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Institutions or market forces? Explaining the employment insecurity of European individuals during (the beginning of) the financial crisis

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Abstract

In reaction to the recent financial crisis, the European Commission re-stated its view that the balance between flexibility and security is the key to success for the future of the European social economy, as well as its belief in the power of institutional arrangements it deems necessary for this balance. However, do powerful institutions actually counter market forces where flexicurity is concerned? In this paper we address this question by analysing the impact of institutional configurations and market factors

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on perceived employment insecurity among workers in Europe. We use the 4th wave of the European Social Survey for 2008/2009, which covers 22 countries, and implement a multi-level approach where contextual effects are taken into account and individuals are considered to be embedded within a country. We find that policies that secure one's income and employability skills, such as passive and active labour market policies, are more important for providing employment security for individuals than institutions that secure one's current job, such as employment protection. Of the economic and labour market factors, general market conditions (measured as employment rate average) and the strength of the financial crisis (measured as gross domestic product growth rate from 2008 to 2009) are both similarly influential in explaining cross-national variance in the employment insecurity perception of individuals. More generally, and most interestingly, we find that institutional factors lose their significance when market factors are taken into account. Thus, it seems that differences in economic and labour market conditions between countries better explain why workers feel insecure about their employment, than the differences in employment and income policies. Although this result could be influenced by the time period under investigation, which is characterized by a financial crisis, results from previous studies using data from different periods suggest that it is not period-specific.

Keywords : cross-European study, employment insecurity, flexicurity institutions, market forces, multi-level study, subjective perception

1. Introduction

Flexicurity, the balance between flexibility and security, has been praised by the European Commission (CEC: Commission of European Communities) as a strategy that could enhance the competitiveness of European markets while maintaining the European Social Model (CEC, 2007). Due to the consequences of the recent financial crisis seen in the US and other liberal markets, a consensus is growing that the balance between flexibility and security is key in securing a successful future for European welfare states (Council of the European Union, 2009). Accordingly, there is a strong belief in the institutional arrangements that are deemed necessary to create or strengthen this balance. However, given the recent financial crisis, whether powerful institutions are against market forces has come into question. Since the recent financial crisis affected all of Europe, it provides a unique and interesting opportunity to see how different institutional flexicurity configurations have performed in adapting to the shock across Europe. In addition, it provides us with the possibility to test whether institutions can override the (negative) impacts of market forces. In this paper, we are interest in the impact of institutions and market conditions on the perceived employment insecurity among workers. Generally, workers' security perceptions are vital for the successful implementation of flexicurity policies. Individuals who do not feel secure may be reluctant to accept increased flexibility in the labour market or changes made in the social security systems. In addition, job and employment insecurity have dire consequences for the mental, physical health and well being of workers (Ashford, Lee, & Bobko, 1989; A. Clark, Knabe, & Rätzel, 2010; Hellgren, Sverke, & Isaksson, 1999; Näswall & De Witte, 2003). For these reasons, it is important to understand which individuals under which institutional contexts and market conditions

are more susceptible to job and employment insecurities and whether institutions can counter the impact of economic shocks on these insecurities.

Due to the importance of the topic, a large number of studies examine the insecurity perceptions of individuals, some of which focus on the impact of institutions. However, there are several gaps in this field of literature. First, due to data limitations, most studies examine job security and not employment security. Employment security can be distinguished from job security in that although both entail the security of being employed, the former can be maintained while changing jobs and/or employers. Therefore, as we will explain later, this concept illustrates the true insecurities of individuals better than job security. Second, there are only a few studies that use multi-level regression models to explain the cross-national variance found in individuals' employment insecurity perceptions. Although some recent studies touch upon this issue (Anderson & Pontusson, 2007; A. E. Clark & Postel-Vinay, 2009; Erlinghagen, 2008), the number of countries included in these studies is quite small, and consequently the number of context variables that could be included in the models was also restricted. Third, most studies are based on data from the 1990s or early 2000s, thus the results of the studies need to be updated with recent data. Fourth, the focus of most analyses has been on the relative impact of institutions compared to one another rather than the impact of institutions versus market forces. Lastly, there has of yet not been any analysis of how institutions perform in times of financial and economic crisis. Thus our study, which is based on recently gathered data from the recent financial crisis (2008/2009) and includes 22 countries, helps fill the gap in the literature. This is done by explaining the cross-national variance in employment insecurity and through examining the relative impact of institutions and market forces on this variance.

Our paper is structured as follows. In the second section, definitions of employment security as well as the theories concerning the contextual determinants of this perception are examined, focusing on national-level institutions and market conditions. In the third section, we examine the main data and methodologies applied, with an emphasis on the multi-level modelling method. In the fourth section, we examine the analysis outcomes, and in the final section we present our conclusions and policy implications.

2. Definition and determinants of employment insecurity

2.1. Defining subjective employment insecurity

In defining employment security, it is important to distinguish it from job security. In the definition of security given by Wilthagen and Tros (2004) as well as by the CEC (2007), job security is the security of keeping a particular job or employment contract. On the other hand, employment security can be understood as having (the potential for) secure and continuous employment, which might entail changing employers and/or jobs. The difference between job and employment security is that the former focuses on keeping a current position with one employer, whereas the latter could entail greater mobility within the labour market. Thus workers can still have employment security when chances of losing their job are high but the chance of finding another position relatively quickly is also high.

Most relevant studies have focused on job insecurity; we believe that there is a problem in using this concept. Under this definition, workers who do not go through a

period of unemployment and related income loss are also considered to be insecure. In this paper, we focus on employment insecurity and therefore only on workers with "true insecurities" who anticipate experiencing a significant period of job loss and perhaps income insecurity in the near future. This can be measured by asking individual workers whether they believe that they will lose their job in the near future (the next 12 months or a similar amount of time) and be unable to find another position relatively quickly.

2.2. Country-level determinants of perceived employment insecurity

The key purpose of this paper is to analyse the impact of institutional and economic contexts on the perceived employment insecurity of individuals. In this section, we will discuss a number of hypotheses about such impacts which will be tested later on in the paper. Due to the former unavailability of data sources measuring employment insecurity in the way we think is appropriate, there are no previous studies that we can refer to directly to derive our hypotheses. However, there are many studies that examine the determinants of individuals subjective job insecurity, which we use here as a starting point.

Institutions

- ***Unemployment benefits and labour market policies***

Theoretically, unemployment benefit systems (UB) impact subjective employment insecurity in two ways. First, less generous UB, in terms of its level and duration, can increase perceived employment insecurity by increasing an individual's fear of the

repercussions of unemployment and prolonged job loss (Anderson & Pontusson, 2007; A. E. Clark & Postel-Vinay, 2009; OECD, 2004; Pacelli et al., 2008). Second, more generous UB give opportunities for and therefore may encourage, unemployed workers to take up jobs more suited to their specific skills in the long term. This will then make the job they attain more sustainable (Marimon & Zilibotti, 1999). Accordingly, in countries with generous UB, workers may be more likely to have stable, well-matched jobs, thus increasing their long-term employment security.

The actual impact of UB on individuals' job security perceptions has been the subject of several empirical studies. OECD (2004), covering 16 OECD countries for the late 1990s, Böckerman (2004), examining the Eurobarometer data for 1998, and Pacelli et al. (2008), using data across Europe for the year 2005, all find that generous UBs are correlated positively with workers' perceptions of employment and job security. However, these results are from bi-variate analyses where other factors are not controlled for. Anderson and Pontusson (2007), using data from 15 OECD countries for 1997, show that countries with generous UBs are those with individuals who do not fear job loss, even when other factors such as social security spending are controlled for. Clark and Postel-Vinay (2009) show similar results, using the ECHP data set from 1997 to 2001 for 12 countries, but more specifically for workers in private companies and on temporary contracts. However, Erlinghagen (2008), examines 17 European countries for 2004 and shows that social security spending, when controlling for unemployment rates, GDP growth rates and EPL, does not have any significant effect on the perceived job insecurity of individuals. Based on the theory and empirical outcomes, for our analysis we assume:

H 1: In countries with generous unemployment benefit systems, workers will be less likely to perceive employment insecurity

Active labour market policies (ALMP) are generally regarded as being one of the key components of flexicurity policies (CEC, 2007). They are important in that they may increase the employability of workers and the unemployed; which will not only increase the re-employment opportunities for individuals, but also decrease their chances of being laid off. This may in turn lead to less perceived insecurity with regards to employment. Several empirical studies indeed show that extensive use of ALMPs is associated with lower unemployment rates and shorter unemployment periods (Nickell, Nunziata, & Ochel, 2005). We may expect that in countries with extensive ALMPs, workers will feel more secure concerning re-employment and retaining their current jobs. Empirically, OECD (2004) shows in a bi-variate analysis that ALMP is positively correlated with feelings of security. Anderson and Pontusson (2007) show that although spending figures on ALMP do not statistically impact upon cognitive job insecurity, that is the perceived likelihood of losing one's current job, when other factors such as employment protection legislation are controlled for, it does decrease labour market insecurity; that is, the feeling of not being able to find an appropriate job when unemployed. Thus, we come to the following hypothesis:

H 2: In countries with extensive active labour market policies, workers are less likely to perceive employment insecurity.

- ***Employment Protection Legislation***

Employment Protection Legislation (EPL) refers to the regulations that concern hiring and firing of workers, both on permanent and temporary contracts (OECD, 1999:50). The EPL indexes for regular workers concern the costs to employers of firing workers on permanent contracts, while the EPL indexes for temporary workers refer to the regulations concerning hiring workers on temporary contracts. In most cases, EPL referred to in previous literature and theory is that for regular workers. The relationship between EPL and employment insecurity is not self evident. At first sight, stricter EPL seems to improve subjectively experienced employment security given that its designed to make it more difficult to fire workers. However, since it can lead to longer unemployment durations (Nickell, 1997), especially for certain groups (Esping-Andersen, 2000), and greater use of temporary contracts (Chung, 2005; Dolado & Jimeno, 2002; OECD, 2004), it may also increase feelings of employment insecurity. Certainly, the main role of EPL for regular workers is to protect workers from the risk of job loss, but this may only be valid for workers with permanent contracts (Boeri, Börsch-Supan, Tabellini, Moene, & Lockwood, 2001:21). On the other hand, relaxing EPL for temporary workers and therefore easing the hiring practices of temporary workers may decrease the perceived insecurity of both temporary and permanent workers as it makes it easier for workers to find new positions, albeit temporary. However, this would then increase the number of workers on temporary contracts, which could increase the overall level of insecurity felt in that country. When controlling for the type of contract individuals have, we expect the impact on quicker job search to be more prevalent. However, it should also be noted that EPL for regular workers rather than for temporary ones has been shown to better explain cross-national variance in the use of temporary contracts - even when other aspects are controlled for

(Chung, 2005). Thus it is questionable how strong the impact of EPL for temporary workers would be when we control for EPL for regular workers.

Outcomes of empirical analyses confirm the idea that EPL (focusing on EPL for regular workers) may be harmful for the job security of workers. Using bi-variate methods, OECD (2004), Böckerman (2004) and Pacelli et al. (2008) show how individuals feel more insecure about their positions in countries with more stringent EPL. Clark and Postel-Vinay (2009) show that particularly workers in private companies or on temporary contracts feel less secure in countries where EPL is stricter. Böckerman (2004) argues that this is because it is harder to find (good quality) jobs in countries with strict EPL. Interestingly, Erlinghagen (2008) shows that employment protection levels do not show any significant effects on perceived job security when other macro-level indicators are taken into account. Whereas Anderson and Pontusson (2007) show that it actually decreases job insecurity perceptions, although for labour market security it has no significant impact. For our analyses we will assume:

H 3a: In countries with strict employment protection legislation for firing regular workers, workers without permanent contracts are more likely to perceive employment insecurity.

H 3b: In countries with strict employment protection legislation for firing regular workers, workers with permanent contracts are less likely to perceive employment insecurity.

H 3c: In countries with strict employment protection legislation for hiring temporary workers, all workers are more likely to perceive employment insecurity but this impact may decrease when EPL for regular workers is controlled for.

One question that arises is which institutions are more influential in explaining the cross-national variance in Europe. In the literature it is suggested that EPL and UB may be functional equivalents in providing workers with labour security, but one through labour market security and the other through income security (Schmid, 1995). With this in mind, there has been a wide discussion concerning which institutions provide greater security for individuals. Most studies, with the exception of the one by Anderson & Pontusson (Anderson & Pontusson, 2007), conclude that either EPL increases the insecurity perceptions of individuals (Böckerman, 2004; A. E. Clark & Postel-Vinay, 2009; OECD, 2004; Pacelli et al., 2008) or does not have any significant impact (Erlinghagen, 2008). Whereas in most studies UB and ALMP have been shown to have positive impacts on the employment security of individuals (Anderson & Pontusson, 2007; Böckerman, 2004; A. E. Clark & Postel-Vinay, 2009; OECD, 2004; Pacelli et al., 2008), although Erlinghagen (2008) does not find any significance in this relationship as well. Further empirical analysis is needed to examine how the impact of institutions may differ in times of crisis. However, based on previous empirical studies, we can expect that of the institutions under investigation, it would be UB and ALMP rather than EPL that impact individuals' employment security perceptions. Thus, we come to the following hypothesis:

H 4: The impact of labour market policies will be stronger and more significant than the impact of EPL.

Market factors

- ***Labour market conditions***

Theoretically, it is obvious that labour market conditions may impact feelings of employment security, since these conditions define the opportunities for individuals to find and keep jobs. When unemployment rates are higher due to the sheer number of people getting dismissed, individuals are more likely to perceive employment insecurity. When employment rates are higher due to the larger number of positions being offered, individuals are less likely to perceive such insecurity. In addition, changes in the employment and unemployment rates from the previous year may be important for individuals when assessing the prospect of keeping their current job or finding another one (Anderson & Pontusson, 2007:222). When there is an increase in unemployment rates, we may find an increase in the insecurities of individuals due to the fact that more people are being laid off. An increase in the employment rate may indicate the market condition changing for the better, thus making individuals' perceptions more positive. Especially given that the period that we are examining is the early stages of the financial crisis, it is likely that the steep increase in unemployment rates shown at the end of 2008 and in 2009 may have greatly affected individuals' perceptions of employment insecurity.

The relationship between labour market conditions and feelings of job insecurity has been the subject of many empirical studies. Böckerman (2004) finds that the perceived job insecurity of individuals is positively correlated with unemployment rates, based on bi-variate analysis. Clark and Postel-Vinay (2009) use five year average

local unemployment rates to show how negative local market conditions are linked to a more pessimistic perception of job security among temporary workers, although the impact is insignificant with regard to permanent workers in the public sector. Anderson and Pontusson (2007), find that unemployment rate changes from previous years impact negatively on both the individuals' assessment of the possibility of keeping one's job and the possibility of finding another position. They also find that unemployment rate averages, on the other hand, have a negative impact only on the assessment of losing one's current job. However, Green et al. (2000) using data for 1986 and 1997, found that in the case of Britain annual changes in the unemployment rate from previous years seemed to have no effect on individuals' perceptions of job insecurity but that it significantly increased the perception of having difficulty in finding new employment. Erlinghagen (2008) finds significant negative impacts of long-term unemployment rates on the perceived job insecurity of individuals. Based on these findings we can reach the following hypotheses:

H 5a: In countries with higher unemployment rate averages, workers are more likely to perceive employment insecurity.

H 5b: In countries with lower employment rate averages, workers are more likely to perceive employment insecurity.

H 5c: In countries where there have been stark increases in unemployment due to the financial crisis – measured here as the changes between the second quarter of 2008 to the second quarter of 2009 - workers are more likely to perceive employment insecurity.

- ***Economic conditions***

Apart from the labour market, the general economic condition of a country could also impact on the employment security of individuals, by affecting how they perceive the possibilities of losing and finding jobs due to changes in the demands faced by companies. Some studies use average GDP growth rates as a measure of the economic conditions of countries (for example Erlinghagen, 2008), although empirically this has not provided any significant results. Despite such findings, economic conditions are especially relevant in our study due to the period under examination. There was a major economic recession across Europe during the time of the ESS survey (late 2008 to early 2009), and to test for the performance of institutions during crisis, we need to control for the impact of this event. Although the crisis began in late 2008, examining GDP growth rate changes, we see that the true indications of the financial situation only unravelled through the GDP growth rates for 2009. For this reason, the GDP growth rate for 2009 is used as a proxy to measure the severity of the impact of the global financial recession on the economic condition of the country. Our respective hypothesis is as follows:

H 6a: In countries with worse economic conditions, expressed as lower GDP growth rate averages, workers are more likely to perceive employment insecurity.

H 6b: In countries where the financial crisis hit harder, expressed as a lower GDP growth rate for 2009, workers are more likely to perceive employment insecurity.

Because economic conditions operate through their effects on the labour market, it could be said that the significance of their impact on individuals' employment

insecurity may disappear when relevant factors such as unemployment rates are controlled for. However, it could also be the case that regardless of labour market conditions, economic conditions are in themselves significant. The current or projected economic conditions (growth rates for 2009) could already give people an idea of what future labour market conditions will be like. In addition, in countries such as Germany, although unemployment rates were contained due to the use of various reactionary policies, the impact of the crisis measured by the GDP growth rate for 2009 was comparable to the rest of Europe (Chung & Thewissen, 2011). Thus, the information on economic conditions may play a more important role in individuals' future insecurity perceptions than the unemployment figures. Thus, our hypothesis is as below:

H 7: GDP growth rate for 2009 is still significant in explaining the cross-national variance in the employment insecurity of individuals, even when we control for labour market factors

2.3. Institutions versus markets

The central question that we raised in the introduction is whether institutional arrangements matter or whether market situations are more important. Based on the institutionalist approach, we can expect that institutions might have a stronger impact on individuals' behaviour or perceptions than market conditions. However, considering that the dependent variable is a subjective measure, it may also be important to see what has a greater impact on an individuals' perception, regardless of what may impact their actual employment insecurity. Individuals may not have a good idea about the

institutional configurations of their country, especially compared with other countries. On the other hand, individuals may have a better idea of the market conditions compared with other countries, especially changes in the conditions as this issue is more widely covered by the media. Multi-variate studies that have included market conditions in their models conclude that either both market conditions and institutions have significant impacts (Anderson & Pontusson, 2007; A. E. Clark & Postel-Vinay, 2009; Green et al., 2000) or that only market conditions matter (Erlinghagen, 2008) when explaining the cross-national variance in the subjective job and employment insecurity of individuals. Here we will explore this issue further by examining the relative impact of institutions against market forces.

2.4. Other determinants of employment insecurity

To examine the impact of our context variables correctly, we must control for the differences between countries due to possible differences in the composition of their workforces. Several individual-level characteristics are included as control variables based on previous studies of job insecurity (Anderson & Pontusson, 2007; Burgoon & Dekker, 2010; Erlinghagen, 2008; Muñoz de Bustillo & de Pedraza, 2010). We can expect that individuals will have different levels of employment insecurity depending on different demographic, human capital, family structure, employment characteristics and work-place characteristics. For more information concerning the detailed theories behind these variables, we refer to Chung and van Oorschot (Chung & van Oorschot, 2010).

3. Data and Methodology

3.1. ESS 2008/2009

In this paper, we use the fourth wave of the European Social Survey (ESS)[i], which covers 31 European countries for the years 2008/2009. This data set has been chosen for several reasons. First, it is one of the few that include a large number of countries and a measure of the perceived employment security of individuals. Second, this survey also includes important individual-level control variables which may impact perceptions of employment security and are not available in other similar data sets. Third, this survey covers the period 2008/9, which coincides with the recent financial crisis, allowing us to explore its impact on security perceptions. Due to the timing of the analysis, we use a data set which only includes 29 countries. Of these, we use cases from 22 countries, including Belgium, Bulgaria, Cyprus, the Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, Great Britain, Greece, Hungary, Latvia, the Netherlands, Norway, Poland, Portugal, Romania, Sweden, Slovenia and Slovakia. We exclude some countries from the analysis due to a lack of comparable contextual variables (Croatia, Switzerland and Ukraine), and some because they are not member states of the EU (Switzerland, Israel, Turkey and Russia). The number of countries included is larger than that of previous multi-level studies, which allows us to include more context variables in the model. In addition, the selection of countries allows for the examination of a larger variation in institutional factors. Since we are examining the security of staying in employment, we are only interested in those individuals currently in paid employment. We therefore also exclude pensioners, defined as individuals aged over 65. Our selected data contains 20,809 cases. Later on in the

analysis, we exclude extra country cases for some of the analyses (due to a lack of data for EPL indexes), which will be noted.

3.2. The dependent, independent variables

The perceived employment security of individuals is measured using the following question in the ESS. "How likely is it that during the next 12 months you will be unemployed and looking for work for at least four consecutive weeks?" (D47). We use this variable in a dichotomous manner, and consider those who answered very likely or likely to this question as those who perceived their employment to be insecure.

At the individual level, to account for cross-national composition effects we include individual and workplace characteristics as control variables. In this paper, we use age, sex, education, training experience, unemployment experience, existence of a disability and citizenship as demographic/human capital variables. For family structure variables, we use variables such as the existence of a partner in paid work and the existence of dependent children. Employment characteristics include being in a union or not, having a permanent contract, influence at work and working long hours. Lastly, for work-place variables we include size and sector; meaning the type of business but also whether or not the employer is a public company. The country-level institutional variables include national expenditure on both passive and active labour market policies as proxies to measure a country's UB and ALMP systems. The two are combined to measure a country's total labour market policy (LMP) expenditure. We use the average for the four years leading up to the survey year due to availability of data, thus 2004-

2007, and use data from the EUROSTAT Labour Market Policy Database. To measure the strictness of the EPL systems, we use the EPL index provided by the OECD LFS data. The EPL indexes are separated for regular workers and temporary workers, and are for the year 2008. To measure labour market condition, we include the unemployment and employment rate averages and the change in unemployment rate from the second quarter of 2008 to the second quarter of 2009. We use these time periods because the second quarter of 2008 is immediately before the crisis, and the second quarter of 2009 is when the survey ended, as well as when the major unemployment shifts took place. Economic conditions are measured by GDP growth rate average and GDP growth rate for 2009, to indicate the impact of the financial crisis. Labour market data are from the EU LFS and economic indicators are from EUROSTAT. For averages, we use five year (2004-2008) averages to adjust for fluctuations.

3.3. The model

We run two random intercept, multi-level logistic regression models, where contextual effects are taken into account and individuals are considered to be nested in countries (Hox, 2002). Through the use of a multi-level model we are testing to see whether individuals perceive their employment insecurity differently depending on which country they live in, even when all other factors that may influence individual employment insecurity perceptions have been controlled for, and to find out why there is this cross-national variance. We use a logistic regression model here, because our

dependent variable is considered to be dichotomous. We use STATA 10.0, xtmelogit to derive our results.

4. Outcomes

4.1. Descriptive analyses

First, we examine the perceived employment insecurity of individuals across countries. As shown in Figure 1, there are large variances in the way individuals in different countries perceive their employment insecurity, ranging from Norway with only six percent of its population stating that they feel insecure in their employment, to Latvia where this percentage rises to 68 percent. We can see that it is mostly eastern European countries (Latvia, Bulgaria, Estonia, Romania, Czech Republic, Hungary and Poland) and southern European countries (Greece, Spain and Portugal) where individuals feel more insecure. In the Nordic countries (Norway, the Netherlands, Finland, Denmark and Sweden), along with the UK and Germany, not many feel insecure regarding employment. Interpretations as to which underlying country characteristics may explain the pattern in Figure 1 are not self-evident. We will analyse them in the next section.

<figure 1 about here>

4.2. Empty model

The so-called "empty model" allows us to examine the extent to which the variation in feelings of employment insecurity among workers in Europe can be attributed to the fact that they live in a specific country. 17% of the total variance between individuals' employment insecurity can be attributed to the country level.[ii] This is a relatively large proportion, but it is not controlled for by any composition effects. Therefore, some part of this variance could be due to the fact that the composition of the populations of workers differs between countries. When we control for compositional effects by including a series of individual-level characteristics, the variance attributed to the national level drops to about 15%. In other words, still a larger part of the country variance remains in perceived employment insecurity even when we take into consideration the composition of workers in each country.

4.3. Multi-variate, multi-level analysis: Contextual explanations

Table 1 shows the results of the multi-variate, multi-level random intercept model where country-level variables are included individually. As expected, we see that countries with generous UB (expressed here as PLMP expenditure as a percentage of GDP divided by the unemployment rate) are those countries where individuals are less likely to perceive employment insecurity. In addition, countries with extensive ALMP measures (expressed here as the ALMP expenditure as a percentage of GDP divided by the unemployment rate) are also the countries where individuals are less likely to perceive employment insecurity. Examining the impacts of EPL, we see that none of

the EPL indexes explain much of the cross-national variance of employment insecurity, unlike our hypotheses. One impact we do find is the interaction between EPL for regular workers and permanent contracts, which is a positive, significant relationship. Taking into account that for the average European country, having a permanent contract decreases the chance of being insecure about employment (see Chung & van Oorschot, 2010), the interaction term of EPL and permanent contracts can be interpreted as follows: in countries where the regulations for firing regular workers are stricter, the positive impact of having a permanent contract is not as strong, thus the gap of insecurity between permanent workers and workers with temporary or no contracts decreases. This is contrary to our hypotheses 3a and 3b, where in combination it was predicted that the stronger the EPL for regular workers, the larger the gap between temporary and permanent workers in terms of their perceived employment insecurity. In addition, the result we find suggests that higher costs for firing regular workers actually decrease duality, which contradicts the results of previous studies. However, we should note that this duality is decreased not because temporary workers are less insecure, but because both permanent and temporary workers feel more insecure. It is unclear why this impact of EPL is found but having tested for the influence of the proportion of temporary workers in a country, it does not seem to explain this relationship.

For the labour market factors, we see that both unemployment and employment rates impact an individuals' perception of employment insecurity. Countries with high unemployment rate averages over the past five years are those where individuals are more insecure about employment, although the impact is statistically weak. Similarly, when a country has had high employment rates over the past five years, individuals are

less insecure. Changes to the unemployment rate before and after the financial crisis also increase the perception of insecurity. Further, economic conditions make a difference to how individuals perceive their employment insecurity. As expected, countries that were harder hit by the financial crisis (measured here by the GDP growth rate from 2008 to 2009) are those where individuals are more likely to be insecure about their employment. Strangely, however, countries with on average high GDP growth rates are those where individuals are more likely to perceive employment insecurity. This contradicts our hypothesis 6a, but may be due to other characteristics of the country that may be correlated with GDP growth rate averages.

<Table 1 about here>

In addition to the individual impacts, one of the key questions of this paper is which institutional factors and which market factors are influential in explaining the cross-national variance found in employment insecurity. To help answer this, we arrive at two models, one where institutional factors are examined in combination, and the other where market factors are examined in combination. Table 2 shows the two models. First, all institutional factors are included in the model to show their relative strengths in explaining the cross-national variance in employment insecurity (Model 4-1). We see that all institutional variables are insignificant, with the exception of the interaction term of EPL for regular workers and permanent contracts. One of the reasons behind labour market policy indicators being insignificant is their high correlation (0.9), resulting in multi-collinearity. Due to this, we combine the two labour market policies into one measure. In Model 4-2 we see that labour market policies are now significant in reducing employment insecurity perceptions of individuals, while EPL does not have

much impact. In addition, adding extra EPL indicators does not help increase the explained variance much, adding approximately eight percentage points compared to the model with the LMP indicator alone. This confirms our fourth hypothesis; that labour market policies have a more significant impact on employment insecurity than employment protection regulations.

<Table 2 about here>

Second, all market factors are added in the model to show their relative strengths in explaining the cross-national variance in employment insecurity. Unemployment rate averages are excluded here because of their high correlation with employment rates (-0.7) and its insignificant impact shown in Table 1. We see that in Model 5-1 in Table 3, the GDP growth rate average is insignificant, albeit still positive in its impact. However, we also see that taking this variable out of the model, the impact of the change in unemployment rates during 2008 q2 – 2009 q2 also becomes insignificant. This may be due to the fact that unemployment change is highly correlated with the GDP growth rate between 2008 and 2009 (-0.7). Last is Model 5-3, with only employment rate averages for the last five years and GDP growth rate for 2009. This model explains 73.5% of the total variance across countries in the perceived employment insecurity left after individual factors are taken into account. We see that there has not been a big decease from the two previous models, when other market factors are taken into account. The results of the models confirm our seventh hypothesis where it was predicted that GDP growth rate for 2009 is significant even when other market forces are taken into account. Comparing the strength of the two variables in Model 5-3, we find that both labour market and economic factors have a similar importance. In addition, comparing

the impact of GDP growth rate for 2008- 2009 to unemployment rate 2008-2009, the former is more significant. This entails that for this crisis, the economic forecast of the financial crisis was more significant than the actual labour market consequences of it.

<Table 3 about here>

To understand the true impacts of flexicurity institutions, and how they perform in times of crisis, we must control for the socio-economic condition of the country. We do this by including both labour market and economic condition variables into the model, along with the institutional variables. Due to the limited number of countries in the analysis, we cannot include all context variables, but only include the significant ones found in previous models. The results are shown in Table 4. Note that as employment rates have been already controlled for, we use LMP averages. In Model 6-1, we see that labour market policy expenditure loses its significance when labour and economic market factors are included in the model. However, the interaction term of the impact of EPL for regular workers and permanent contracts is still positively significant. In other words, even when controlling for labour market policies and market factors the impact that the cost of firing regular workers has in decreasing the gap felt between workers with permanent and those with temporary/no contracts, is still valid. However, the impact of generous labour market policies decreasing the employment insecurity of individuals is insignificant when market factors are taken into account. Since including EPL indexes makes us lose cases from four countries, we also derive models excluding EPL indexes. Model 6-2 shows us that even for the extended 22 countries, when we control for economic and labour market factors, LMP expenditure does not have any significant impact. On the other hand, labour market condition (employment rate

average) as well as impact of the economic crisis (GDP growth rate for 2009), are statistically significant in explaining the variance found in the employment insecurity of individuals across European countries. Model 6-1 explains 67%, and Model 6-2 76%, of the cross-national variance left after taking composition factors into account. Comparing the explained variance of this model to Model 5-3 (where only employment rate averages and GDP growth rate for 2009 are included), we see that little is added to the explained variance. This confirms our last hypothesis, that it is economic and labour market forces that drive how individuals perceive their employment insecurity perceptions, rather than labour market institutions.

<Table 4 about here>

We can say that this result, the importance of market forces over institutions, can be explained by the fact that the period in which the survey took place was a very specific one, when the economic crisis took precedence over all other aspects of societies. However, when we compare this result to previous studies, similar conclusions are made. For example Erlinghagen (2008) also comes to the conclusion that it is market conditions rather than institutions that explains the cross-national differences in the insecurities individuals perceive. Anderson and Pontusson (2007) also found significant impacts of labour market conditions rather than active labour market policies on cognitive job insecurity, although in their study the impact of EPL was also significant. However, their study was restricted to only 15 countries, and did not include variables to examine the impact of economic conditions. In other words, our result which shows that labour markets and economic conditions are the more important factors in explaining the variance of employment insecurity across countries seems to be

somewhat influenced by the period under investigation. However, reflecting on previous studies the conclusion is not period specific and provides insights for other periods as well.

5. Conclusions

Despite the fact that employment insecurity is becoming more important in the field of policy and research due to the interest in flexicurity approaches, there have not been many studies on how individuals perceive their employment insecurity situations. In particular, how different flexicurity institutional configurations perform in times of crisis, as well as whether or not institutions matter compared with market forces, has not been previously examined. Using a data set gathered during the recent financial crisis, this paper contributes to the discussion. More specifically it examines which country-level variables - institutional or economic and labour market factors - explain the cross-national variance found across 22 European countries in individuals' perceptions of their employment insecurity during late 2008 and early 2009. We find that there is a large cross-national variance in how individuals perceive employment insecurity in Europe. Of the institutions, we find that it is labour market policies that help insure individuals' employability and income security, rather than institutions that help individuals keep their current jobs that impacts individuals' security perceptions. However, stricter regulations on firing regular workers seem to help decrease the gap between permanent and temporary workers in terms of their perceptions of insecurity. Of the economic and labour market factors, general market trends (measured here by

employment rate averages) and the strength of the financial crisis (measured as the GDP growth rate from 2008 to 2009) are both similarly influential in explaining cross-national variance in the employment insecurity perception of individuals. When labour market and economic factors are taken into account, institutional factors lose their significance. Thus, it seems that economic and labour market conditions in a country better explain why an individual feels insecure. Although this result could be influenced by the time period under investigation, comparing the results to those from previous studies of different periods, suggests that this result is not period specific.

However, we are not ruling out the significance institutions may have in protecting individuals from feeling insecure, due to its indirect impact on individuals' security. Institutions shape the employment rate as well as the marketconditions of countries, and we find that there are high correlations between both ALMP, PLMP expenditures with employment rates (0.6). More importantly, institutional arrangements will impact upon human capital and other individual-level characteristics. For example, active labour market policy activities are directly linked to training experiences of individuals, which have a strong significant impact on how insecure individuals feel (Chung and van Oorschot, 2010). However, in the context of the financial crisis and the group of countries examined here, the most important factors are the general labour market condition of the country and how hard the financial crisis hit, especially via the economic projections of the country. In addition, the results should not be confused with the significance of institutions for the objective employment insecurity of individuals, as the results here are based on subjective perceptions. What we can conclude is that perhaps economic and labour market conditions are more important because they are covered more in the media than

institutional issues. Thus, individuals may be more aware of these changes, as well as the comparative position of the country in terms of these indexes. In addition, it should be noted that of the institutions, it may be more fruitful to invest in policies that allow development of individuals' employability and income protection, rather than protecting one's job, to provide citizens with a better sense of security.

There are still some questions that need to be addressed. For example, the result we find for the relationship between employment protection legislation and the gap of perceived employment insecurity between workers on permanent and temporary contracts needs further investigation. It seems likely that there may be cross-national differences in the gap between how workers in these two different contracts perceive their employment insecurity. Our question would then be, to what extent are differences to be found across countries, and what types of institutions or labour market factors drive this result. The varying impact of individual, workplace level characteristics could also be tested for other factors, such as gender, education level, age and sector. Second, the reason behind the negative impact of GDP growth rate averages on employment security perception should be investigated further. Third, to examine the real impact of the financial crisis, we would need to compare the result from a non-crisis year, but not with job insecurity indicators, which have been done in previous studies but with employment insecurity indicators. Lastly, we should note the limitation of this paper, which comes from the fact that we are using cross-sectional data. For a better understanding of the true causal mechanism behind the national factors and individuals' employment insecurity perception we need longitudinal data, which can control for the unobserved heterogeneity across countries. This is not possible because data allowing

for cross-national comparison is not available. However, the conclusions of this study could be strengthened by repeated testing using such data.

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[Tables and Figures]

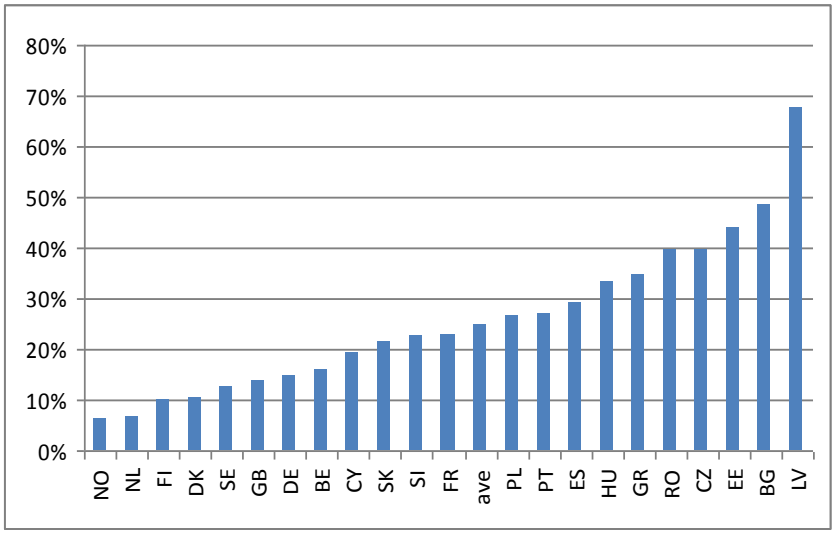

Figure 1. Cross-national variance in the percentage of individuals subjectively perceiving employment insecurity across Europe for 2008/2009 – weighted averages

Table 1. Explaining employment insecurity of individuals across Europe, through country-level characteristics separately (each row represents one model controlled for individual-level variables)

Model		B	SE	$R^{2\,a}$
3-1	PLMP expenditure/unemployment rate	**-4.005**	1.018	42.0
3-2	ALMP expenditure/unemployment rate	**-6.751**	1.921	36.5
3-3	LMP expenditure/unemployment rate	**-2.622**	0.671	41.7
3-4	EPL for regular workers	0.166	0.266	2.2
3-5	EPL for temporary workers	0.131	0.157	3.9
3-6	(in one model) EPL regular	0.048	0.272	
	EPL regular*permanent	**0.189**	0.086	1.9
3-7	Unemployment rate average	*0.100*	0.060	11.3
3-8	Employment rate average	**-0.072**	0.022	32.2
3-9	Change in unemployment 2008Q2 - 2009Q2	**0.155**	0.049	31.8
3-10	GDP growth rate average	**0.251**	0.090	26.6
3-11	GDP growth rate for 2009	**-0.121**	0.034	36.8

Bold = significant at the 95% level, italic = significant at the 90% level
N level 1 = 17936 and N level 2 = 22, with the exception of when EPL indexes are included then N level 1 = 15508 and N level 2 = 18
a: Amount of variance explained from the model including individual level variables. The baseline models can be provided upon request.

Table 2. Explaining employment insecurity of individuals across Europe through institutions (controlled for individual-level variables)

Employment Insecurity	Model 4-1		Model 4-2	
	B	SE	B	SE
PLMP exp as a % of GDP	-1.792	2.129		
ALMP exp as a % of GDP	-2.647	3.877		
LMP exp as a % of GDP			**-2.091**	0.535
EPL for regular workers	-0.046	0.207	-0.041	0.204
EPL for temporary workers	0.110	0.118	0.113	0.117
EPLreg* permanent	**0.184**	0.086	**0.184**	0.086
variance level 2	0.190	0.068	0.190	0.068
R^2 (from model2)[a]	50.1%		50.1%	
N level 2	18		18	
N level 1	15508		15508	

Bold = significant at the 95% level, italic = significant at the 90% level

a: Amount of variance explained from the model including individual-level variables. The baseline models can be provided upon request.

Table 3. Explaining employment insecurity of individuals across through market factors (controlled for individual-level variables)

Employment Insecurity	Model 5-1		Model 5-2		Model 5-3	
	B	SE	B	SE	B	SE
Employment average	**-0.062**	0.017	**-0.077**	0.014	**-0.077**	0.014
Unemployment change 08-09	**0.095**	0.044	*0.076*	0.043		
GDP growth average	0.095	0.067				
GDP growth 08-09	**-0.071**	0.032	**-0.087**	0.032	**-0.128**	0.023
variance level 2	**0.124**	0.040	**0.136**	0.044	**0.156**	0.050
R^2 (from model2)[a]	79.0%		76.9%		73.5%	
N level 2	22		22		22	
N level 1	17936		17936		17936	

Bold = significant at the 95% level, italic = significant at the 90% level

a: Amount of variance explained from the model including individual-level variables. The baseline models can be provided upon request.

Table 4. Explaining employment insecurity of individuals across Europe through country-level characteristics in combination (controlled for individual-level variables)

Employment Insecurity	Model 6-1		Model 6-2	
	B	SE	B	SE
LMP exp as a % of GDP	-0.146	0.094	-0.148	0.092
EPL for regular workers	0.071	0.167		
EPLreg* permanent	**0.188**	0.087		
Employment rate average	**-0.062**	0.016	**-0.067**	0.015
GDP growth rate for 2009	**-0.084**	0.033	**-0.116**	0.023
variance level 2	**0.125**	0.046	**0.139**	0.045
R^2 (from model2)[a]	67.1%		76.5%	
N level 2	18		22	
N level 1	15508		17936	

Bold = significant at the 95% level, italic = significant at the 90% level

a: Amount of variance explained from the model including individual-level variables. The baseline models can be provided upon request.

[i] For more information concerning the ESS data please refer to the ESS website http://ess.nsd.uib.no/ess/round4/.

[ii] Results can be provided upon request.