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Cross-national comparison of job types: analysis using the EU LFS and Albanian LFS

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Cross-national comparison of job types: analysis using the EU LFS and Albanian LFS

This paper is dedicated to the cross-national comparison of the labour markets of the EU member countries and Albania. The aim is to establish whether or not cross-national variations in propensities of being hired in a non-standard job are the result of differences in national institutional regimes and labour market regulations. An adapted version of the Fraser Index is used to explain cross-country differences in relation to the application of rigid labour market regulation. The econometric analyses indicate that the net effect of more stringent labour market regulation, increase job quality in different senses: in less affluent transition economies, more workers use involuntary non-standard jobs as a means to escape unemployment. On the other hand, in affluent economies, interventionist policies are associated with high levels of voluntary non-standard work and low unemployment.

Keywords: involuntary non-standard employment, Albania, European Union, labour market regulation, post-communist

1. Introduction

Non-standard forms of employment (NSFE) such as part-time and/or temporary jobs were initially proposed as means of giving firms more flexibility and bringing more workers into employment. With these ends in mind, policy-makers in many transition and non-transition countries in Europe reformed their labour market regulations and institutional regimes (Hipp et al., 2015). Apart from this traditional scope, two other types of NSFE recourses have emerged: on one hand, purposeful avoidance of protection legislation in non-transition economies, complemented by lack of compliance with and poorer labour law enforcement in transition economies on the other hand, have resulted in increased systematic adversity to such jobs. Previous research suggests that the prevalence of NSFE is also related to the institutional framework. Southern European countries with relatively high unemployment and low employment growth, such as France (Cahuc and Postel-Vinay, 2002), Italy (Boeri, 2011), and Spain (Dolado et al., 2011), and transition countries (Babos, 2014; Baranowska et al., 2011; Coe et al., 2008; Pilc, 2015; Savić and Zubović, 2015; Upchurch, 2009) generally experienced a more pronounced growth in the share in NSFE than countries with relatively low unemployment and high employment growth such as Denmark (Houseman and Ōsawa, 2003). To further exacerbate these adverse effects, migration and shifts in the demographic composition of the labour force and industries have also intensified the growth and cross-country differences in NSFE. Interestingly, numerous studies have focused on the comparison of NSFE with standard forms of employment (SFE), from a "bad to good jobs" or "upward transition" sense. This approach often departs from the stepping stone and state dependence competing theoretical backgrounds with the unemployed are omitted from the sample. What has been missing from the literature, however, is a thorough cross-national comparative account that incorporates the "no-job to bad jobs" transition or "downward" comparison to shed light on the integrative power of NSFE for those in non-employment conditions. Labour market theory suggests that workers with tight non-employment constraint, tend to lower their reservation wages and expectations of employment arrangements which drives them to endogenously sort into NSFE; in this case, a 'bad' job is better than 'no-job' (Green and Livanos, 2017; Livanos and Papadopoulos, 2019). Although a few studies have attempted such analysis, partly focusing in either part-time (Kyyrä et al., 2017) or temporary (Gebel, 2013) employment, they have been restricted in non-transition economies or in the

estimation of the port of entry hypothesis in the sense of school-to-work transitions. We thus offer a bridge to this gap by measuring job quality on a widened comparative spectrum that includes unemployment, NSFE (temporary and/or part-time hours of work), and SFE (permanent and full-time). We further dissect NSFE by the involuntariness aspect since it has been found to exercise profound psychological effects on job and life satisfaction thus ultimately affecting job quality as viewed by workers (Kauhanen and Nätti, 2015; Witte et al., 2010). Another novelty of this study is its comprehensive nature in terms of including all the transition (post-socialist) and non-transition institutional regimes across all EU countries and Albania. This allows to test whether the validity of previous findings for OECD countries (OECD, 2015) are replicated and generalized in other less developed parts of the EU. In similar cross-national study, Aleksynska (2018) found that temporary employment arrangements were endogenous to working conditions and job satisfaction and provide evidence that not only it affected directly working conditions, but also through them it exercised indirect effects in job satisfaction. Referring to Diener's (1984) 'bottom-up' approach, a person's life satisfaction is operationalized as the sum of satisfaction in a range of domains including in particular the work and leisure domains. Both these domains are central to the definition of subjective well-being and exercise direct (bottom-up or vertical) effects on life satisfaction but also (horizontal/spillover) effects on other life domains such as family, friends, etc.

The central question in this paper asks what are the drivers of job quality. We are interested in the estimation of similarities and differences across different European institutional contexts and their converging or diverging patterns in term of job quality. Secondary data from the Labour Force Surveys (LFS) for the European Union (EU) countries and Albania is used to create e pooled database comprised of variables at the micro- and macro-level as well as institutional and socio-economic variables such as labour market rigidity index and welfare regime. Results indicate that more stringent labour market regulation affects job quality in different senses for different welfare regimes. The remainder of this paper has been organised in the following way: Section 2 describes the methodology, dataset, and variables. Section 3 includes the micro-level analysis. The main results estimate which country differences affect the prevalence of NSFE and unemployment are discussed here. Finally, conclusions and some final remarks are presented in Section 4.

2. Data and methodological approach

2.1.Data

Secondary Labour Force Survey (LFS) micro-data for the EU countries and Albania, as reported by Eurostat and INSTAT respectively for 2013, is used in this study. This data is advantageous compared to other European cross-national surveys because it includes large-scale national samples which increase the reliability of estimates in particular for social groups of interest to this study such as workers in part-time, temporary or non-employment working conditions[1] (see Appendix 1). The sample is restricted to participants who were in wage-employment at the time of survey (reference week) and those who were not working but in their last job were in paid-employment. The self-employed and those engaged in unpaid domestic work were excluded from the sample. Aggregate and institutional measures are taken from the International Labour Organisation (ILO) and World Bank (WB).

2.2.Variables

The main variables of interest include labour market status and the contractual employment arrangements. To create the outcome variable, the job quality taxonomy, we rely on the desirable qualities of a job from the workers' prospective and refer to the cross-tabulation of type of contract (permanent or temporary) and hours of work (full- or part-time), as objectifying indicators of employment destandardization (Koch and Fritz, 2013). The distribution was such that high quality 'good' jobs included SFE[2] (permanent and full-time) while low quality 'bad' jobs clustered the combinations of NSFE (temporary full-time, permanent part-time, temporary part-time). Additionally, the involuntary aspect of NSFE, captured by the reason of working in NSFE due to impossibility of finding SFE, is included. The dependent variable resulted in four categories of ordinal nature: 1 'unemployed', 2 'involuntary NSFE', 3 'voluntary NSFE', and 4 'SFE'. To keep account for confounding variables, the independent

[1] Other competing cross-national surveys such as the EBRD's Life in Transition Survey (LiTS) or Euromod's European Working Conditions Survey sample between 1000 – 1500 households at the country level and do not interview all the member of the household. The LFS's number of households surveyed is proportional to the size of the population, i.e. larger countries have larger sample size, and each adult in a household is interviewed. See Appendix 1 for more detailed information on country sample sizes by gender.

[2] Or if we refer to it from a sociological perspective as the 'employment standard'(Koch and Fritz, 2013)

variables included individual (micro) level (including a constant) measures which have been previously used as standard controls in analyses of employment arrangements (Aleksynska, 2018; Green and Livanos, 2017; Kauhanen and Nätti, 2015). The cross-national database also included aggregate level variables such as the ILO unemployment rates and Eurostat's year-on-year growth of GDP per capita for 2013 to capture between country and within country trend effects respectively. Previous research suggests that the prevalence of NSFE is also related to institutional framework. Therefore, to account for differences in job quality across institutional frameworks, the data was complemented with a set of dummies for the welfare clusters and a labour market regulation index. The latter is similar to the one produced by the Fraser Institute (Aleksynska and Cazes, 2014) and indicators from the WB's Doing Business Labour Market Regulation (LMR) are used to calculate it[3]. As economic "freedom" is considered to be an ultimate value, any institutional or custom regulation is viewed as reducing such freedom. A comprehensive description of the variables included in the model can be found in Table A1.1 and A1.2 in Appendix 1.

2.3.Structure of the multivariate micro-macro model

In order to be able to identify what drives national differences in terms of probability of an individual being employed in a standard, voluntary or involuntary NSFE, or unemployment, an econometric model that is able to deal with country- and individual-level data is necessary (Gangl, 2004, 2000). We thus have employed the following multi-level modelling to a database of cross-sectional comparative surveys with restricted sample of employees in wage-employment:

$$JobQuality^*_{ij} = \beta_1 X_{ij} + \beta_2 Country_j + \beta_3 Institional_j + \varepsilon_{ij} \quad \textbf{(1)}$$

Where i denotes individuals and j for the countries (EU and Albania); $JobQuality^*_{ij}$ is latent job quality; X_{ij} is a vector of individual baseline variables including characteristics such as age segment, sex, marital status, education, supervisory responsibilities, firm size and a constant term. Controls for industry (NACE Rev. 1, 1-

[3] It is part of their Economic Freedom of the World Index and includes aspects such as hiring, working hours, redundancy rules, and cost for the manufacturing sector for 2013. Higher values of the index reflect higher levels of rigidity and levels of employment protection of the regular standard workers and its calculation is explained in Table A2 of Appendix 1.

digit) and occupation (ISCO-88, 1-digit) are also included to enable controlling for structural and systematic differences that affect the prevalence of NSFE.

Table 1**.** Outline of the multi-level model

Dependent variable	Job Quality: The probability of being in (1) unemployment, (2) involuntary NSFE, (3) Voluntary NSFE, (4) SFE in 28 EU countries and Albania in 2013	
Independent variables	Sex, age segment, education, married, supervisory, responsibilities, occupation, industry, firm size, public, sector	**Individual (micro) level**
		Country (macro) level
	Unemployment rate	(between country level effects)
	Gross Domestic Production (GDP) per capita	(within country trend effects)
	Welfare cluster	**Institutional level**
	Labour market regulation Fraser (LMR) index	
	LMR index * GDP per capita	
	Country-level unobserved heterogeneity	**Country-fixed effects**
	Individual-level unobserved heterogeneity	**Individual-fixed effects**

This large set of explanatory variables allows to control for selective participation in NSFE, because of their possible link with of unobserved fixed effects. For example, workers' unobserved higher career aspirations and a proactive personality can be proxied by education and skill level which in turn predict contractual arrangements. Additionally, results are reported separately for men and women as gender is a proxy for preferences of NSFE and a significant aspect of heterogeneity of both, across countries with more supportive labour market institutions and family-oriented policies, and across different groups of women such as the low-skilled (Cipollone et al., 2014). Table 1 summaries the hierarchical nature of the model and the variables included in it. Standard errors are clustered at the country-level to capture country-fixed effects.

3. Results

3.1.Descriptive analysis: graphical inspection of the outcome variable

The graphical inspection consists of histograms, of the relative shares for the four categories of the dependent variables, and arranged in rows by welfare regime clusters. It serves as a shell-model with country fixed effects only. Differences between countries and clusters provided a rationale for the multi-level approach.

The first cluster in Fig. 1 includes the 'social democratic' countries. In this cluster, voluntary NSFE are significant for women in particular as a means to achieve work-life balance. Netherlands, Denmark and Sweden have the highest shares of voluntary female NSFE. The quality of NSFE is 'good' since workers chose it mainly on voluntary basis, not just to escape unemployment and engage in on-the job search. These jobs play the role of stepping stones where workers rearrange themselves for upward movement in the career ladder and occupational status. These jobs are not insecure and precarious but rather flexible and utility maximising. The Scandinavian countries are quite known for their interventionist labour market policy and institutional regime but this does not translate into higher unemployment, instead stricter employment protection legislation and unionization for regular standard workers translates into higher part-time and flexibility-bounded unemployment.

In the opposite extreme of the 'rigidity continuum', the 'liberal countries' in Fig. 7 are mapped. Both the United Kingdom (UK) and Ireland are recognized for their low level of SFE protection and higher flexibility in terms of NSFE such as temporary, agency workers, zero-hours contract, etc. The low intervention in the market is argued to incentivise workers for upward mobility. The effect of the Irish unemployment might outweigh the similarities in terms of voluntary NSFE between the UK and the social democratic countries. Nevertheless, the general cluster-level outlook suggests that there are similarities between these two clusters and that while SFE is male-dominated, voluntary NSFE is female dominated. Both clusters have active labour market policies in place that provide incentives for upward movement and of job-worker matching.

The German-speaking corporatist countries in Fig. 2 (Austria, Germany, and Switzerland) show similar patterns Netherlands, Denmark, and Sweden. However, the opposite is true for France and Belgium. In fact, when compared with the southern European countries in Fig. 3, the corporatist economies have higher incidence of NSFE.

This cluster is also characterized by strong interventionist policies because of vulnerability to external labour market forces and ethnic homogeneity (Kahn, 2012). Fig. 4 illustrates the configurations for the 'post-socialist corporatist' countries. Interestingly, Croatia and Slovenia[4] have high male and female SFE, almost inexistent NSFE, and high unemployment shares and map with Latvia and Lithuania from the 'post-socialist liberal' cluster in Fig. 5 in terms of fairly high levels of labour market rigidity. The same trends can be identified for Estonia which has a slightly lower unemployment rate, and the '2007 accession cluster' show the same trends. In Fig. 6, Albania is a negative exemption in 2013, which also happens to be a central government election year where political patronage and emigration reached its peak. All the job quality categories are male dominated as female participation in the labour market is significantly lower. The unemployment rate compares well with the 'southern European' countries like Italy and Portugal but its labour market protection is higher. With the exemptions being Hungary, Czech Republic, and Poland, transition countries show high levels of labour market polarization; they are characterized by high labour market regulation which results in high SFE but is also related to high shares of involuntary NSFE and unemployment.

In summary, the 'liberal', 'social democratic' and some of the 'corporatist' countries qualify as efficient and competitive economies if compared to the 'southern European' and 'post-socialist' clusters in terms of labour market performance.

[4] With very fragile labour market institutions and policies which joined the European Union in the last rounds of expansion present these patterns.

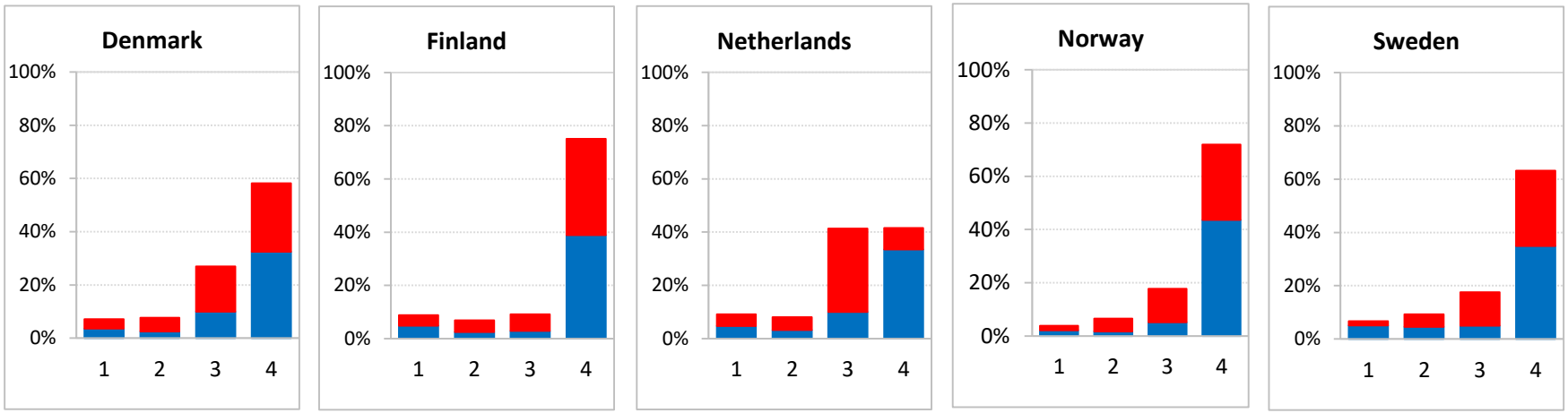

Fig. 1. Country level types of employment (1) unemployment, (2) Involuntary non-standard, (3) Voluntary non-standard, (4) Standard FTPE, as % of employment for the *'social democratic'* cluster (men: blue; women: red)

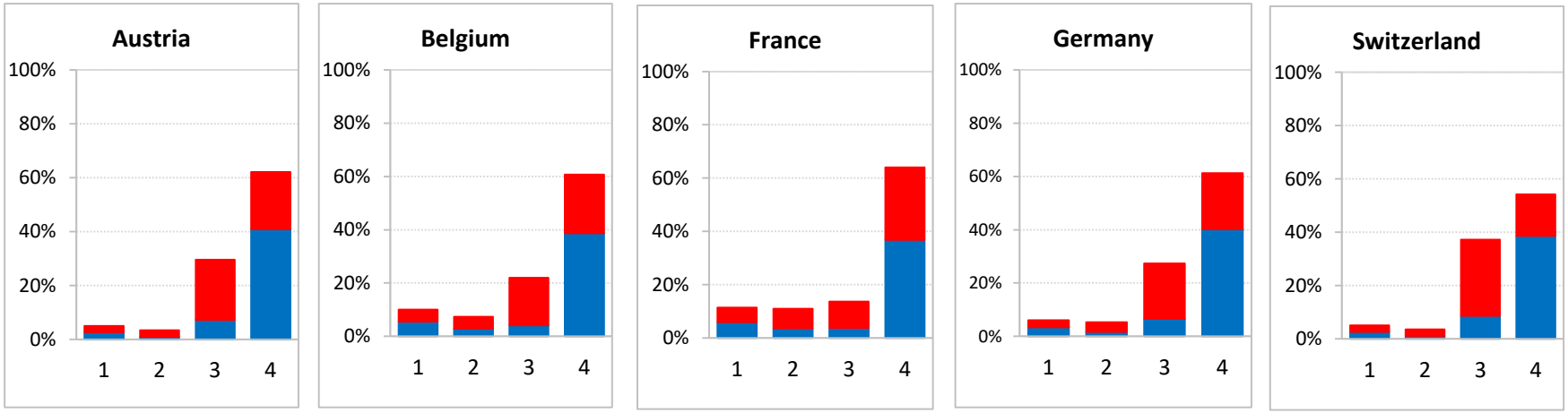

Fig. 2. Country level types of employment (1) unemployment, (2) Involuntary non-standard, (3) Voluntary non-standard, (4) Standard FTPE, as % of employment for the '*corporatist'* cluster (men: blue; women: red)

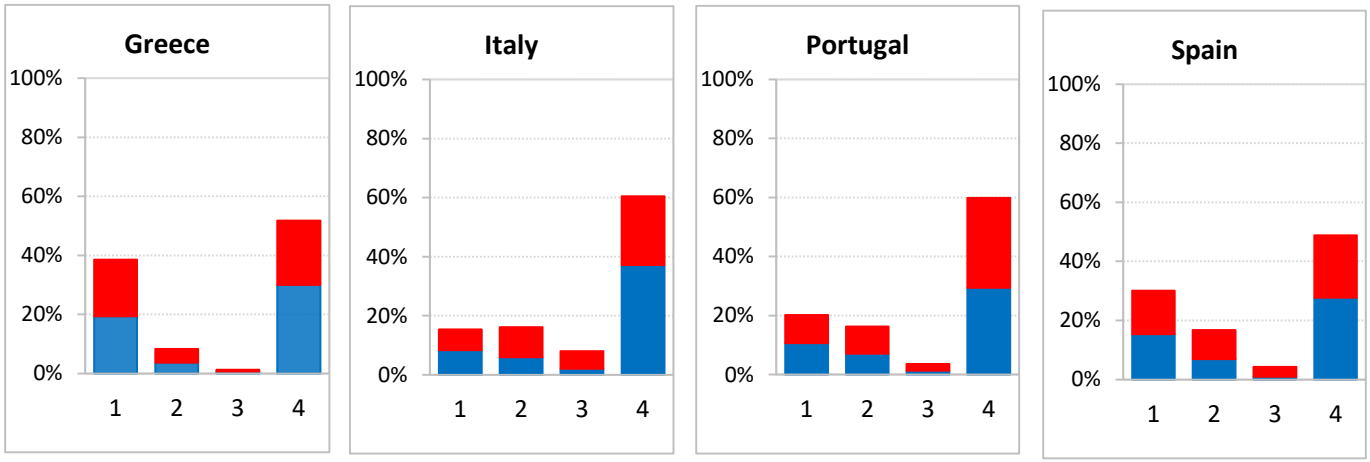

Fig. 3. Country level types of employment (1) unemployment, (2) Involuntary non-standard, (3) Voluntary non-standard, (4) Standard FTPE, as % of employment for the '*southern European'* cluster (men: blue; women: red)

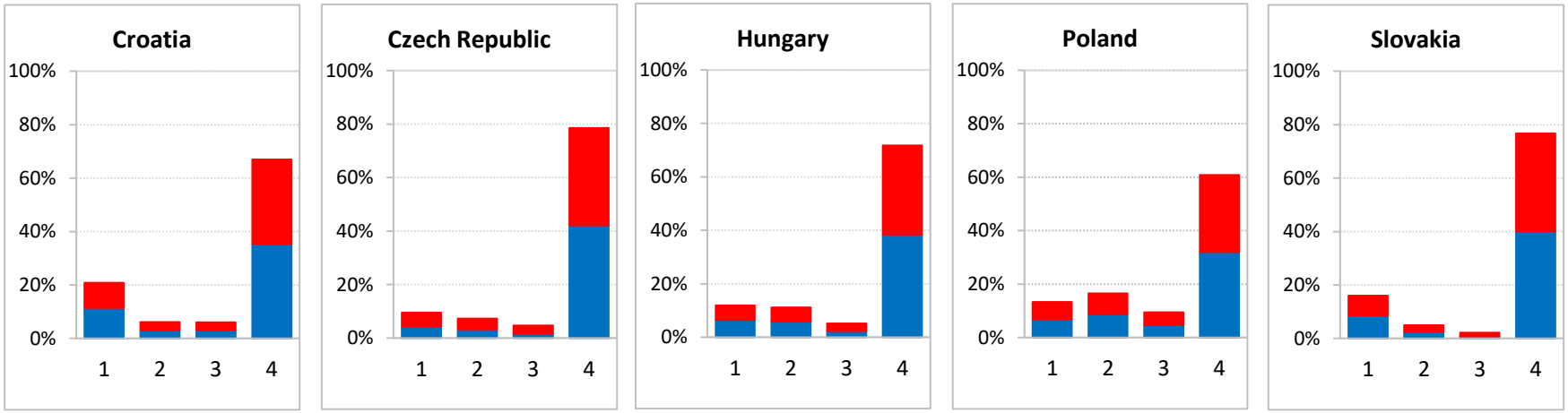

Fig. 4. Country level types of employment (1) unemployment, (2) Involuntary non-standard, (3) Voluntary non-standard, (4) Standard FTPE, as % of employment for the '*post-socialist corporatist'* cluster (men: blue; women: red)

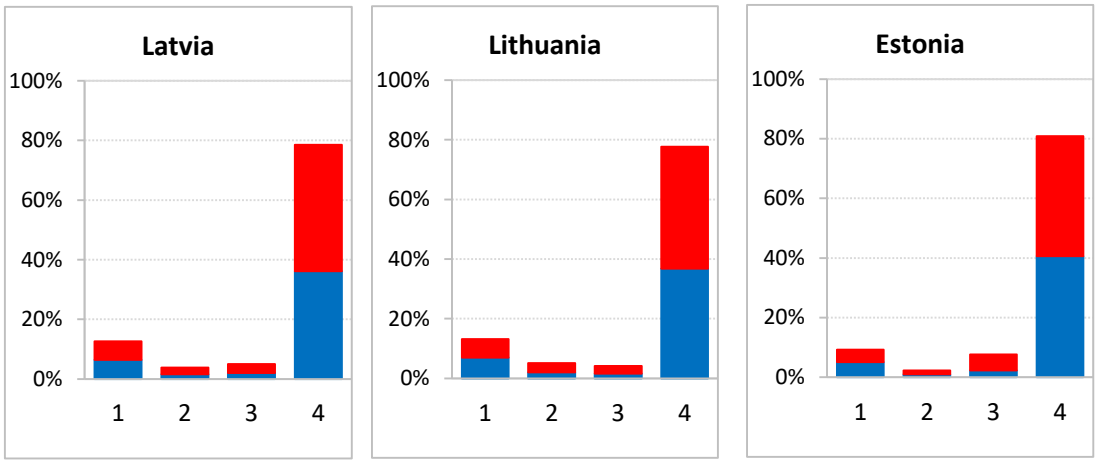

Fig. 5. Country level types of employment (1) unemployment, (2) Involuntary non-standard, (3) Voluntary non-standard, (4) Standard FTPE, as % of employment for the '*post-socialist liberal*' cluster (men: blue; women: red)

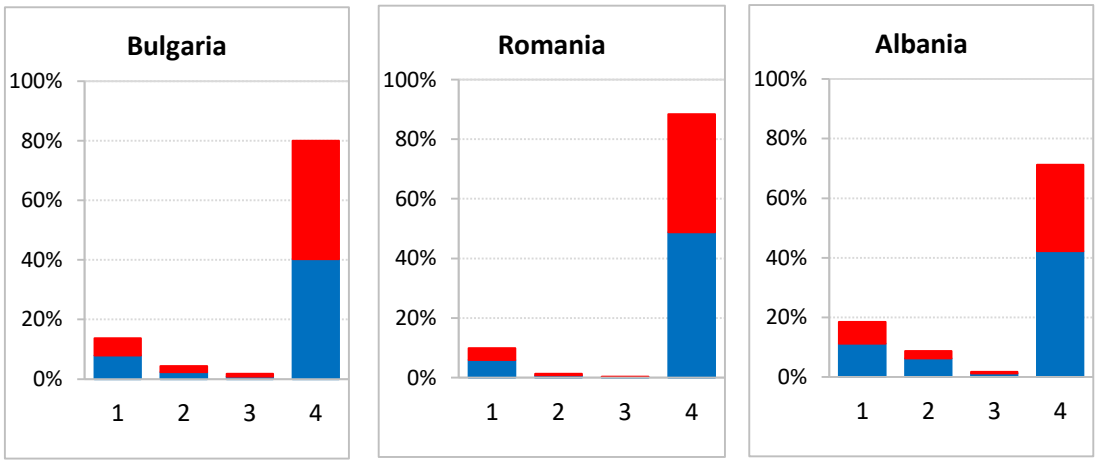

Fig. 6. Country level types of employment (1) unemployment, (2) Involuntary non-standard, (3) Voluntary non-standard, (4) Standard FTPE, as % of employment for the '*2007 accession & Albania cluster*' cluster (men: blue; women: red)

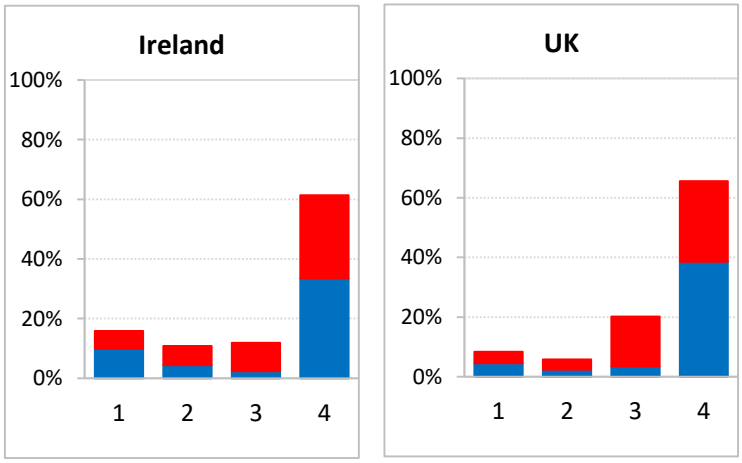

Fig. 7. Country level types of employment (1) unemployment, (2) Involuntary non-standard, (3) Voluntary non-standard, (4) Standard FTPE, as % of employment for the '*liberal'* cluster (men: blue; women: red)

3.2.Ordered logit estimation

The regression analysis for this model is an ordered logit since the observable levels of the latent outcome variable, job quality, are of ordinal nature: 1 if 'unemployed', 2 if 'involuntary NSFE', 3 if 'voluntary NSFE', and 4 'SFE'. We start with a baseline specification (Model 1) with individual-level variables and institutional regime dummies. The resulting demographic profile of NSFE workers is in line with existing literature. We find that younger workers, non-married, with less than university education, working in small firms, with no supervisory responsibilities, and in blue-collar occupations are characteristics linked with lower levels of job quality, i.e. involuntary NSFE and unemployment. These effects are more pronounced for men. Interestingly, old women compared to their prime age counterparts have in general lower likelihoods of working in NSFE across Europe. The opposite is true for male workers but the results are less significant. These differences can be attributed to the institutional regime. Social democratic, liberal and corporatist countries in general have their old workers in NSFE, while the transition countries such Bulgaria, Croatia, Poland, Romania and EU candidate Albania have higher shares of old workers in SFE because of their strong employment protection legislation. Detailed information for within-country estimations for men and women separately is provided in the supplementary Appendix 3. In the subsequent models (2 to 4) the country-level explanatory variables have been added. The results in Table 2 show that the odd ratios of GDP per capita growth for Model 4 are statistically significant and show that, ceteris paribus, for a one-unit increase in GDP per capita growth, the odds of higher job quality (voluntary NSFE and SFE), compared with the combined medium and low job quality options (involuntary NSFE and unemployment), are 0.84 times lower for men and 1.39 times higher for women. Countries with higher GDP per capita growth, usually transition economies, have lower job quality. This is quite plausible since their unemployment rate is higher, and share of involuntary NSFE is significant, as explained above. On the other hand, more affluent non-transition countries with lower GDP per capita growth, have higher job quality: more workers on SFE and voluntary NSFE.

The odd ratios of LMR Fraser index for Model 4 are statistically significant and show that, ceteris paribus, for a one-unit increase in LMR Fraser index, the odds of the higher job quality compared with the combined lower job quality options are 2.63 and 6.36 times higher for men and women respectively.

Table 2. Ordered logit: The probability of being in (1) unemployment, (2) involuntary NSFE, (3) Voluntary NSFE, (4) SFE by Sex, conditional on LMR Fraser Index and GDP growth, Pooled Database (coefficients, standard errors, and odd ratios)

Variable	Job Quality							
	Men				Women			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Individual level variables								
Age 15 – 29	-1.088***	-1.095***	-1.081***	-1.081***	-.651***	-.664***	-.639***	-.642***
	(.003)	(.003)	(.003)	(.003)	(.004)	(0.004)	(.004)	(.004)
	[.337]	[.335]	[.335]	[.339]	[.521]	[0.515]	[.528]	[.526]
Age 50 – 64	-.022*	-.019*	-.021*	-.021*	.203***	.210***	.206***	.209***
	(.009)	(.009)	(.009)	(.009)	(.007)	(.008)	(.008)	(.008)
	[.978]	[.981]	[.980]	[.980]	[1.225]	[1.234]	[1.229]	[1.233]
Married	.395***	.387***	.399***	.399***	.122***	.146***	.076***	.040***
	(.013)	(.013)	(.013)	(.013)	(.005)	(.005)	(.005)	(.005)
	[1.485]	[1.472]	[1.491]	[1.491]	[.786]	[.776]	[.790]	[.785]
Secondary education	-.377***	-.360***	-.393***	-.393***	.122***	.146***	.076***	.040***
	(.011)	(.011)	(.011)	(.011)	(0.017)	(.017)	(.016)	(.015)
	[.686]	[.697]	[.675]	[.675]	[1.130]	[1.157]	[1.079]	[1.041]
Tertiary education	-.001	-.005	-.010	-.010	.141***	.138***	.118***	.116***
	(.010)	(.010)	(.010)	(.010)	(.008)	(.008)	(.008)	(.008)
	[.999]	[.995]	[.990]	[.999]	[1.151]	[1.148]	[1.125]	[1.123]
Supervisory responsibilities	.865***	.887***	.887***	.887***	.567***	.591***	.593***	.597***
	(.025)	(.025)	(.025)	(.025)	(.013)	(.014)	(.014)	(.014)
	[2.374]	[2.427]	[2.428]	[2.428]	[1.762]	[1.805]	[1.810]	[1.817]
Low-skilled white collar	-.368***	-.372***	-.369***	-.369***	-.456***	-.460***	-.469***	-.465***
	(.007)	(.007)	(.007)	(.007)	(.004)	(.011)	(.004)	(.004)
	[.692]	[.689]	[.692]	[.692]	[.634]	[.631]	[.626]	[.628]
High-skilled blue collar	-.229***	-.220***	-.215***	-.215***	-.480***	-.471***	-.473***	-.474***
	(.009)	(.009)	(.009)	(.009)	(.011)	(.011)	(.011)	(.011)
	[.795]	[.802]	[.806]	[.806]	[.619]	[.624]	[.623]	[.623]
Low-skilled blue collar	-.734***	-.728***	-.728***	-.728***	-1.110***	-1.113***	-1.131***	-1.125***
	(.005)	(.005)	(.005)	(.005)	(.003)	(.003)	(.003)	(.003)
	[.480]	[.483]	[.483]	[.483]	[.330]	[.329]	[.323]	[.325]
Mining and quarrying	1.111***	1.092***	1.085***	1.085***	1.164***	1.155***	1.145***	1.154***
	(.154)	(.151)	(.150)	(.150)	(.331)	(.329)	(.326)	(.329)
	[3.037]	[2.981]	[2.960]	[2.960]	[3.202]	[3.175]	[3.143]	[3.172]

Table 2 (continued)

Variable	Job Quality							
	Men				Women			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Manufacturing and construction	.680***	.669***	.667***	.668***	.953***	.945***	.945***	.949***
	(.035)	(.035)	(.035)	(.035)	(.066)	(.065)	(.065)	(.065)
	[1.973]	[1.953]	[1.949]	[1.949]	[2.594]	[2.574]	[2.572]	[2.582]
Producer services	.830***	.824***	.821***	.821***	.840***	.840***	.833***	.836***
	(.049)	(.049)	(.048)	(.048)	(.069)	(.069)	(.069)	(.069)
	[2.293]	[2.280]	[2.274]	[2.274]	[2.316]	[2.316]	[2.301]	[2.307]
Consumer services	.163***	.154***	.155***	.155***	.350***	.343***	.343***	.345***
	(.021)	(.021)	(.021)	(.021)	(.035)	(.035)	(.035)	(.035)
	[1.177]	[1.167]	[1.168]	[1.168]	[1.419]	[1.409]	[1.409]	[1.412]
Firm size 11 to 19 employees	.229***	.226***	.236***	.236***	.249***	.242***	.261***	.262***
	(.015)	(.015)	(.015)	(.015)	(.011)	(.011)	(.011)	(.011)
	[1.257]	[1.253]	[1.266]	[1.266]	[1.283]	[1.273]	[1.298]	[1.300]
Firm size 20 to 49 employees	.330***	.330***	.344***	.344***	.389***	.388***	.410***	.410***
	(.015)	(.015)	(.015)	(.015)	(.012)	(.012)	(.012)	(.012)
	[1.391]	[1.392]	[1.411]	[1.411]	[1.475]	[1.474]	[1.507]	[1.508]
Firm size over 50 employees	.507***	.509***	.518***	.518***	.556***	.555***	.566***	.564***
	(.015)	(.015)	(.015)	(.015)	(.012)	(.012)	(.012)	(.012)
	[1.660]	[1.664]	[1.678]	[1.678]	[1.744]	[1.741]	[1.762]	[1.757]
Country level variables								
Unemployment rate		-.127***	-.228***	-.234***		-.297***	-.260***	-.302***
		(.002)	(.005)	(.003)		(.001)	(.002)	(.009)
		[.883]	[.796]	[.791]		[.743]	[.771]	[.739]
Growth rate of gross domestic product per capita		-.178***	-.178***	-.176***		-.184***	-.194***	.328***
		(.004)	(.004)	(.012)		(.004)	(.004)	(.013)
		[.837]	[.837]	[.839]		[.832]	[.824]	[1.388]
Institutional variables								
Social democratic	-.319***	-.303***	-.284***	-.283***	-.177***	-.161***	-.142***	-.093***
	(.007)	(.007)	(.007)	(.008)	(.006)	(.006)	(.006)	(.006)
	[.727]	[.739]	[.753]	[.753]	[.838]	[.851]	[.868]	[.911]
Corporatist	.115***	.265***	.489***	.489***	.282***	.438***	.765***	.734***
	(.019)	(.022)	(.030)	(.030)	(.014)	(.018)	(.027)	(.026)
	[1.122]	[1.303]	[1.631]	[1.630]	[1.326]	[1.549]	[2.149]	[2.083]

Table 2 (continued)

Variable	Job Quality							
	Men				Women			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
Southern European	-.225***	-.647***	-.618***	-.620***	.318***	-.109***	-.100***	-.241***
	(.008)	(.008)	(.009)	(.009)	(.010)	(.011)	(.011)	(.011)
	[.799]	[.524]	[.539]	[.538]	[1.375]	[.897]	[.905]	[.786]
Post-socialist corporatist	-.286***	-.155***	.054***	.053***	1.098***	1.230***	1.533***	1.499***
	(.007)	(.009)	(.013)	(.013)	(.025)	(.031)	(.047)	(.046)
	[.752]	[.856]	[1.055]	[1.055]	[2.997]	[3.423]	[4.633]	[4.479]
Post-socialist liberal	.883***	1.312***	1.452***	1.451***	.840***	.840***	.833***	.836***
	(.064)	(.109)	(.128)	(.129)	(.069)	(.069)	(.069)	(.069)
	[2.419]	[3.714]	[4.270]	[4.266]	[2.316]	[2.316]	[2.301]	[2.307]
2007 accession cluster and Albania	1.509***	1.973***	2.052***	2.053***	.350***	.343***	.343***	.345***
	(.117)	(.211)	(.228)	(.232)	(.035)	(.035)	(.035)	(.035)
	[4.522]	[7.192]	[7.784]	[7.792]	[1.419]	[1.409]	[1.409]	[1.412]
Labour market regulation index			.964***	.968***			1.393***	1.850***
			(.076)	(.092)			(.086)	(.176)
			[2.621]	[2.632]			[4.025]	[6.362]
Labour market regulation index * Growth rate of gross domestic product per capita				-.439***				-.677***
				(.013)				(.013)
				[.645]				[.508]
/cut1	-2.096	-2.202	-1.677	-1.675	-1.324	-1.441	-.709	-.501
	(.022)	(.022)	(.027)	(.029)	(.026)	(.027)	(.029)	(.030)
/cut2	-1.270	-1.374	-.848	-.846	.144	.030	.769	.977
	(.022)	(.022)	(.027)	(.028)	(.026)	(.027)	(.029)	(.030)
Pseudo R2	.108	.109	.111	.111	.096	.097	.101	.101
Number of observations	730,761	730,761	730,761	730,761	704,707	704,707	704,707	704,707

Notes: standard errors in square brackets and clustered at the country level; odd ratios in square brackets;
*, **, *** Significant at p < 0.1, 0.05, 0.001 respectively

For male workers, it is true that when the LMR Fraser index is included in the model it suggests that no matter if the market is strictly regulated or not, the macroeconomic context of transition economies will have more male workers across EU and Albania unable to find work and working involuntarily in less secure and low quality NSFE. This is not the case for female workers on the other hand. Including the labour market regulation reverses the effects of GDP per capita growth. In transition countries where the labour market is strictly regulated, women find it easier to work in SFE. The interpretation of the LMR Fraser Index and GDP growth interaction is quite problematic when the logit form is used and in order to make sense of their impact on job quality additional steps will be taken. The approach suggested by Long and Freese (2014) for continuous variables will be adopted to apply a scenario analysis for three macroeconomic performances (downturn, incremental growth, upturn) with three different values of the LMR Fraser Index i.e. low, medium, high. This approach makes use of the marginal effects at each value of the LMR index taking for reference the performance of three typical countries, which are: downturn in Greece: - 3.2; incremental growth in Germany 0.47; and fast growth in Romania 3.5. For each of these scenarios, marginal effect at three points of LMR Fraser index will be calculated for each country. The values are again related to countries that serve as points of reference: low regulation in Czech Republic 0.16; Moderate regulation in Austria 0.47; and strictly regulated market in France 0.75. Detailed information about the results of the scenario analysis for each country is provided in the supplementary Appendix 2.

Scenario downturn (Greece: - 3.2%): The moderating effect that the GDP per capita growth has on the Fraser index indicates that interventionist policies in less efficient transition economies increase the incidence of NSFE. The effect of market regulation is stronger when the economy is in a downturn and job quality can significantly be improved by reducing the market intervention and regulation. This is understandable since the rate of job acceptance will be higher in a poor performing economy where unemployment stalls and the few SFE become more and more difficult to keep. Therefore, both NSFE and SFE converge equally towards low quality. In this situation, many workers also chose migration as a form of human capital investment and will try diversification of their employment prospects. *Scenario incremental* growth (Germany: 0.47%): The liberal and socio-democratic countries showed very high levels of LMR but the effect of the GDP per capita growth, shows that labour market

regulation alone reduces unemployment but when the macroeconomic performance is incremental, it also increases voluntary NSFE. *Scenario fast growth* (Romania: 3.5%): The effect of high economic growth per se reduces the rate of NSFE and unemployment but this effect is outweighed by the LMR which induces more job destruction and non-standard flexible hiring. However, the rate of job destruction and NSFE hirings is not long-lasting in terms of increasing unemployment since the prosperity and aggregate demand for firms is upward trending and this leaves more room for human capital absorbing through means of SFE. Countries in this phase of economic cycle, mainly developing countries, have both protection and flexibility and workers in NSFE are able to negotiate from a safer and more comfortable positon without risking falling into long-term unemployment.

In conclusion, when considering the transition countries, they all show higher incidence of SFE, albeit to different degrees, compared to the corporatist ones. With the exemption of Poland, Hungary, and Czech Republic, the rest qualify as inefficient in terms of labour and macroeconomic performance. NSFE create state dependence and workers are constantly in and out of employment. As a further robustness check, these results have been further validated by within country and cluster regression in Appendix 3.

4. Interpretation and summary of findings

This study sought out to examine the relationship between institutional regimes and labour market regulations with respect to cross-national variations in propensities of being hired in a standard, voluntary or involuntary NSFE, or being unemployed. Two main results emerged. First, at the individual level, the resulting demographic profile of NSFE workers was in line with previous findings. On average, younger workers, with less than university education, working in small firms and in blue-collar occupations had lower levels of job quality, i.e. involuntary NSFE and unemployment. These effects are more pronounced for men. Second, there are significant diverging effects in terms of unemployment and types of non-standard employment (i.e. voluntary versus involuntary) between the 'liberal', 'social democratic' and some of the 'corporatist' on one hand, and transition and southern European countries on the other hand. In countries where the institutional regime induced quite strong labour market protection for standard workers, but the domestic economy was doing fine, the patterns in terms of labour market efficiency were quite consistent: male dominated SFE, relatively high

and female dominated voluntary NSFE, and low involuntary NSFE and unemployment. In the majority of transition and some non-transition countries, unemployment was high and NSFE were merely a means to escape unemployment, therefore involuntary and inferior in job quality compared to SFE. SFE on the other hand was strictly protected and not easily accessible by NSFE workers, therefore restricting them from upward mobility.

In particular, labour market rigidity significantly increases unemployment among the young and less educated. This is a result that further validates the conventional rationale that job creation is delayed by high interventionist approaches in the labour market, leaving some of the new labour market entrants unemployed (Lehmann and Muravyev, 2012, 2010). These patterns result in state dependences or 'entrapment' conditions. NSFE foster job polarisation as both, the within country and pooled data, results confirm that blue collar, as compared to white collar workers, have higher likelihoods of NSFE and/or unemployment. This means that jobs in the middle of the distribution are more comparable with those in the top of the distribution but altogether they differ significantly from those in the bottom of the distribution. Jobs in the middle-skill occupations are more similar to on standard terms while those in the low-skilled occupations have amplified probability of NSFE.

The scenario analysis with marginal effects of LMR Fraser index on job quality (for fixed values of GDP per capita) indicated that transition rates from unemployment to NSFE is higher during fast growth and recession/downturn. In general, workers will leave unemployment for NSFE if the expected utility flows available of the former surpass those of the latter or if the cost of finding a SFE is very high in terms of social and human capital or time. On the other hand, the opposing effect will be that more and more firms will offer additional incentives to retain only good workers and in equilibrium, only high productivity workers will have a job.

These results provide empirical support for the complementary nature of labour market institutions and policies and indicate that the simple institutional approach is limited and that an interaction of institutions with economic performance would rather be more acceptable (Bertola et al., 2001; Lehmann and Muravyev, 2010).

Appendix 1 – Variables and descriptive statistics

Table A1.1. Variable definition

Variable	Description
Dependent variable	
Job quality	Comprised by 4 categories of ordinal nature: 1 if 'unemployed', 2 if 'involuntary NSFE', 3 if 'voluntary NSFE', and 4 'SFE'.
Independent variables	
Individual level variables	
Age segment	Age in years: age_segment_young: 1 for aged 15 – 29 age_segment_prime: 1 for aged 30 – 49 age_segment_old: 1 for aged 50 and 65
Education	Highest level of education the respondent has successfully completed: education_low: 1 for no formal education or primary education education_medium: 1 for secondary general or vocational education education_high: 1 for tertiary/university education
Married	1 if social status is 'married', 0 otherwise
Supervisory responsibilities	1 if respondent has supervisory responsibilities, 0 otherwise
Occupation	ISCO-88 codes, 1 digit, 9 categories: high_skill_white_collar: 1 for codes 1, 2, or 3 low_skill_white_collar: 1 for codes 4 or 5 high_skill_blue_collar: 1 for codes 6 or 7 low_skill_blue_collar: 1 for codes 8 or 9
Industry	NACE Rev. 1 codes, 1 digit, 15 categories: agriculture_fishing: 1 for NACE Rev. 1 codes A or B manufacturing_construction: 1 for codes C, E or F producer_services: 1 1 for codes I, J or K consumer_services: 1 1 for codes G, H, L, M, N, O or P
Firm size	Number of employees in the firm: firm_size_micro: 1 for less than 10 employees firm_size_small: 1 for 11 - 19 employees firm_size_medium: 1 for 20 to 49 employees firm_size_large: 1 for over 50 employees
Country level variables	
Unemployment rate	The (ILO) national unemployment rate for 2013
Gross domestic production per capita	Eurostat GDP per capita year-on-year growth rates for 2013
Institutional level variables	
Welfare cluster	Dummy variables for welfare/institutional regimes: Liberal: UK and Ireland; corporatist: Germany, Austria, Belgium, France, Switzerland; social democratic: Denmark, Finland, Norway, Sweden, Netherlands; southern European: Italy, Spain, Portugal, Greece; post-socialist corporatist: Czech Republic, Hungary, Poland, Slovenia, Slovakia; post-socialist liberal: Latvia, Lithuania, Estonia, Croatia; 2007 accession cluster and Albania: Bulgaria, Romania, Albania.
Labour market regulation Fraser index	Fraser Institute index for labour market regulations rigidity and is part of their Economic Freedom of the World Index; Since Albania is not included in their database, we have used their methodology to generate an adapted version with 4 components from the World Bank, Doing Business, Labour Market Regulation, Manufacturing Sector data for 2013

Table A1.2. Adapted labour market regulation Fraser index

Labour market regulation variables	Type	Component
Are fixed-term contracts prohibited for permanent tasks?	Binary Yes=1	1
What is the maximum cumulative duration of a fixed-term employment relationship (in months), including all renewals?	Continuous	1
Can the workweek for a single worker extend to 50 hours per week (including overtime) for 2 months each year to respond to a seasonal increase in production?	Binary Yes=1	2
Are there restrictions on night work?	Binary Yes=1	2
Are there restrictions on "weekly holiday" work?	Binary Yes=1	2
What is the maximum number of working days per week?	Continuous	2
Paid annual leave (working days) - 10 years	Continuous	2
Notice period for redundancy dismissal after 1 year of continuous	Continuous	3
Notice period for redundancy dismissal after 5 years of continuous	Continuous	3
Notice period for redundancy dismissal after 10 years of continuous employment	Continuous	3
Severance pay for redundancy dismissal after 1 year of continuous	Continuous	3
Severance pay for redundancy dismissal after 5 years of continuous employment	Continuous	3
Severance pay for redundancy dismissal after 10 years of continuous employment	Continuous	3
Is it legal for an employer to terminate the employment contract of a worker on the basis of redundancy?	Binary Yes=1	4
Must the employer notify a third party before dismissing one redundant worker?	Binary Yes=1	4
Does the employer need the approval of a third party in order to dismiss one redundant worker?	Binary Yes=1	4
Must the employer notify or consult a third party prior to a collective dismissal (9 workers)?	Binary Yes=1	4
Must the employer obtain prior approval from a third party before a collective dismissal (9 workers)?	Binary Yes=1	4
Is there a retraining or reassignment obligation before an employer can make a worker redundant?	Binary Yes=1	4
Are there priority rules that apply to redundancy dismissals or lay-offs?	Binary Yes=1	4
Are there priority rules applying to re-employment?	Binary Yes=1	4

Notes: Source: World Bank, Doing Business, Labour Market Regulation, DB06 – DB14, Manufacturing Sector historical data for 2013.
The original Fraser Institute methodology of calculating the Labour Market Regulation Fraser index consists of 6 sub-components: (i) Hiring regulations and Minimum Wages, (ii) Hiring and Firing, (iii) Collective Bargaining, (iv) Hours Regulations, (v) Mandated cost of worker dismissal, and (vi) Conscription. However, due to lack of data, 3 out of the originally proposed 6 components were included, which are: (i) hiring regulations, (ii) hours regulation, and (iii) mandated cost of worker dismissal. To compensate this deficiency of the rest of the components, the fourth component, (iv) mandated rules of worker dismissal, was adapted and included with normalized scores where higher scores signified higher strictness of regulation.

Table A1.3. Sample characteristics at country level, absolute and relative figures

	Men			Women		
Country	Employed	Unemployed	Total	Employed	Unemployed	Total
Albania	4,603 (82%)	1,042 (18%)	5,645 (61%)	2,965 (82%)	669 (18%)	3,634 (39%)
Austria	39,552 (95%)	2,087 (5%)	41,639 (51%)	37,348 (95%)	1,899 (5%)	39,247 (49%)
Belgium	17,253 (89%)	2,074 (11%)	19,327 (51%)	16,742 (91%)	1,699 (9%)	18,441 (49%)
Bulgaria	5,536 (85%)	1,006 (15%)	6,542 (51%)	5,458 (88%)	748 (12%)	6,206 (49%)
Switzerland	17,811 (95%)	924 (5%)	18,735 (51%)	17,210 (95%)	921 (5%)	18,131 (49%)
Czech Republic	7,867 (92%)	714 (8%)	8,581 (51%)	7,341 (89%)	877 (11%)	8,218 (49%)
Germany	100,933 (93%)	7,029 (7%)	107,962 (52%)	94,708 (94%)	5,637 (6%)	100,345 (48%)
Denmark	29,594 (93%)	2,356 (7%)	31,950 (49%)	31,552 (93%)	2,351 (7%)	33,903 (51%)
Estonia	5,092 (90%)	586 (10%)	5,678 (49%)	5,458 (92%)	483 (8%)	5,941 (51%)
Spain	15,196 (70%)	6,539 (30%)	21,735 (51%)	14,716 (70%)	6,300 (30%)	21,016 (49%)
Finland	9,438 (90%)	1,033 (10%)	10,471 (49%)	9,968 (92%)	859 (8%)	10,827 (51%)
France	79,401 (88%)	10,570 (12%)	89,971 (50%)	80,240 (89%)	9,891 (11%)	90,131 (50%)
Greece	23,964 (64%)	13,571 (36%)	37,535 (54%)	18,933 (59%)	13,351 (41%)	32,284 (41%)
Croatia	4,968 (78%)	1,363 (22%)	6,331 (53%)	4,457 (80%)	1,119 (20%)	5,576 (47%)
Hungary	43,287 (88%)	5,985 (12%)	49,272 (53%)	38,829 (88%)	5,151 (12%)	43,980 (47%)
Ireland	30,789 (80%)	7,588 (20%)	38,377 (50%)	33,724 (88%)	4,567 (12%)	38,291 (50%)
Italy	81,877 (84%)	15,115 (16%)	96,992 (53%)	71,629 (85%)	12,778 (15%)	84,407 (47%)
Latvia	11,133 (86%)	1,807 (14%)	12,940 (46%)	13,339 (89%)	1,729 (11%)	15,068 (54%)
Lithuania	6,501 (85%)	1,118 (15%)	7,619 (47%)	7,493 (88%)	1,000 (12%)	8,493 (53%)
Netherlands	18,608 (91%)	1,863 (9%)	20,471 (51%)	17,626 (91%)	1,775 (9%)	19,401 (49%)
Norway	5,859 (96%)	249 (4%)	6,108 (53%)	5,306 (96%)	193 (4%)	5,499 (47%)
Poland	58,743 (87%)	8,830 (13%)	67,573 (52%)	54,113 (86%)	8,471 (14%)	62,584 (48%)
Portugal	22,973 (78%)	6,420 (22%)	29,393 (49%)	25,303 (81%)	5,773 (19%)	31,076 (51%)
Romania	33,989 (89%)	4,032 (11%)	38,021 (56%)	27,562 (91%)	2,704 (9%)	30,266 (44%)
Sweden	72,684 (90%)	8,291 (10%)	80,975 (49%)	75,903 (92%)	6,971 (8%)	82,874 (51%)
Slovenia	17,430 (83%)	3,493 (17%)	20,923 (52%)	16,417 (85%)	2,979 (15%)	19,396 (48%)
United Kingdom	14,896 (91%)	1,521 (9%)	16,417 (49%)	15,819 (92%)	1,286 (8%)	17,105 (51%)

Note: The ‘employed’ and ‘unemployed’ percentages are in terms of within gender ‘total’ figure; the ‘total’ percentage is the share of the country level ‘total’ figure.

Appendix 2 – Scenario analysis

Table A2.1. Scenario One: Downturn (GDP per capita growth = -3.2)

	LMR Index		
Margins	Low: 0.16	Medium: 0.47	High: 0.75
Albania	.005*** (.000)	.002*** (.000)	.001*** (.000)
Austria	.142*** (.002)	.070*** (.000)	.035*** (.000)
Belgium	.140*** (.002)	.069*** (.000)	.035*** (.000)
Bulgaria	.007*** (.000)	.003*** (.000)	.001*** (.000)
Switzerland	.116*** (.002)	.056*** (.000)	.028*** (.000)
Czech Republic	.062*** (.001)	.028*** (.000)	.013*** (.000)
Germany	.128*** (.002)	.063*** (.000)	.031*** (.000)
Denmark	.183*** (.003)	.094*** (.001)	.048*** (.001)
Estonia	.020*** (.000)	.009*** (.000)	.003*** (.000)
Spain	.202*** (.003)	.105*** (.000)	.054*** (.001)
Finland	.161*** (.002)	.081*** (.001)	.041*** (.001)
France	.147*** (.002)	.073*** (.000)	.036*** (.000)
Greece	.219*** (.004)	.115*** (.000)	.059*** (.001)
Croatia	.068*** (.001)	.032*** (.000)	.015*** (.000)
Hungary	.070*** (.001)	.033*** (.000)	.016*** (.000)
Ireland	.084*** (.002)	.040*** (.000)	.019*** (.000)
Italy	.184*** (.003)	.095*** (.000)	.049*** (.001)
Latvia	.019*** (.000)	.008*** (.000)	.004*** (.000)
Lithuania	.025*** (.000)	.011*** (.000)	.005*** (.000)
Netherlands	.146*** (.002)	.073*** (.001)	.037*** (.001)
Norway	.137*** (.002)	.068*** (.000)	.034*** (.000)
Poland	.064*** (.001)	.030*** (.000)	.014*** (.000)
Portugal	.206*** (.003)	.108*** (.000)	.056*** (.001)
Romania	.006*** (.000)	.003*** (.000)	.001*** (.000)
Sweden	.146*** (.002)	.073*** (.000)	.037*** (.001)
Slovenia	.062*** (.001)	.028*** (.000)	.013*** (.000)
United Kingdom	.076*** (.001)	.035*** (.000)	.017*** (.000)

Notes: Standard errors in parentheses.
*, **, *** Significant at $p < 0.1, 0.05, 0.001$ respectively

Table A2.1. Scenario Two: Medium (Incremental) growth (GDP per capita growth= 0.47)

	LMR Index		
Margins	Low: 0.16	Medium: 0.47	High: 0.75
Albania (1)	.007*** (.000)	.005*** (.000)	.003*** (.000)
Austria (2)	.185*** (.000)	.137*** (.000)	.103*** (.000)
Belgium (3)	.183*** (.001)	.136*** (.000)	.102*** (.000)
Bulgaria (4)	.010*** (.000)	.007*** (.000)	.005*** (.000)
Switzerland (5)	.153*** (.000)	.112*** (.000)	.083*** (.000)
Czech Republic (6)	.084*** (.000)	.059*** (.000)	.043*** (.000)
Germany (7)	.168*** (.000)	.124*** (.000)	.093*** (.000)
Denmark (8)	.233*** (.001)	.177*** (.000)	.135*** (.000)
Estonia (9)	.028*** (.000)	.019*** (.000)	.014*** (.000)
Spain (10)	.257*** (.002)	.197*** (.001)	.150*** (.001)
Finland (11)	.208*** (.001)	.156*** (.000)	.118*** (.000)
France (12)	.191*** (.001)	.142*** (.000)	.106*** (.000)
Greece (13)	.277*** (.002)	.212*** (.001)	.163*** (.001)
Croatia (14)	.092*** (.000)	.066*** (.000)	.048*** (.000)
Hungary (15)	.095*** (.000)	.068*** (.000)	.049*** (.000)
Ireland (16)	.113*** (.000)	.081*** (.000)	.060*** (.000)
Italy (17)	.236*** (.001)	.179*** (.001)	.136*** (.001)
Lithuania (18)	.026*** (.000)	.018*** (.000)	.013*** (.000)
Latvia (19)	.035*** (.000)	.024*** (.000)	.017*** (.000)
Netherlands (20)	.189*** (.001)	.141*** (.000)	.106*** (.000)
Norway (21)	.178*** (.000)	.132*** (.000)	.099*** (.000)
Poland (22)	.087*** (.000)	.062*** (.000)	.045*** (.000)
Portugal (23)	.261*** (.002)	.200*** (.001)	.154*** (.001)
Romania (24)	.009*** (.000)	.006*** (.000)	.004*** (.000)
Sweden (25)	.189*** (.001)	.141*** (.000)	.106*** (.000)
Slovenia (26)	.084*** (.000)	.059*** (.000)	.043*** (.000)
United Kingdom (28)	.102*** (.000)	.073*** (.000)	. 053*** (.000)

Notes: Standard errors in parentheses.
*, **, *** Significant at $p < 0.1, 0.05, 0.001$ respectively

Table A2.3. Scenario Three: Upturn, fast growth (GDP per capita growth = 3.5)

	LMR Index		
Margins	Low: 0.16	Medium: 0.47	High: 0.75
Albania (1)	.010*** (.000)	.010*** (.000)	.009*** (.000)
Austria (2)	.227*** (.002)	.224*** (.001)	.221*** (.003)
Belgium (3)	.225*** (.002)	.221*** (.001)	.219*** (.003)
Bulgaria (4)	.014*** (.000)	.014*** (.000)	.013*** (.000)
Switzerland (5)	.190*** (.002)	.187*** (.001)	.185*** (.003)
Czech Republic (6)	.107*** (.001)	.105*** (.000)	.103*** (.002)
Germany (7)	.208*** (.002)	.205*** (.001)	.202*** (.003)
Denmark (8)	.281*** (.003)	.277*** (.001)	.274*** (.000)
Estonia (9)	.037*** (.000)	.036*** (.000)	.035*** (.000)
Spain (10)	.309*** (.004)	.305*** (.003)	.301*** (.005)
Finland (11)	.253*** (.003)	.249*** (.001)	.246*** (.003)
France (12)	.234*** (.002)	.231*** (.008)	.228*** (.003)
Greece (13)	.332*** (.004)	.327*** (.003)	.324*** (.005)
Croatia (14)	.117*** (.001)	.115*** (.001)	.114*** (.002)
Hungary (15)	.121*** (.000)	.119*** (.001)	.117*** (.002)
Ireland (16)	.142*** (.001)	.140*** (.001)	.138*** (.002)
Italy (17)	.284*** (.003)	.280*** (.003)	.277*** (.005)
Lithuania (18)	.034*** (.000)	.034*** (.000)	.033*** (.000)
Latvia (19)	.045*** (.000)	.044*** (.000)	.044*** (.001)
Netherlands (20)	.232*** (.003)	.228*** (.001)	.225*** (.003)
Norway (21)	.218*** (.002)	.132*** (.001)	.212*** (.003)
Poland (22)	.111*** (.001)	.109*** (.000)	.108*** (.002)
Portugal (23)	.312*** (.004)	.309*** (.003)	.305*** (.005)
Romania (24)	.012*** (.000)	.012*** (.000)	.012*** (.000)
Sweden (25)	.231*** (.003)	.228*** (.001)	.225*** (.003)
Slovenia (26)	.107*** (.001)	.106*** (.001)	.104*** (.002)
United Kingdom (28)	.129*** (.001)	.127*** (.001)	.125*** (.002)

Notes: Standard errors in parentheses.
*, **, *** Significant at $p < 0.1, 0.05, 0.001$

Appendix 3 – Country estimations

Table A3. 1. Ordered logit: Country estimates of the probability of being in (1) unemployment, (2) involuntary NSFE, (3) Voluntary NSFE, (4) SFE for men (coefficients and standard errors)

Variable	Albania	Austria	Belgium	Bulgaria	Switzerland	Czech Republic	Germany	Denmark	Estonia	Spain	Finland	France	Greece
Age 15 – 29	1.081	.275***	.450***	.751	.273***	.491***	.227***	.110***	.480***	.387***	.245***	.252***	.508***
	(.175)	(.010)	(.027)	(.120)	(.016)	(.055)	(.006)	(.006)	(.075)	(.025)	(.027)	(.006)	.028
Age 50 – 64	1.477**	.947	.586***	.785	.699***	.760**	.861***	.801***	.775	1.936***	.570***	1.073*	1.302***
	(.162)	(.043)	(.032)	(.104)	(.038)	(.081)	(.026)	(.048)	(.120)	(.123)	(.065)	(.033)	.076
Married	1.261	1.811***	1.294***	1.484**	1.994***	1.641***	1.944***	2.092***	1.410*	1.752***	1.561***	1.746***	1.528***
	(.206)	(.074)	(.072)	(.209)	(.108)	(.183)	(.056)	(.121)	(.222)	(.098)	(.169)	(.048)	.076
Secondary education	.162	.746	.671***	.103***	.915	.473***	.708***	.699**	.297**	.647***	.476**	.789***	.623***
	(.297)	(.163)	(.052)	(.027)	(.146)	(.064)	(.045)	(.083)	(.111)	(.053)	(.102)	(.039)	.036
Tertiary education	1.846***	.661***	1.084	1.241	.878*	1.706***	1.118**	1.059	.819	1.078	1.159	1.070*	1.185***
	(.273)	(.028)	(.064)	(.270)	(.047)	(.132)	(.037)	(.058)	(.133)	(.062)	(.139)	(.031)	.074
Supervisory responsibilities	1.723***	2.972***	2.161***	1.420	3.382***	2.169***	3.873***	4.595	2.576***	2.938***	2.710***	2.864***	2.579***
	(.187)	(.129)	(.140)	(.354)	(.181)	(.346)	(.139)	(.391)	(.545)	(.243)	(.360)	(.112)	.263
Low-skilled white collar	.331***	.858***	.764***	.631	1.016	.816	.794***	.478***	.914	.971	.790	.789***	.704***
	(.024)	(.037)	(.050)	(.160)	(.064)	(.120)	(.025)	(.478)	(.199)	(.069)	(.101)	(.027)	.050
High-skilled blue collar	.286**	1.157**	1.084	.401**	1.141	.751	1.107**	.967	.847	.953	1.031	.717***	.578***
	(.081)	(.050)	(.086)	(.107)	(.080)	(.109)	(.039)	(.068)	(.170)	(.077)	(.150)	(.025)	.049
Low-skilled blue collar	.132***	1.110*	.611***	.261***	1.435***	.443***	.649***	.452***	.747	.626***	.798	.471***	.485***
	(.004)	(.058)	(.044)	.065	.138	.061	.024	.026	.150	.048	.115	.015	.040
Mining & quarrying	4.571***	.608	.809	5.495*	2.265	1.814	1.776*	.1.41	2769681	2.153*	1.335	2.714***	3.570***
	(1.532)	(.198)	(.437)	(4.113)	(1.574)	(.927)	(.443)	(.652)	(2.3e+1)	(.724)	(.934)	(.754)	1.014
Manufacturing & construction	1.816**	.860	1.307	1.908***	2.805***	.831	1.198	1.736***	1.276	2.507***	1.095	1.668***	1.711***
	(.403)	(.132)	(.372)	(.350)	(.490)	(.187)	(.118)	(.193)	(289)	(.265)	(.321)	(.118)	.147
Producer services	7.285***	.892	1.291	5.105***	1.709**	1.955*	.882	1.895***	1.726	2.923***	.786	1.918***	3.234***
	(2.465)	(.146)	(.377)	(1.584)	(.329)	(.563)	(.093)	(.254)	(.518)	(.375)	(.247)	(.155)	.402
Consumer services	4.715***	.579***	.673	1.232	1.284	.474**	.570***	.770*	.629*	2.530***	.426**	1.078	1.881***
	(1.078)	(.089)	(.190)	(.227)	(.221)	(.110)	(.056)	(.084)	(.147)	(.268)	(.125)	(.076)	.169
Firm size 11 - 19 employees	4.222***	1.586***	1.259**	1.931***	1.418***	1.703**	1.299***	.909	2.645***	1.212*	1.179	1.163**	1.477***
	(.679)	(.077)	(.106)	(.352)	(.120)	(.275)	(.049)	(.056)	(.464)	(.098)	(.157)	(.058)	.106
Firm size 20 to 49 employees	7.203***	2.016	1.353***	3.483***	1.210**	1.649***	1.609***	1.097	2.477***	1.252**	.933	1.041	1.496***
	(1.744)	***	(.101)	(.798)	(.083)	(.227)	(.057)	(.062)	(.418)	(.091)	(.103)	(.044)	.115
		(.089)											

Firm size over 50 employees	4.993***	2.673***	1.438***	4.717***	1.536***	1.566***	2.090***	1.145**	2.975***	1.833***	1.287*	1.089**	1.855***
	(.914)	(.103)	(.089)	(.992)	(.091)	(.185)	(.061)	(.058)	(.488)	(.116)	(.137)	(.034)	.120
/cut1	.540	-4.036	-2.831	-2.519	-2.992	-2.858	-3.344	-4.533	-3.417	-.108	-3.051	-2.538	-1.440
	(.266)	(.163)	(.293)	(.330)	(.190)	(.280)	(.106)	(.130)	(.303)	(.130)	(.324)	(.078)	.116
/cut2	.774	-1.435	-1.823	-2.195	-.378	-2.506	-1.472	-1.904	-2.222	.087	-2.251	-1.631	-1.257
	(.266)	(.158)	(.292)	(.328)	(.184)	(.279)	(.104)	(.126)	(.293)	(.130)	(.322)	(.077)	.116
Pseudo R2	0.147	0.146	0.063	0.120	0.139	0.063	0.174	0.303	0.082	0.133	0.121	0.124	0.090
Number of observations	3574	39247	17186	5409	16399	7659	79049	23523	4892	13446	4849	74573	23667

Notes: robust standard errors in brackets

*, **, *** Significant at p < 0.1, 0.05, 0.001 respectively

Table A3. 1. (continued)

Variable	Croatia	Hungary	Ireland	Italy	Latvia	Lithuania	Netherlands	Norway	Poland	Portugal	Romania	Sweden	Slovakia	United Kingdom
Age 15 – 29	.308***	.674***	.516***	.339***	.722**	.558***	.331***	.239***	.440***	.348***	.448***	.345***	.503***	.471***
	(.033)	(.025)	(.026)	(.009)	(.088)	(.076)	(.018)	(.029)	(.011)	(.016)	(.048)	(.008)	(.043)	(.037)
Age 50 – 64	1.793***	.711***	.769***	1.320***	.707***	.597***	.861**	.539***	1.138***	1.438***	1.269*	.872***	.720***	.516***
	(.224)	(.024)	(.039)	(.034)	(.061)	(.072)	(.042)	(.070)	(.028)	(.068)	(.147)	(.022)	(.058)	(.038)
Married	1.422**	1.410***	1.342***	1.635***	1.841***	1.557 **	1.710***	1.954***	1.58***	1.747***	2.055***	1.272***	1.845***	1.347***
	(.157)	(.049)	(.064)	(.040)	(.216)	(.205)	(.089)	(.251)	(.040)	(.076)	(.219)	(.031)	(.154)	(.102)
Secondary education	2.119	.174***	.797**	.609***	.293**	.162***	.752**	.029**	.641***	.962	.280***	.627***	.240*	.319
	(.202)	(.025)	(.065)	(.025)	(.122)	(.081)	(.064)	(.029)	(.066)	(.042)	(.067)	(.040)	(.147)	(.189)
Tertiary education	.616**	1.807***	1.161**	.648***	1.416**	1.407*	.833***	.919	1.244***	.6178***	1.201	.769***	1.077	.919
	(.089)	(.116)	(.053)	(.023)	(.164)	(.234)	(.042)	(.111)	(.039)	(.036)	(.211)	(.020)	(.142)	(.064)
Supervisory responsibilities	2.090***	1.531***	3.974***	1.577***	2.484***	3.582	2.566***	2.986***	1.816***	1.877***	1.276	2.372***	1.890***	3.607***
	(.392)	(.092)	(.255)	(.042)	(.396)	(2.589)	(.127)	(.347)	(.062)	(.087)	(.281)	(.059)	(.336)	(.294)
Low-skilled white collar	.577***	.814**	.503***	.552***	1.310	1.119	.699***	.335***	.576***	.827**	.817	.426***	.925	.360***
	(.084)	(.050)	(.027)	(.018)	(.204)	(.230)	(.039)	(.042)	(.020)	(.047)	(.160)	(.012)	(.129)	(.028)
High-skilled blue collar	.609**	.405***	.885	.627***	1.06	.511***	.923	1.009	.630***	.701***	.383***	.882**	.339***	1.174
	(.099)	(.024)	(.059)	(.023)	(.143)	(.090)	(.065)	(.178)	(.023)	(.044)	(.072)	(.033)	(.051)	(.146)
Low-skilled blue collar	.456***	.154***	.475***	.342***	.698**	.362***	.680***	.538***	.489***	.624***	.480***	.501***	.075***	.309***
	(.071)	(.008)	(.028)	(.011)	(.090)	(.060)	(.045)	(.093)	(.017)	(.039)	(.090)	(.017)	(.010)	(.027)
Mining & quarrying	2.961	5.403***	1.014	13.73***	1.331	.394*	5.973	4.371**	3.182***	1.558*	5595513	1.172	1.743	1.549
	(1.704)	(1.982)	(.256)	(3.047)	(.649)	(.175)	(6.177)	(2.047)	(.296)	(.309)	(2.3e+0)	(.206)	(.778)	(1.056)
Manufacturing & construction	1.716*	1.235***	.787*	7.763***	1.510**	.945	1.058	2.937**	.984	1.744***	3.074***	1.851***	1.132	.976
	(.362)	(.064)	(.091)	(.351)	(.188)	(.169)	(.177)	(.924)	(.053)	(.133)	(.377)	(.145)	(.164)	(.334)
Producer services	1.088*	3.779***	1.350*	7.048***	3.415***	1.064	.618**	2.787***	1.690***	2.174***	3.610***	1.211*	4.035***	.789
	(.253)	(.305)	(.186)	(.398)	(.587)	(.238)	(.109)	(1.000)	(.103)	(.221)	(.650)	(.101)	(.828)	(.277)
Consumer services	1.743*	.354***	.554***	3.688***	1.027	.351***	.667*	1.219	1.032	1.547***	3.383***	.738***	.233***	.338***
	(.383)	(.018)	(.063)	(.167)	(.126)	(.061)	(.110)	(.386)	(.057)	(.120)	(.479)	(.057)	(.034)	(.114)
Firm size 11 - 19 employees	1.053	1.187***	1.584***	1.213***	1.920***	2.081***	.739	1.375*	1.204***	1.123	2.501***	1.162***	1.244***	1.079
	(.165)	(.056)	(.101)	(.035)	(.235)	(.296)	(.420)	(.216)	(.042)	(.072)	(.349)	(.042)	(.122)	(.116)
Firm size 20 to 49 employees	1.101	1.176***	2.107***	1.537***	2.692***	2.883***	.818	1.131	1.307***	1.201**	3.211***	1.260***	1.173*	1.516***
	(.171)	(.052)	(.116)	(.048)	(.318)	(.456)	(.464)	(.155)	(.044)	(.073)	(.482)	(.039)	(.117)	(.132)
Firm size over 50 employees	1.206	1.644***	2.858***	2.114***	3.98***	3.736***	1.047	1.230	1.645***	1.199***	3.017***	1.553***	1.882	1.936***
	(.152)	(.066)	(.128)	(.060)	(.397)	(.620)	(.592)	(.154)	(.047)	(.055)	(.386)	(.043)	(.188)	(.143)

/cut1	-2.511	-3.054	-2.224	-.454	-1.833	-3.433	-3.355	-3.439	-1.384	-1.060	-2.497	-2.625	4.012	-3.811
	(.273)	(.081)	(.128)	(.056)	(.191)	(.254)	(.588)	(.354)	(.067)	(.097)	(.238)	(.082)	(.209)	(.349)
/cut2	-1.677	-2.622	-1.696	-.060	-1.000	-2.835	-1.455	-1.814	-.783	-.821	-2.298	-1.655	4.273	-2.849
	(.270)	(.080)	(.127)	(.056)	(.189)	(.251)	(.587)	(.347)	(.066)	(.097)	(.237)	(.082)	(.210)	(.348)
Pseudo R2	0.103	0.125	0.120	0.130	0.096	0.081	0.114	0.189	0.087	0.101	0.093	0.118	0.173	0.145
Number of observations	4810	43048	25844	80800	10805	6180	15919	5505	57945	22664	33921	69554	17282	13839

Notes: robust standard errors in brackets
*, **, *** Significant at $p < 0.1, 0.05, 0.001$ respectively

Table A3. 2. Ordered logit: Country estimates of the probability of being in (1) unemployment, (2) involuntary NSFE, (3) Voluntary NSFE, (4) SFE for women (coefficients and standard errors)

Variable	Albania	Austria	Belgium	Bulgaria	Switzerland	Czech Republic	Germany	Denmark	Estonia	Spain	Finland	France	Greece
Age 15 – 29	.494***	1.010	.706***	.603*	.912	.451***	.679***	.281***	.372***	.367***	.299***	.428***	.539***
	(.091)	(.031)	(.033)	(.117)	(.048)	(.049)	(.016)	(.012)	(.046)	(.022)	(.027)	(.009)	(.030)
Age 50 – 64	1.585**	1.320***	.917*	.704*	.894**	1.048	1.198***	1.030	.679***	2.064***	1.324***	1.262***	1.539 ***
	(.239)	(.035)	(.033)	(.096)	(.035)	(.086)	(.020)	(.035)	(.070)	(.098)	(.102)	(.023)	(.087)
Married	.955	.456***	.688***	1.953***	.361***	1.291*	.398***	.992	1.098	.971	1.006	.808***	1.249***
	(.188)	(.012)	(.026)	(.344)	(.015)	(.135)	(.008)	(.040)	(.124)	(.046)	(.082)	(.014)	(.063)
Secondary education	.552***	1.019	.953	.097***	1.264	.752***	1.256***	.799	.386	.904	.852	.965	.690***
	(.012)	(.165)	(.069)	(.032)	(.174)	(.033)	(.075)	(.097)	(.208)	(.070)	(.166)	(.033)	(.046)
Tertiary education	2.484***	1.136***	1.390***	2.113***	1.130***	1.589***	1.245***	1.051	.961	1.085	1.172*	1.101***	1.277***
	(.413)	(.035)	(.055)	(.443)	(.046)	(.066)	(.024)	(.038)	(.098)	(.052)	(.094)	(.021)	(.068)
Supervisory responsibilities	.785	2.692***	1.971***	1.126	2.273***	1.970***	2.391***	2.856***	1.938***	2.944***	2.346***	2.022***	1.905***
	(.184)	(.083)	(.092)	(.269)	(.091)	(.273)	(.049)	(.168)	(.272)	(.221)	(.264)	(.055)	(.197)
Low-skilled white collar	.633***	.723***	.781***	.778	.888**	.770**	.693***	.565***	.970	.752***	.838*	.790***	.620***
	(.022)	(.018)	(.032)	(.168)	(.035)	(.073)	(.012)	(.020)	(.111)	(.039)	(.067)	(.015)	(.035)
High-skilled blue collar	.328***	1.035	.800	.249***	1.465***	.514***	.819***	1.108	.638	.631**	.986	.627***	.460***
	(.044)	(.070)	(.115)	(.085)	(.131)	(.096)	(.036)	(.156)	(.166)	(.089)	(.246)	(.037)	(.068)
Low-skilled blue collar	.226***	.602***	.472***	.125***	.695	.244***	.409***	.537***	.367***	.317***	.603***	.308***	.190***
	(.055)	(.021)	(.025)	(.028)	(.057)	(.028)	(.010)	(.026)	(.049)	(.021)	(.069)	(.007)	(.013)
Mining & quarrying	1.653	.692	.988	1096512	1.273	1.417	1.423	3200770	.662	2.819	119376.6	3.876**	1135508
	(1.146)	(.308)	(.708)	(5.2e+08)	(1.315)	(.979)	(.477)	(2.4e+09)	(.782)	(3.156)	(5.9e+07)	(1.714)	(7.9e+0)
Manufacturing & construction	5.424***	1.388*	1.701	11.24***	2.209***	1.509	1.167	1.454*	1.376	2.497***	2.836**	3.170***	1.444*
	(2.262)	(.202)	(.566)	(3.859)	(.389)	(.412)	(.118)	(.250)	(.388)	(.453)	(.959)	(.265)	(.222)
Producer services	8.196***	1.313	1.721	.954	1.288	.881	.892	1.247	.522	1.917**	2.065	2.663***	.972
	(4.644)	(.210)	(.596)	(.466)	(.253)	(.280)	(.098)	(.243)	(.174)	(.419)	(.800)	(.249)	(.206)
Consumer services	6.039***	.860	.985	.817	1.110	.706	.591***	.675*	.615	1.555*	1.424	1.464***	.591***
	(2.491)	(.124)	(.324)	(.265)	(.188)	(.192)	(.059)	(.113)	(.170)	(.270)	(.472)	(.119)	(.085)
Firm size 11 - 19 employees	2.911***	1.362***	1.215**	1.498*	1.204**	1.295*	1.221***	.953	1.559***	1.474***	1.212*	1.280***	1.669***
	(.675)	(.045)	(.071)	(.297)	(.077)	(.149)	(.029)	(.044)	(.193)	(.101)	(.116)	(.044)	(.108)
Firm size 20 to 49 employees	5.123***	1.814***	1.182**	1.868**	1.272***	1.481***	1.468***	.999	1.798***	2.053***	1.082	1.295***	1.729***
	(1.491)	(.057)	(.060)	(.417)	(.069)	(.158)	(.034)	(.042)	(.220)	(.124)	(.088)	(.039)	(.126)

Firm size over 50 employees	2.614*** (.526)	2.173*** (.058)	1.368*** (.058)	2.171*** (.441)	1.750*** (.076)	1.564*** (.151)	1.955*** (.036)	1.344*** (.051)	2.639*** (.317)	1.995*** (.096)	1.361*** (.113)	1.408*** (.028)	1.792*** (.112)
/cut1	.301 .445	-3.095 .148	-2.359 .333	-2.961 .429	-3.130 .180	-2.613 .305	-3.249 .103	-3.284 .177	-3.996 .317	-.378 .188	-1.485 .347	-1.430 .085	-2.125 .161
/cut2	.515 .445	.118 .147	-.014 .332	-2.493 .427	.774 .177	-2.021 .304	-.492 .102	-.943 .175	-2.201 .307	.144 .188	-.417 .346	-.149 .085	-1.926 .161
Pseudo R2	0.092	0.070	0.048	0.185	0.072	0.057	0.076	0.117	0.062	0.102	0.078	0.059	0.097
Number of observations	2460	37119	16686	5363	15179	7173	74337	25360	5228	13357	5287	76151	18743

Notes: robust standard errors in brackets
*, **, *** Significant at p < 0.1, 0.05, 0.001 respectively

Table A3. 2. (continued)

Variable	Croatia	Hungary	Ireland	Italy	Latvia	Lithuania	Netherlands	Norway	Poland	Portugal	Romania	Sweden	Slovakia	United Kingdom
Age 15 – 29	.340*** (.041)	.540*** (.023)	.717*** (.027)	.474*** (.012)	.693*** (.071)	.714*** (.087)	.588*** (.034)	.639*** (.059)	.336*** (.009)	.298*** (.013)	.424*** (.055)	.454*** (.009)	.492*** (.045)	1.189** (.061)
Age 50 – 64	2.365*** (.310)	1.148*** (.037)	.900** (.029)	2.036*** (.038)	.768*** (050)	.661*** (.057)	1.150** (.047)	.993 (.075)	1.418*** (.036)	1.444*** (.056)	.794 (.099)	1.226*** (.021)	.803** (.054)	1.116** (.046)
Married	1.424** (.170)	1.157*** (.046)	.735*** (.024)	.823*** (.016)	1.246*** (.121)	1.175 (.122)	.580*** (.027)	1.014 (.083)	1.311*** (.035)	1.604*** (.065)	1.619*** (.207)	.895 (.015)	1.652*** (.140)	.649*** (.029)
Secondary education	.514 (.280)	.116*** (.022)	.808** (.055)	.636*** (.028)	.505 (.575)	.450 (1.011)	1.245* (.123)	2.799 (3.263)	1.006 (.228)	.935 (.039)	.241*** (.081)	.926 (.058)	.055*** (.041)	.599 (.264)
Tertiary education	.471*** (.064)	1.340*** (.060)	1.537*** (.045)	.931** (.020)	1.640*** (.132)	1.175 (.122)	1.250*** (.055)	1.051 (.089)	1.244*** (.034)	.530*** (.028)	.773 (.124)	.967 (.018)	.914 (.094)	1.043 (.041)
Supervisory responsibilities	2.044** (.450)	1.554*** (.095)	2.457*** (.087)	1.288*** (.026)	2.302*** (.290)	1.787 (.763)	2.653*** (.125)	2.086*** (.163)	1.601*** (.057)	1.813*** (.083)	2.611** (.953)	1.707*** (.030)	3.528*** (.746)	2.366*** (.099)
Low-skilled white collar	.404*** (.056)	.583*** (.024)	.532*** (.017)	.554*** (.011)	1.023 (.089)	1.046 (.118)	.607*** (.027)	.344*** (.029)	.511*** (.014)	.579*** (.031)	.545*** (.089)	.435*** (.008)	.488*** (.049)	.479 (.020)
High-skilled blue collar	.230*** (.072)	.287*** (.021)	.629*** (.075)	.525*** (.026)	.845 (.124)	.733 (.147)	.791 (.139)	.617 (.184)	.353*** (.018)	.301*** (.029)	.150*** (.036)	.649*** (.041)	.138*** (.024)	1.358*** (.290)
Low-skilled blue collar	.168*** (.028)	.1481*** (.006)	.369*** (.019)	.244*** (.006)	.442*** (.043)	.289*** (.035)	.475*** (.038)	.288*** (.040)	.262*** (.009)	.217*** (.013)	.110*** (.019)	.415*** (.013)	.059*** (.006)	.245 (.015)
Mining & quarrying	2.045 (1.805)	1308270 (6.9e+0)	.791 (.442)	5.169*** (1.744)	1.643 (1.765)	1.212 (.829)	.404 (.400)	1.632 (.973)	2.509*** (.628)	1.216 (.759)	7821746 (6.9e+0)	5.674*** (2.778)	288265 (2e+08)	.804* (.375)
Manufacturing & construction	2.973*** (.905)	2.799*** (.215)	1.279 (.229)	7.257*** (.533)	2.946*** (.482)	2.070*** (.422)	1.442 (.361)	.882 (.397)	.968 (.081)	3.171 (.348)	26.99*** (5.478)	2.175*** (.239)	1.459 (.319)	1.787* (.484)
Producer services	9.123*** (5.059)	1.732*** (.187)	.997 (.198)	7.458*** (.680)	.790 (.152)	.974 (.238)	1.294 (.350)	.662 (.320)	1.552*** (.159)	1.712** (.291)	7.910*** (2.903)	1.658*** (.197)	2.783** (1.084)	1.566 (.451)
Consumer services	1.958* (.578)	1.027 (.076)	.640* (.112)	3.351*** (.240)	1.607** (.254)	1.206 (.213)	.876 (.212)	.340* (.149)	1.130 (.094)	1.636*** (.172)	5.585*** (1.059)	.917 (.098)	.457*** (.099)	.750 (.197)
Firm size 11 - 19 employees	.854 (.133)	1.20*** (.053)	1.797*** (.077)	1.370*** (.032)	2.069** (.228)	2.098*** (.233)	.806 (.285)	1.371** (.142)	1.354*** (.046)	1.762*** (.104)	2.153*** (.306)	1.190*** (.031)	1.368*** (.121)	1.478*** (.098)
Firm size 20 to 49 employees	.941 (.146)	1.299*** (.055)	1.923*** (.070)	1.798*** (.043)	2.915* (.277)	3.165*** (.392)	.900 (.317)	1.197 (.112)	1.799*** (.058)	2.295*** (.121)	2.247*** (.354)	1.306*** (.029)	1.644*** (.150)	1.550*** (.081)
Firm size over 50 employees	1.242 (.159)	1.838*** (.074)	2.456*** (.075)	2.379*** (.050)	4.286*** (.329)	3.194*** (.388)	1.108 (.389)	1.512*** (.132)	2.245*** (.065)	2.060*** (.083)	3.455*** (.515)	1.631*** (.034)	1.868*** (.170)	2.128*** (.097)

/cut1	-2.486 (.349)	-2.223 (.092)	-2.136 (.181)	.024 (.076)	-1.371 (.201)	-2.203 (.219)	-2.928 (.430)	-3.601 (.454)	-1.363 (.091)	-1.024 (.123)	-2.554 (.276)	-1.860 (.110)	-4.112 (.254)	-2.858 (.270)
/cut2	-1.650 (.347)	-1.643 (.091)	-.765 (.180)	.838 (.076)	-.437 (.199)	-1.577 (.217)	1.016 (.429)	-1.773 (.452)	-.643 (.091)	-.701 (.123)	-2.228 (.275)	-.363 (.110)	-3.574 (.252)	-.394 (.269)
Pseudo R2	0.113	0.097	0.094	0.098	0.079	0.062	0.052	0.100	0.110	0.122	0.132	0.073	0.143	0.088
Number of observations	4350	38621	29471	71053	13112	7169	15435	4772	53638	24999	27531	72938	16289	14900

Notes: robust standard errors in brackets
*, **, *** Significant at p < 0.1, 0.05, 0.001 respectively

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