment programmes on the log long-term unemployment rate by EPL.

term unemployment. The minimum and maximum observed values were used to indicate low and high levels of EPL.² Both plots show a significant difference between the regression lines as the confidence intervals do not overlap completely. Comparing the regression line that is associated with low EPL between both plots shows that both lines are negative. However, the regression line in the plot of positive economic growth is less negative than the regression line in the plot of negative economic growth. This implies that the moderation effect of EPL on the relationship between employment programmes and long-term unemployment becomes less strong when the economy grows. When EPL is high, a positive relationship is observed between employment programmes and long-term unemployment. The two plots show that when the economy is in an upturn, the effect of employment programmes on long-term unemployment is less positive compared with the effect during an economic downturn. Thus, we accepted hypothesis H2b.

Conclusion and discussion

In this study, we set out to shed more light on if and how less strict EPL is complementary with ALMP in reducing long-term unemployment. We also included the economic environment into our analytical framework, as this might influence the degree of complementarity between activation and employment protection. By doing so, we aimed at improving our understanding of the mechanisms associated with activation and employment protection as well as how institutional incentives differ depending on their external environment.

Our analysis shows that training programmes, as a form of ALMP, and low employment protection do not show any sign of institutional complementarity. Additionally, when we included the level of economic growth in our analysis as a contextual factor, we found no signs of institutional complementarity. This suggests that the consequences of a prolonged unemployment spell due to participation in training programmes might not be remedied by low adjustment costs through lower employment protection. The idea that low EPL might improve the outflow from training programmes was not supported by our analysis.

² During the analysis, we also plotted the opposite moderation effect, that is, where ALMP moderates the relationship between EPL and long-term unemployment. This plot showed a total overlap of the confidence intervals of the minimum and maximum observed values of employment programmes in both plots. This suggests that the institutional complementarity between employment programmes and EPL is a one-way-street.

However, our results indicate that the use of employment programmes and less strict EPL are institutionally complementary and that they are more effective together during economic harsh times. The results suggest that less strict EPL influences the effects of training and employment programmes on long-term unemployment in different ways. Two explanations come to mind. Employment programmes decrease the financial risk of hiring the long-term unemployed to a greater extent than training programmes do. Due to financial incentives such as subsidies and tax reductions, and because employment programme participants are closer to the labour market than the long-term unemployed are who participate only in training programmes and not in the labour market, the financial risk is considered to be acceptable on condition that it is easy to fire them, especially during a crisis. Furthermore, an additional explanation for the differential effects of training and employment programmes could be connected with the way human capital is accumulated. As human capital is directly accumulated from the labour market instead of from the educational system, it might be valued more by employers as it lowers potential training costs. This, too, might contribute to lowering the risk of hiring a long-term unemployed person during an economic crisis or downturn. It appears that in this situation the mechanism of stigmatisation does not dominate the relationship between employment programmes and long-term unemployment. Perceiving employers as economic risk-avoiding agents explains why the moderation effect of EPL on the relationship between employment programmes and long-term unemployment is the stronger during an economic downturn. Choosing the safest route during a storm is a logical choice to make.

In short, our study suggests that the amount of the adjustment costs that an employer has to make determines which mechanisms of ALMPs will dominate. Our study implies that the long-term unemployment decreasing mechanisms become dominant relative to the long-term unemployment increasing mechanisms if adjustment costs are low. However, when adjustment costs are high, the consequences of the prolonged long-term unemployment and stigmatisation appear to become dominant. Our study also shows that this interaction becomes stronger when the level of economic growth declines. Furthermore, we found this effect only with employment programmes, not with training programmes. This implies that governments should rather invest in employment programmes than in training programmes during economic downturns to lower long-term unemployment. But, these programmes should be implemented only in labour markets with less strict EPL. Higher spending on employment programmes is associated

with higher long-term unemployment in labour markets with strict EPL.

On a more abstract level, our study also shows that it is worthwhile to investigate how the effects of one institution are influenced by other institutions. In this way, we are better able to understand how institutional structures function. Our study also shows that including the external environment of institutions in the analytical framework reveals how the output of institutional structures changes. This suggests that excluding an institution's external environment from the analytical framework may obscure certain patterns and insights. This might explain why contradictory results have been found by other scholars. The same institution within different types of institutional structures or different environments might produce different incentives because other mechanisms within the same institution become dominant. This explains why conflicting results have been presented in the academic literature on social policy outcomes.

Another institutional feature that might influence the relationship between ALMPs and long-term unemployment is how income protection is organised. Unemployment insurance and social assistance are also considered to be predictors of unemployment duration, but also of the quality of labour market matching processes. Future research could focus on how the combination of ALMPs and income protection influences long-term unemployment and if the interaction is affected by differences in the economic climate. Another direction future research could follow is to differentiate the effects of the ALMP programmes by target groups. This study examined only the total group of long-term unemployed. It is plausible to assume that various social groups are affected differently by the same institutional system.

This study has also some methodological limitations. The first limitation concerns the level of analysis. We included only the macro-level in our analysis. But the mechanisms involved make assumptions about micro-level behaviour. By excluding these levels, we were unable to analyse these mechanisms in full detail. Institutions influence behaviour but do not fully determine it. Thus, by looking only at the macro-level, much of the detail is lost. Future studies should include these lower levels to better test the assumptions made. Another drawback of this study, one which is closely related to the former, is the exclusion of the ALMP effort on the regional and local levels. EPL is determined on the national level, but how ALMP is organised differs at the national, regional and local levels. As far as we know, no comparative data exist that contain this information. The consequence of this exclusion might be that the ALMP effort of some countries has been underestimated. Other limitations concern statistical endogeneity. The measurements

used are very broad and may, therefore, produce measurement error, which results in inconsistent estimation. A possible solution is to study specific legislature to avoid studying misrepresentations caused by less valid measures (de Beer & Schils, 2009). Within our research framework, this was not a viable option because we were more interested in studying the general patterns across European labour markets. Furthermore, this study may also suffer from statistical endogeneity caused by bi-causality. The policy mechanisms under study assume that policy produces socio-economic outcomes. However, socio-economic outcomes also influence future policymaking. Thus, long-term unemployment may also predict policy. A solution to this problem is to use instrumental variables (IVs) (Antonakis, Bendahan, Jacquart, & Lalive, 2010). But to the authors' knowledge, no reliable IVs exist that fit our research framework. Despite these limitations, we believe that this study provides valuable insights in institutional complementarity between labour market institutions and how this might be affected by their external environment.

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