IN AND OUT OF THE CRISIS – AN EXPLORATIVE STUDY OF THE RESILIENCE OF EUROPEAN LABOUR MARKETS

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Abstract

This paper focuses on the development of unemployment levels in the period between 2008 and 2017. This period is characterised by the Great Recession and the subsequent recovery. Countries have experienced different trajectories of unemployment development both within these two sub-stages and between these two sub-stages of the last decade. Partially, this can be explained with the economic development these countries have experienced during this period, but the paper shows that also other factors have contributed to these different paths of development.

Keywords

labour market resilience, unemployment, economic performance.

Introduction

In nearly all European countries, the last decade has shown a period of rapid economic decline followed by a period of economic recovery which has been almost unprecedented in modern economic history. A myriad of reasons have been given for this, including the instability of the US financial system, institutional failures within the euro area and the interrelation of national economies in a global economic system. As an illustration, Figure 1 shows the development of GDP in the period 2006-2017 for a selection of European countries. This figure highlights the sharp economic decline specifically in the Baltic states, but also many other European countries have experienced neg-

ative growth rates. The recovery has been more gradual in most countries but again is cumulatively higher than 10% in 4 subsequent years in most countries.

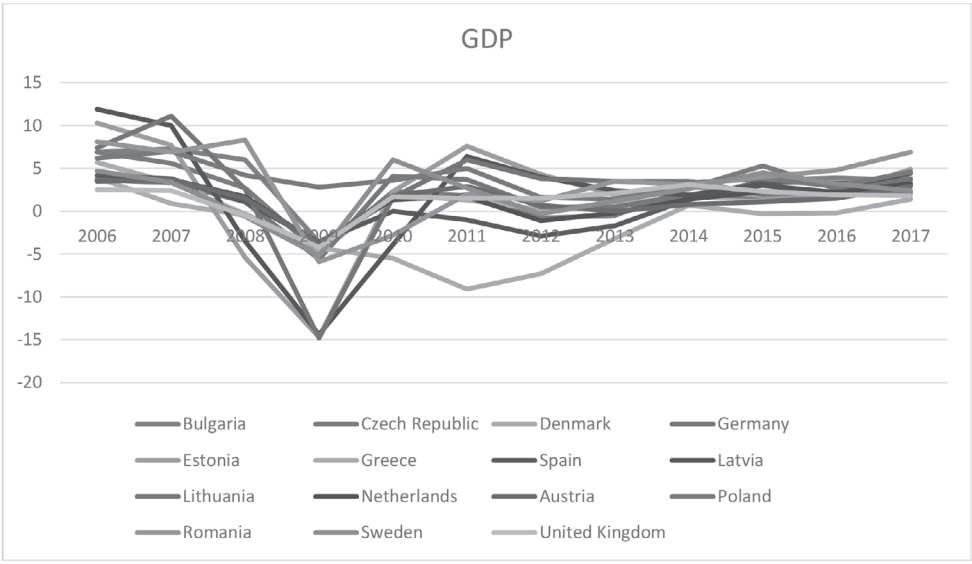

Figure 1: Development of GDP in selected European countries
Source: Eurostat

Not surprisingly, the economic crisis and subsequent recovery also affected unemployment levels in Europe. There is even a general 'rule of thumb' – which by some even is upgraded to a real law – Okun's law. Okun (1962) observed that there seemed to be a more or less fixed relation between economic growth and employment growth. He stated that in general a 2% increase in unemployment rate is related to a 1% decline in GDP. Although the law-like pretentions of this relation are contested in literature – and was never meant this way by Okun – this relation between GDP and unemployment offers us a good opportunity to gain insights in the performance of labour markets and labour market policies. For most countries, the development of the economy is an externality that is beyond the sphere of influence of national governments. However, the impact of economic developments on national labour markets gives us an impression of how well-prepared the policies and the institutions that are aimed at regulating the labour market are for economic shocks. Figure 2 illustrates this by showing the development in unemployment levels for the same selection of countries as Figure 1.

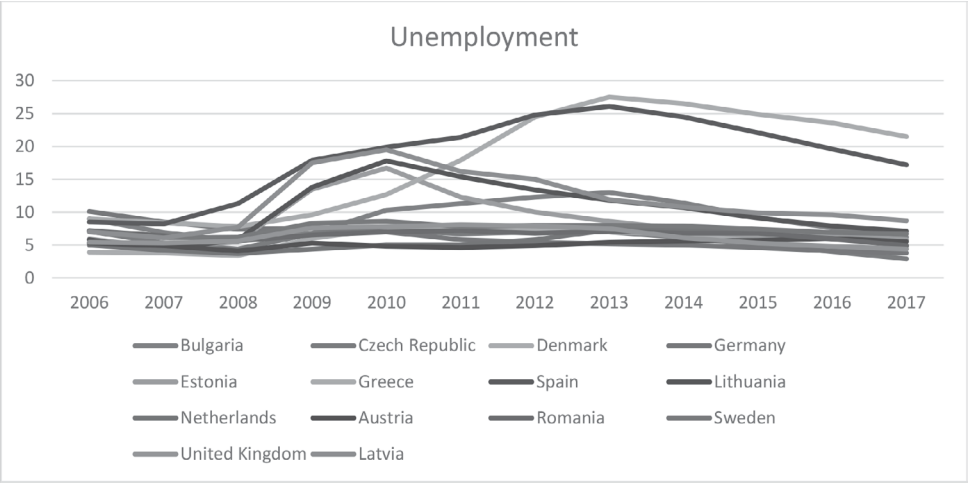

Figure 2: Unemployment in various European countries
Source: Eurostat

In economic literature the concept of labour market resilience in recent years has been introduced to conceptualise the relation between the economic development and unemployment. For instance, the Organisation for Economic Co-operation and Development (OECD) (2012) uses the concept of labour market resilience to refer to the extent to which labour markets weather economic downturns with limited social costs. From a more general perspective, we define labour market resilience as the inclusive capacity of the labour market to resist, withstand or quickly recover from negative exogenous shocks and disturbances and to renew, adjust or re-orientate in order to benefit from positive shocks (see Bigos *et al*., 2013). Resilience is theoretically constructed as a dynamic, interactive process contingent upon regional economies and labour markets, social policy systems and welfare regimes (see Fenger et al., 2014). There is a general consensus that interactions between macro-economic shocks (such as shifts in productivity growth caused by global recessions) and structural policy settings play a key role in determining labour market outcomes (OECD 2006). Moreover, in the long-run perspective, the ability of a certain region to have more and better jobs largely depends on the intensity and characteristics of economic growth and on the patterns of structural change interacting with changes in the global division of labour (Brada and Signorelli, 2012). In this respect, sectoral productivity dynamics (Kruger 2008) together with demographic and mi-

gration trends (Bauer and Zimmermann, 1999; Galgóczi *et al*., 2011) are of key importance for economic decline of different regional labour markets. Consequently, there are many institutional, structural-demographic and socio-economic explanatory variables of the labour market resilience.

Unemployment dynamics

The relation between the unemployment levels and the economic developments can be illustrated by plotting developments in GDP and changes in unemployment levels in a single graph. Figure 3 provides this overview of the relation between the development of GDP and unemployment levels for the period 2008-2012. Here we see both Okun's law confirmed and denied. Denied because of the large variety between countries, confirmed because the general relation is clearly visible. As argued above, the country-specific patterns might provide us with insights in the conditions for resilience, i.e. the conditions for some countries that are better able to deal with economic shocks than others. To do so, we should be able to identify the factors that affect the relation between the two.

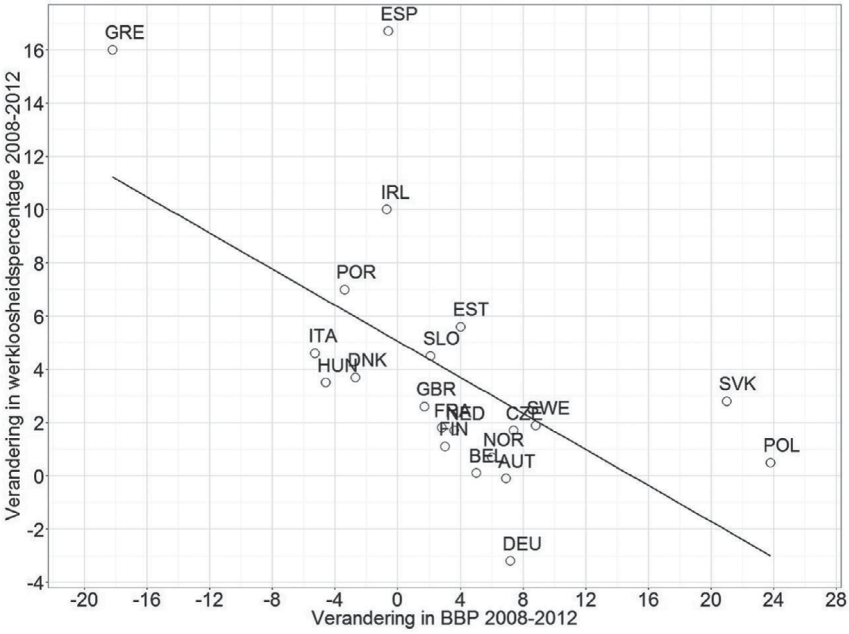

Figure 3: Correlation between cumulative changes in GDP (horizontal axis) and unemployment (vertical axis) in the period 2008-2012

If we focus on the unemployment dynamics during and after the Great Recession than the differences in the magnitude of the employment dynamics is particularly remarkable. To illustrate this, Table 1 provides an overview of the total changes in development of unemployment in the period between 2008 and 2017, whereas Tables 2 and 3 zoom in specifically on the crisis period and the recovery period. From Table 1 it comes as no surprise that the German labour market performed particularly well in the last decade, but also some of the Eastern European countries saw their unemployment rates drop significantly in the last decade. In contrast, the Mediterranean countries have experienced strong increases in unemployment levels in the period of the Great Recession and the recovery.

Country	**Development unemployment (2008-2017)**
Germany	-4,7
Poland	-4,7
Hungary	-3,2
Slovakia	-3,1
Malta	-2,5
Czech Republic	-2,4
Romania	-1,5
United Kingdom	-0,9
Bulgaria	-0,7
Belgium	-0,4
Portugal	-0,1
Iceland	0,5
Austria	0,6
Sweden	0,6
Netherlands	0,7
Croatia	1,2
Estonia	1,2
Luxembourg	1,4
France	1,4
Slovenia	1,7
Finland	1,7
Ireland	1,7
Norway	1,7
Denmark	1,9
Latvia	2,6
Lithuania	2,8
Italy	5,1
Spain	5,9
Cyprus	7,2
Greece	13,1

Table 1: Development of unemployment
Source: Eurostat

But even though, countries may have similar outcomes in the development of unemployment levels in the period 2008-2017, the path through which these outcomes have been reached may differ. For instance, whereas Germany and Poland both have shown a 4.7% decrease in unemployment levels in this period, Germany has reached this through a steady 2.2% decrease in the crisis and a 1.4% decrease in the recovery period, but Poland suffered a 3.2% increase during the crisis and a 5.2% decrease in unemployment in the recovery period. From Tables 2 and 3, we can also observe some other interesting findings: whereas Spain and Greece have both suffered from a large increase in unemployment during the Great Recession, Spain also leads the list of countries with the strongest decrease in unemployment levels in the recovery stage, but the recovery in Greece has been less intensive. This comparison calls for more insights in the relation between economic developments and labour market developments.

Country	**Increase in unemployment (2008-2013)**
Greece	19,7
Spain	14,8
Cyprus	12,2
Croatia	8,8
Portugal	7,6
Bulgaria	7,4
Ireland	7
Lithuania	6
Slovenia	5,7
Italy	5,4
Slovakia	4,6
Latvia	4,2
Denmark	3,6
Netherlands	3,6
Poland	3,2
Estonia	3,1
France	2,9
Czech Republic	2,6
Iceland	2,4
Hungary	2,4
United Kingdom	1,9
Sweden	1,8
Finland	1,8
Romania	1,5
Belgium	1,4
Austria	1,3

Norway	1,1
Luxembourg	1
Malta	0,4
Germany	-2,2

Table 2: Unemployment development during the crisis
Source: Eurostat

Country	**Decrease in unemployment (2013-2017)**
Spain	-8,9
Portugal	-7,4
Ireland	-7,1
Bulgaria	-6,8
Croatia	-6,3
Slovakia	-6,1
Greece	-6
Hungary	-6
Poland	-5,4
Cyprus	-4,8
Lithuania	-4,7
Czech Republic	-4,1
Slovenia	-3,5
Latvia	-3,2
United Kingdom	-3,1
Estonia	-2,8
Iceland	-2,6
Malta	-2,4
Netherlands	-2,4
Romania	-2,2
Germany	-1,4
Belgium	-1,3
Denmark	-1,3
Sweden	-1,3
Italy	-0,9
France	-0,9
Luxembourg	-0,3
Austria	0,1
Finland	0,4
Norway	0,4

Table 3: Unemployment development in the recovery period
Source: Eurostat

Linking GDP and unemployment

In other publications (Fenger et al., 2014a, 2014b; Bigos et al., 2014) we have theoretically explored a large variety of factors that may affect labour market resilience, i.e. the relation between the economic performance and unemployment. These publications primarily have taken into account the period of the economic crisis. For this paper, I have updated the existing dataset to include the period of economic performance and I have performed a nested multi-level regression analysis. Data was used that spans from 1995 till 2015 and it contains publically available information on national labour market characteristics. Only complete observations were used, which resulted in a sample of 264 observations from 29 European countries. As time is nested in countries, a multi-level linear model was used to analyse how various labour market characteristics are related to the unemployment rate (see Table 4). A random intercept was included in the model to correct for the nested structure of the data. With this data it is possible to estimate a country's development of unemployment levels on the base of the economic development in a country and the institutional conditions.

	Model 1
(Intercept)	14.08 (14.41)
GDP(pps) % change (t-1)	-0.09**(0.03)
Expenditure on LMP	3.84***(0.53)
Working hours	-0.73*(0.33)
Share of temporary employment	-0.35***(0.10)
Tax wedge	0.13(0.09)
At least secondary education	0.24***(0.05)
Dispersion of regional GDP	0.01(0.04)
AIC	1303.53
BIC	1338.98
Log Likelihood	-641.76
Num. obs.	264
Num. groups	29

Table 4: Results of regression analysis

From the multi-level regression analysis that was performed for this paper, we learn that there is a significant reversed relation between GDP and unemployment levels, as might be expected. Again, this confirms Okun's Law. Moreover, the share of temporary unemployment is also significant and reversely related to unemployment levels. We need further analyses to be able to understand this relation, as the relation between labour market flexibility and unemployment is subject to a scholarly debate which has not seen a winner yet (see, for instance, Nickell, 1997; Esping-Andersen & Regini, 2000). More surprisingly, the regression analysis also shows that the share of people with at least higher education is positively related to unemployment levels. Again, we need further analyses to be able to interpret this relation. For the purposes of this paper, however, the main conclusion is that we have been able to create a regression model that captures the relation between unemployment levels and GDP.

Discussion and conclusion

This paper has highlighted the complex and non-linear relation between GDP and unemployment levels. It also has highlighted the large differences in unemployment paths during the last decade. Countries have witnessed different unemployment trajectories throughout the last decade, but also remarkable differences between countries in the period of recession and the period of recovery can be observed. The model that we presented above is a first step in understanding in more detail what explains these different trajectories.

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