

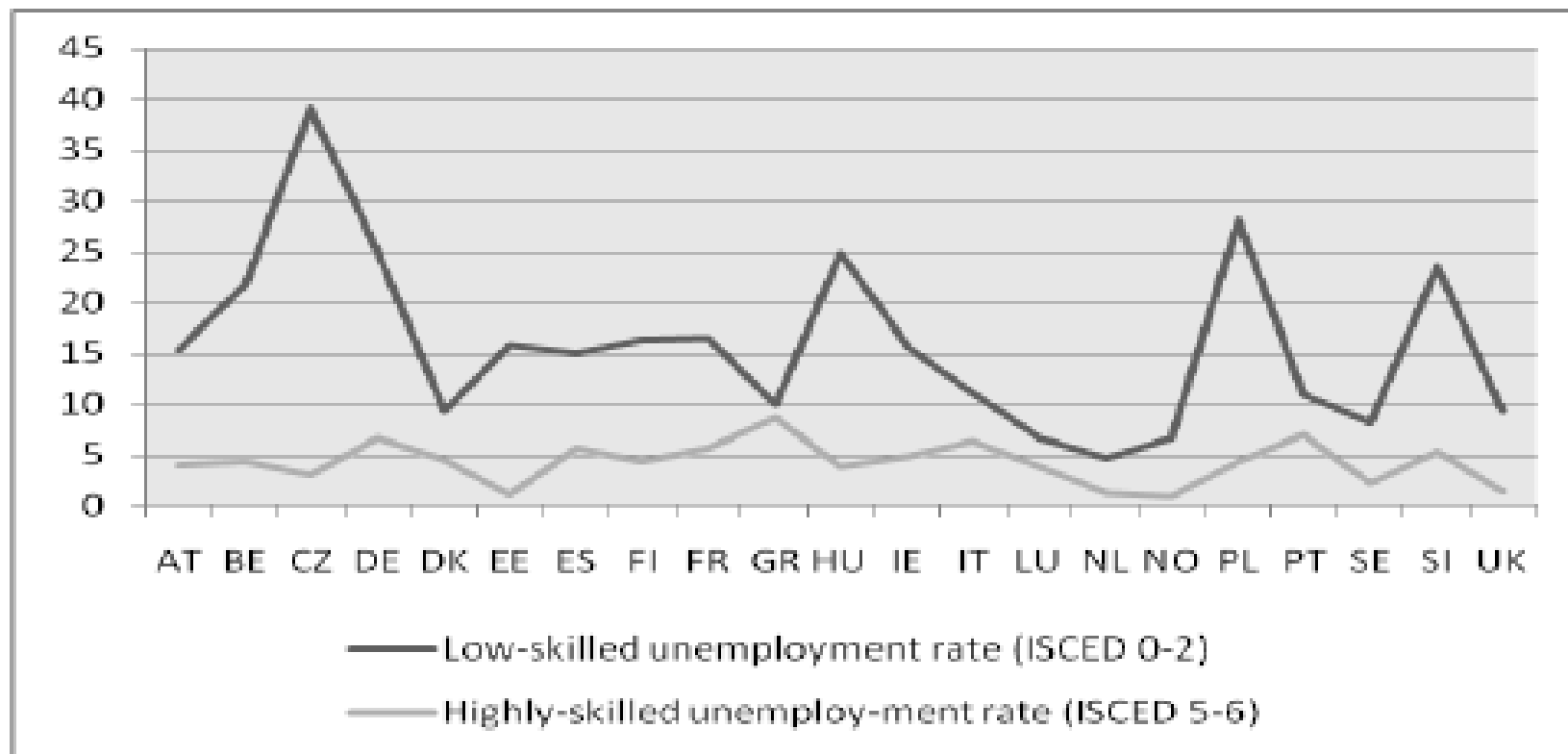
Unemployment Risks for Low- and Highly-Skilled Individuals and the Role of Employment Protection Legislation

Jenny Bennett
University of Cologne
GK SOCLIFE

Unemployment risks



Figure 1: Unemployment rates of the low- and highly-skilled



Source: EU-SILC 2007

Employment Protection Legislation



Dimensions:

Dismissal rules for regular employment

Restrictions on the use of temporary employment

Additional rules for collective dismissal

“restrictions on the employers ability to hire and fire at will”
(OECD 2004)



| Aspects | Consequences | Particularly affected skill-group |
|--------------------------|--------------------------------|-----------------------------------|
| High labour costs | Decrease the number of hirings | Both groups |
| Productivity beneficials | Increase the number of hirings | Highly-skilled |
| High separation costs | Increase the number of firings | Low-skilled |

Technological progress and security demands



Economical requirements:

Higher need for numerical flexibility in countries with high innovation performance for the low-skilled compared to less developed countries

Higher need for stable job relations in high developed countries for the highly-skilled compared to countries with low technological progress

Hypotheses

H1: For the highly-skilled, it is more likely that the unemployment risks due to strict EPL are lower the more innovative a country is and vice versa.

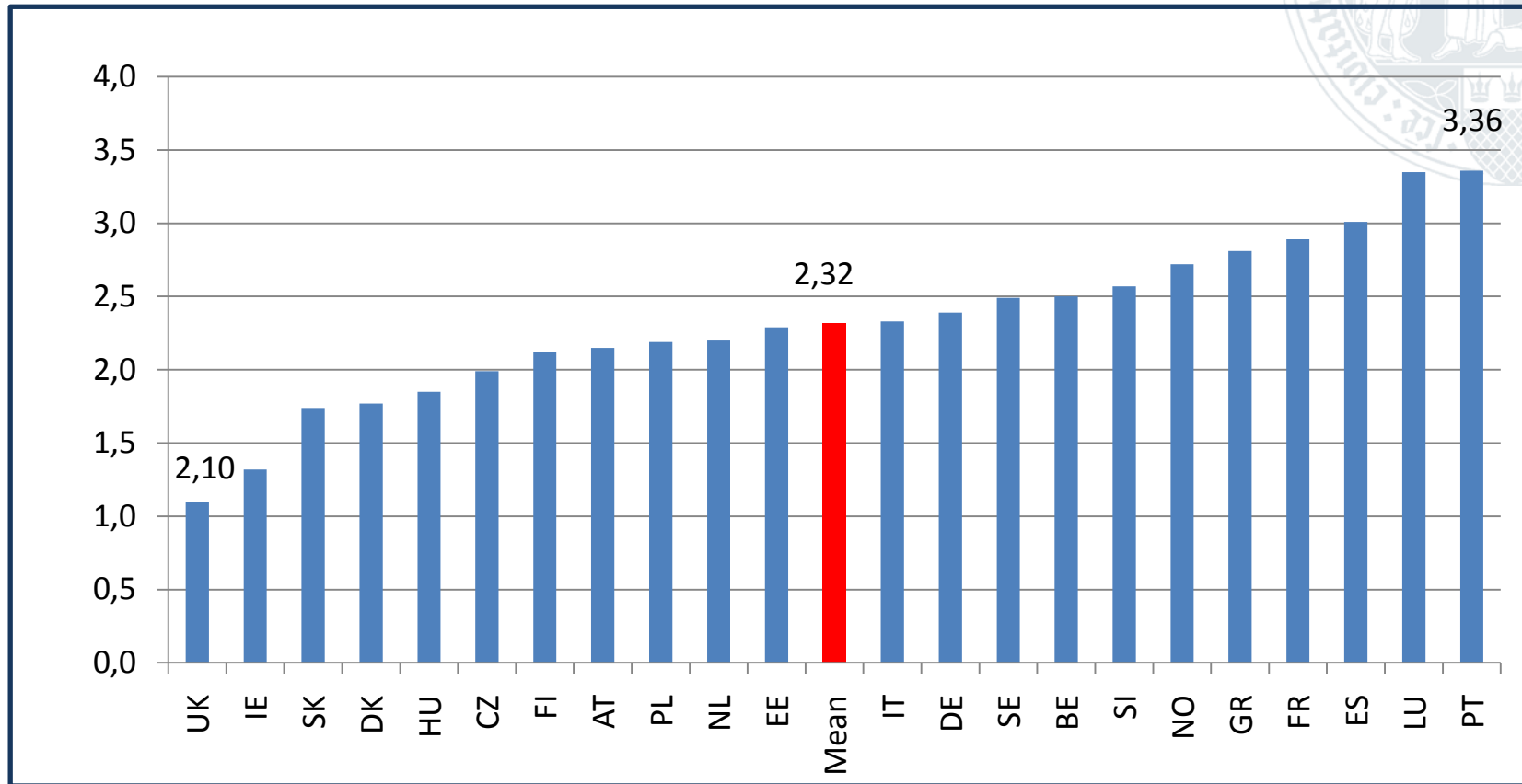
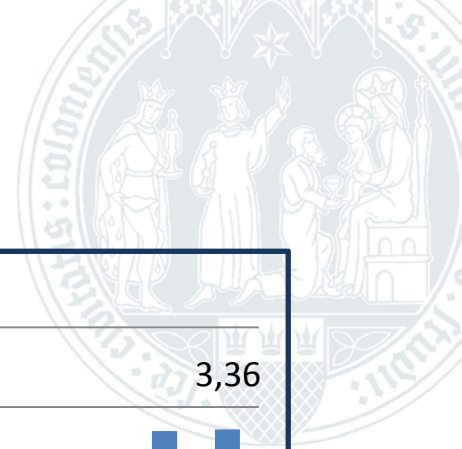
H2: For the low-skilled, it is more likely that strict EPL is related with higher unemployment risks the greater the innovative potential of the country is and vice versa.



Data and Method

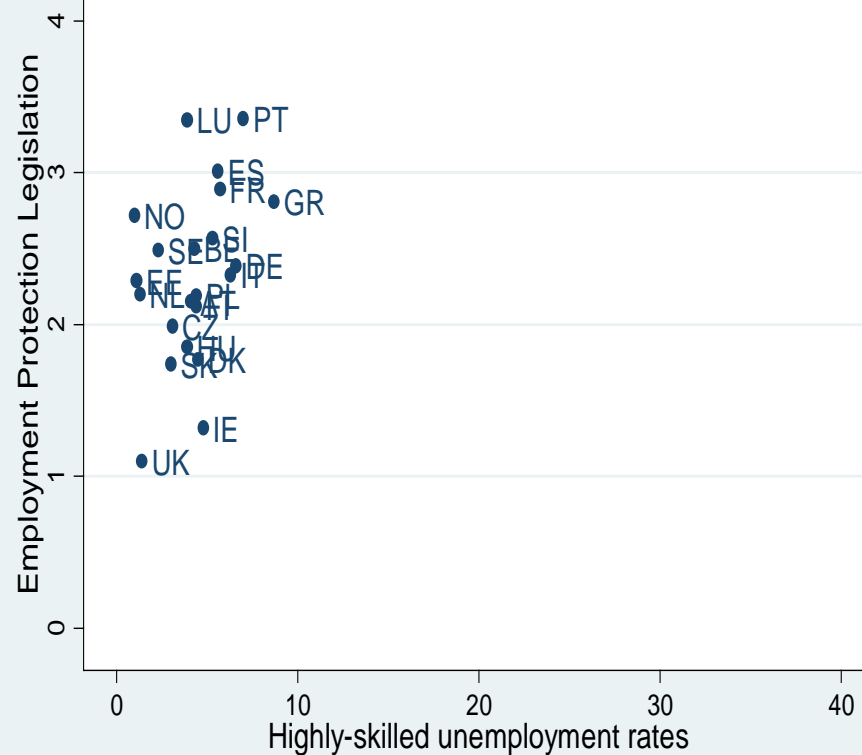
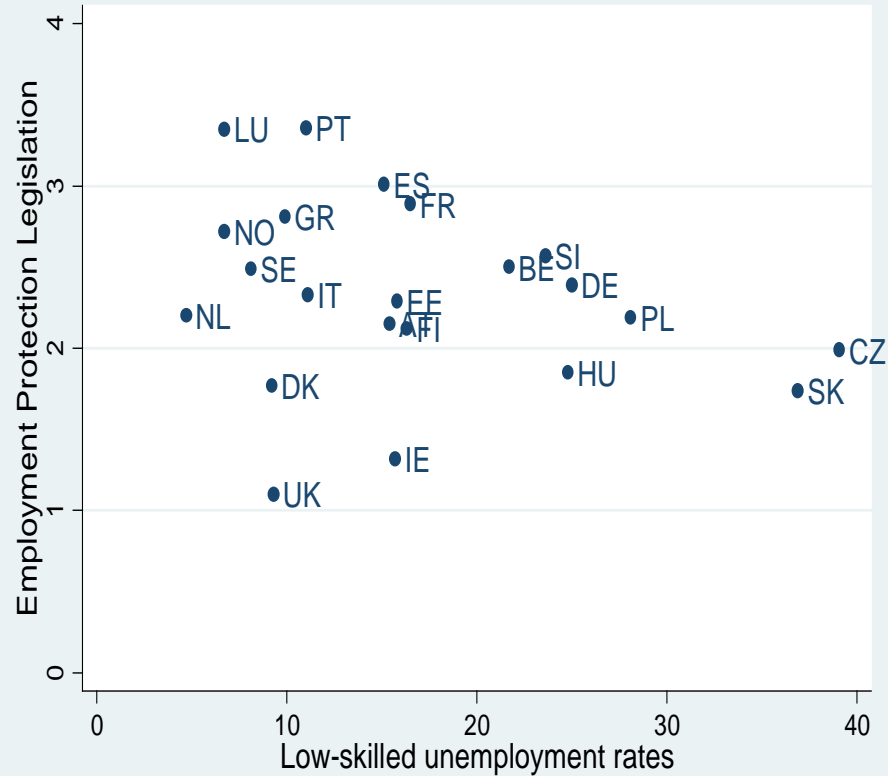
| | |
|------------------------------|--|
| Data | EU-SILC, wave 2007 |
| Population | 21 European countries, active labour force |
| Method | Logistic multi level regression- separately for low- and highly-skilled individuals |
| Dependent variable | Self-defined employment status: unemployed [0/1] |
| Macro-level variables | EPL (OECD) [0-6] Innovation performance SII (European Commission) [0-10] ALMP (Eurostat) Bargaining coverage (Eurostat) Unemployment Benefits (Eurostat) |
| Control variables | Age, gender, country of birth |

Employment Protection Legislation



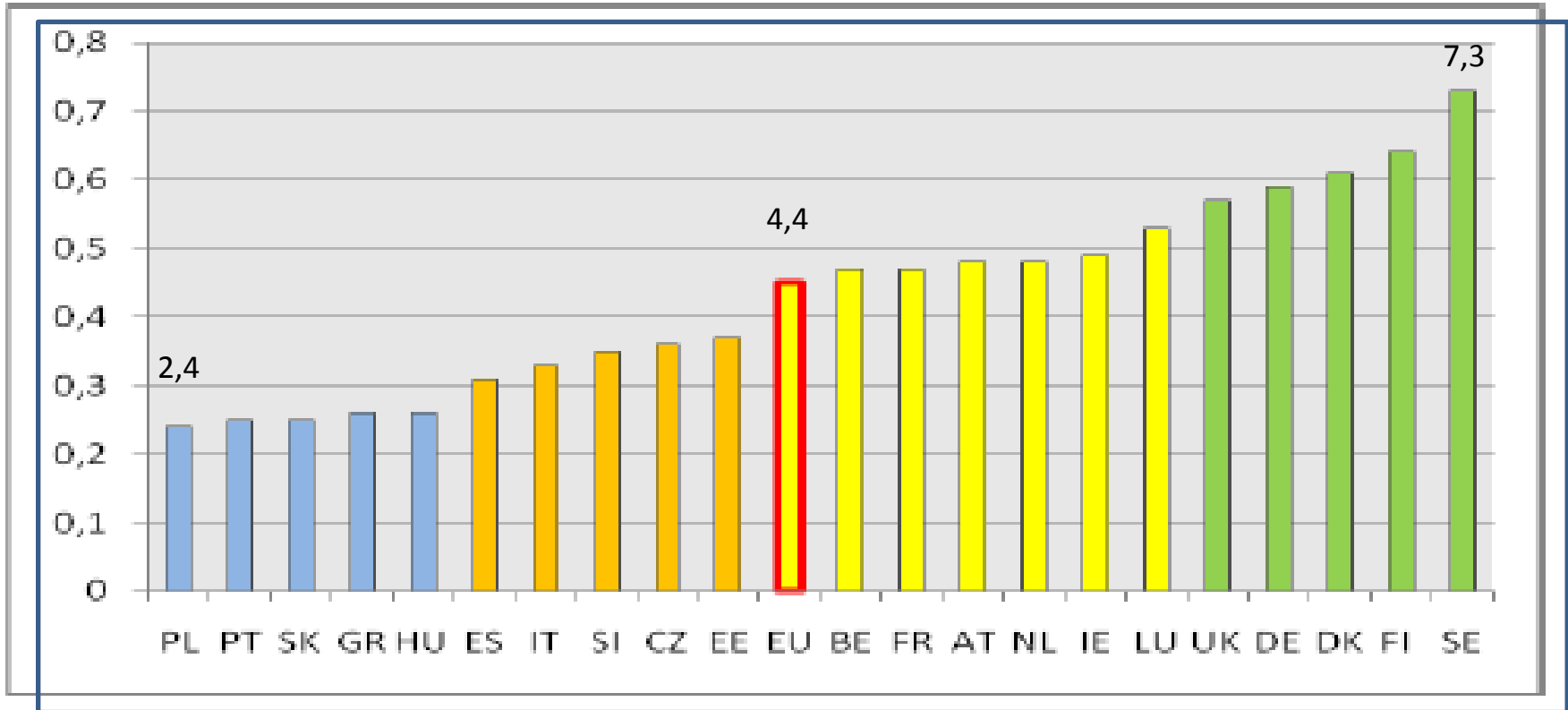
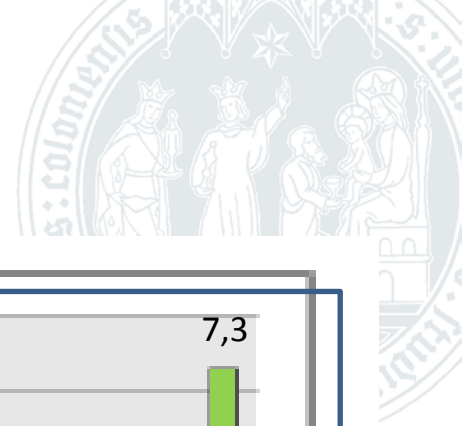
Source: OECD 2007

EPL and Unemployment rates



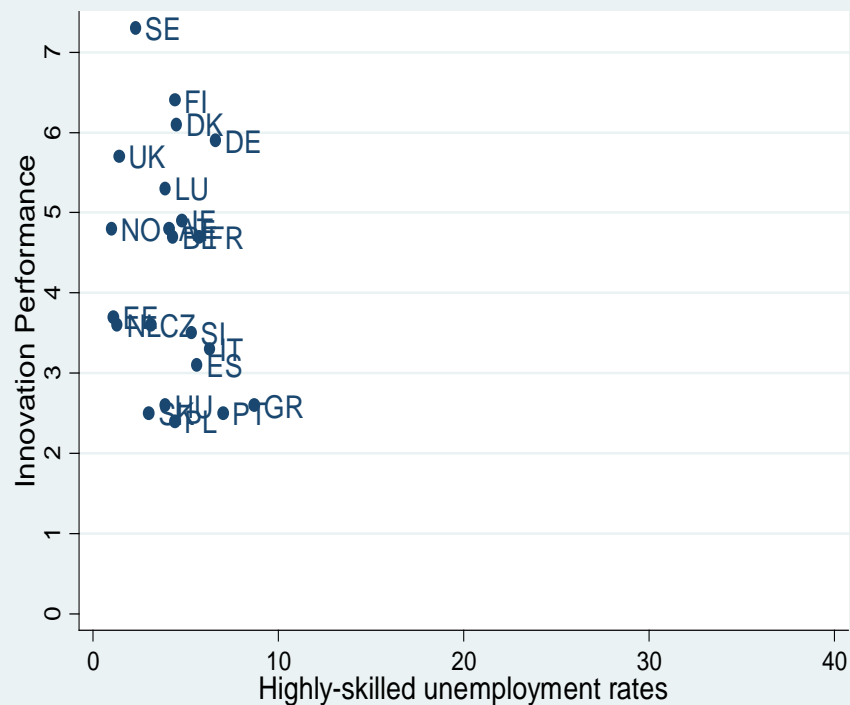
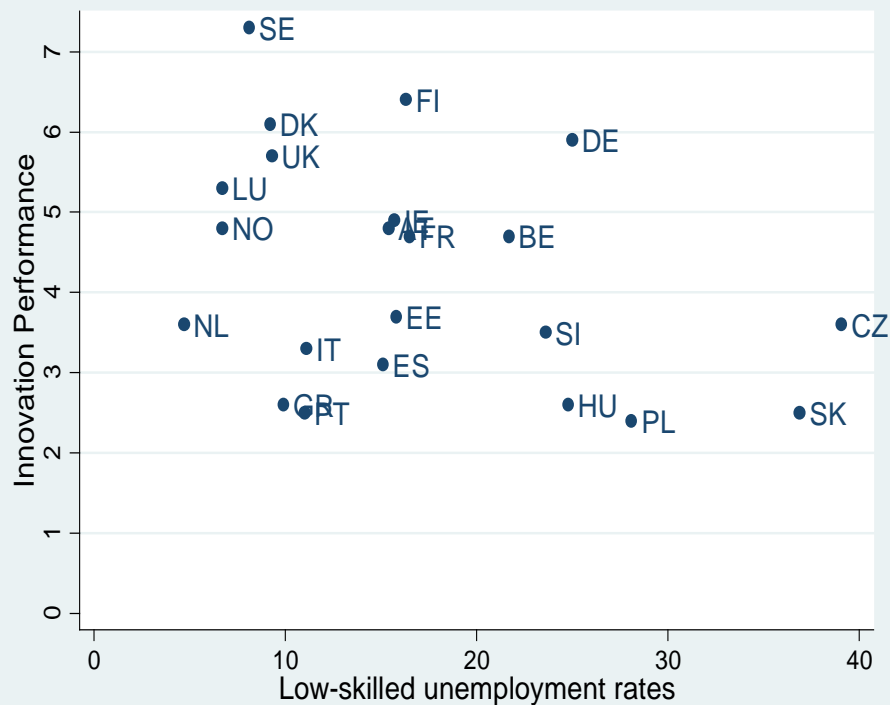
Source: EU-SILC 2007, OECD 2007

Innovation Performance



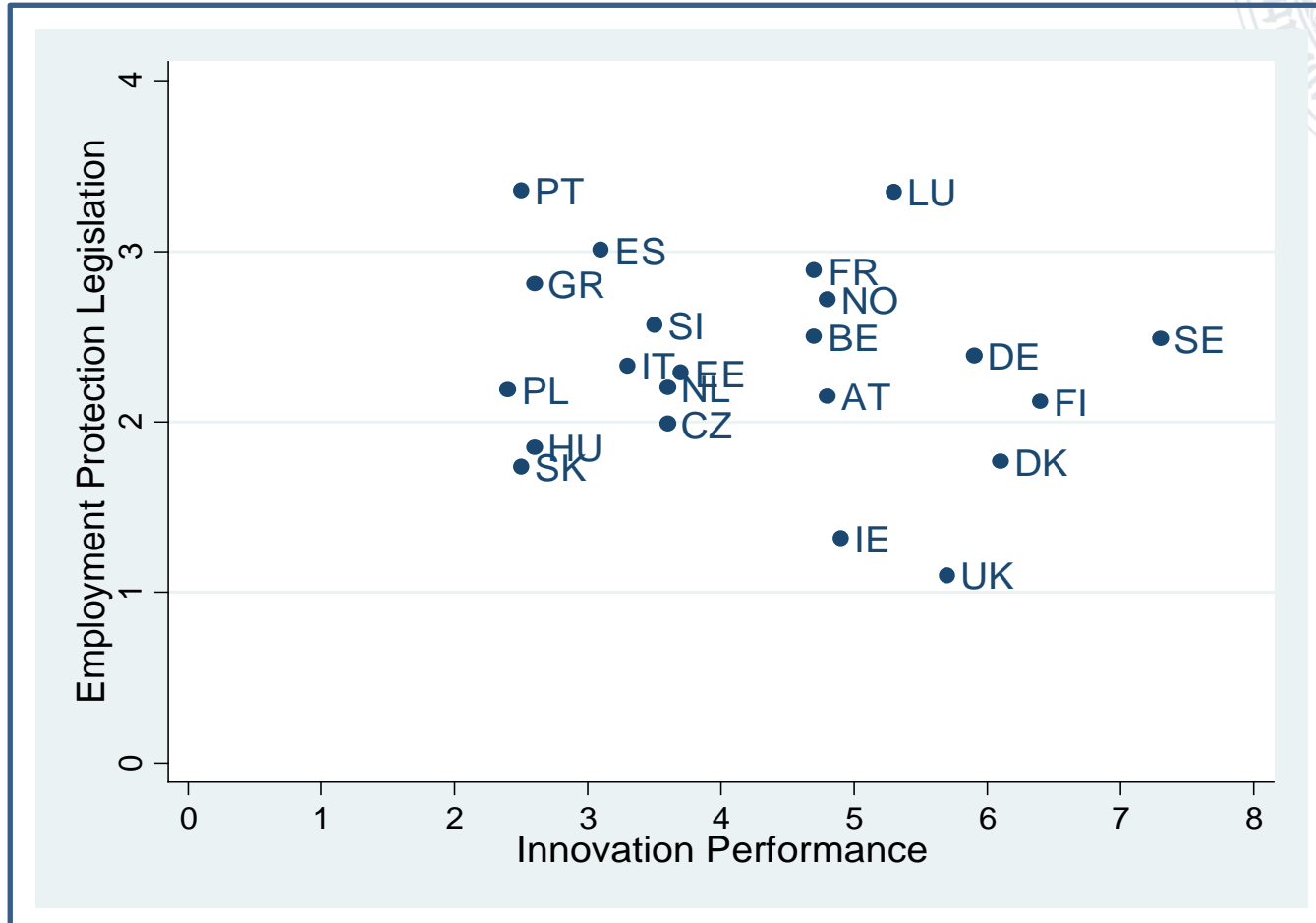
Source: based on PRO INNO 2008, p.7

Innovation Performance and Unemployment Rates



Source: EU-SILC 2007, Pro Inno 2008

EPL and Innovation Performance



Source: OECD 2007, Pro Inno 2008

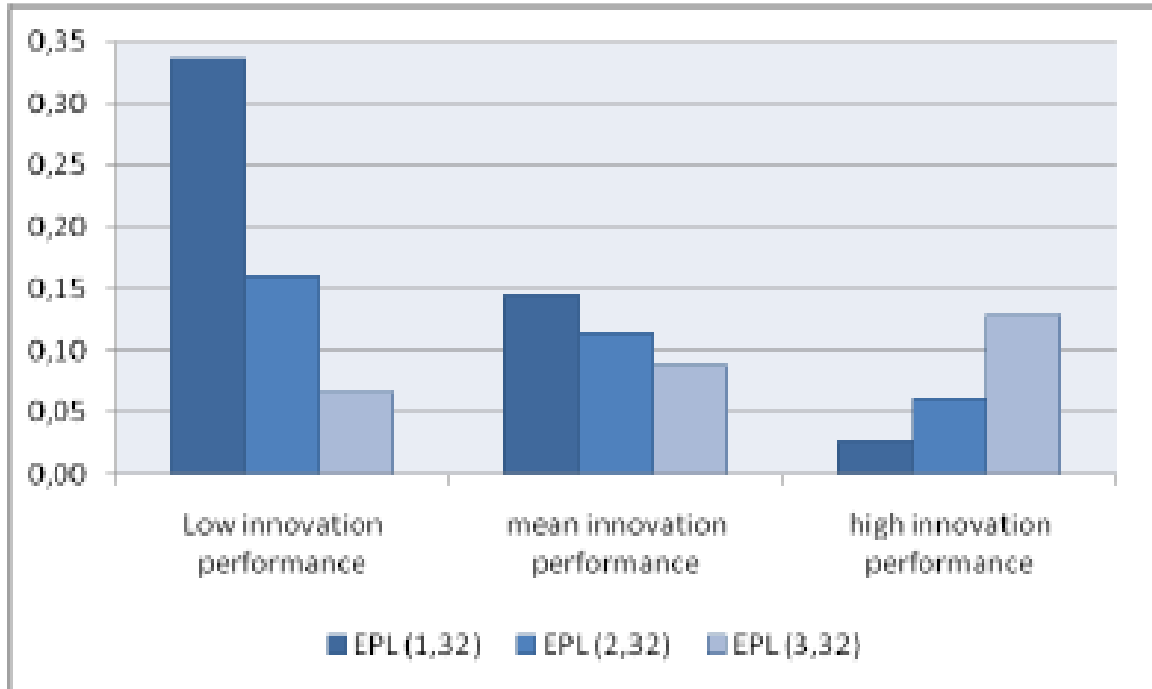
MLA: Low-skilled unemployment risks



| | Model 1: Lowest innovation performance | | | Model 2: Mean innovation performance | | | Model 3: Highest innovation performance | | |
|---------------------|--|-----|-------|--------------------------------------|-----|-------|---|-----|-------|
| | b | | S.E. | b | | S.E. | b | | S.E. |
| Intercept | -1.653 | *** | 0.145 | -2.052 | *** | 0.132 | -2.747 | *** | 0.251 |
| EPL | -0.973 | *** | 0.242 | -0.285 | * | 0.147 | 0.829 | *** | 0.265 |
| Innovation | -0.213 | *** | 0.06 | -0.213 | *** | 0.06 | -0.213 | *** | 0.06 |
| EPL*Innovation | 0.368 | *** | 0.085 | 0.368 | *** | 0.085 | 0.368 | *** | 0.085 |
| Variance components | 0.327 | *** | | 0.327 | *** | | 0.327 | *** | |
| N | 46605 | | | 46605 | | | 46605 | | |
| N | 21 | | | 21 | | | 21 | | |
| Macro Iterations | 2 | | | 2 | | | 2 | | |
| degrees of freedom | 17 | | | 17 | | | 17 | | |

*Dependent variable: unemployed: yes/no, each country has an equal weight, Population average model with robust standard errors, controlled for age, gender and country of birth, reference: male, aged 30-49 years, born in the country of residence, * significant at 10 percent-level, ** significant at 5 percent level, *** significant at 1 percent level*

MLA: Predicted probabilities (low-skilled)



Low innovation performance = 2.4, mean innovation performance = 4.4, high innovation performance = 7.3, source: own calculation

MLA: Labour market institutions (low-skilled)

Labour market institutions: unemployment benefits, active labour market policies, bargaining coverage

- Coefficients for EPL and its interaction with the innovation variable remain nearly the same in size and direction
- EPL loses significance when there is mean innovation performance
- Coefficients of labour market institutions are not significant.
- Intercepts show slightly smaller unemployment risks the more rigid labour market institutions are.

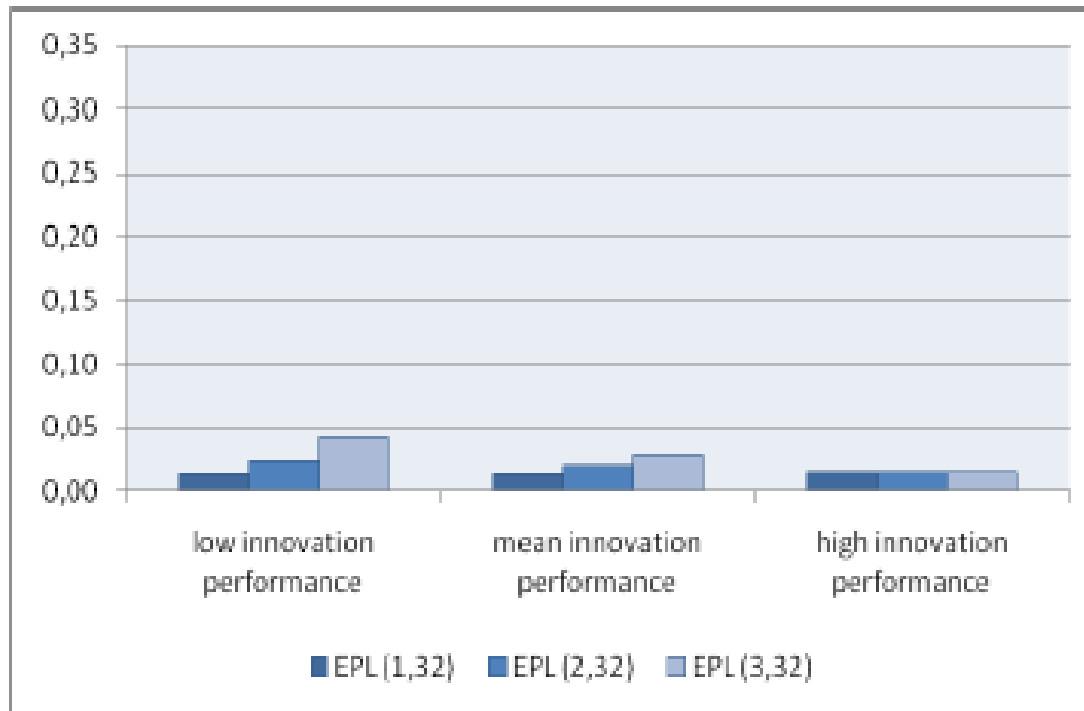
MLA: Highly-skilled unemployment risks



| | Model 4: Lowest innovation performance | | Model 5: Mean innovation performance | | Model 6: Highest innovation performance | |
|---------------------|--|-------|--------------------------------------|-------|---|-------|
| | b | S.E. | b | S.E. | b | S.E. |
| Intercept | -3,71 *** | 0,155 | -3,885 *** | 0,084 | -4,167 *** | 0,183 |
| EPL | 0,6 *** | 0,188 | 0,361 *** | 0,111 | 0,025 | 0,304 |
| Innovation | -0,093 | 0,06 | -0,093 | 0,06 | -0,093 | 0,06 |
| EPL*Innovation | -0,128 | 0,089 | -0,128 | 0,089 | -0,128 | 0,089 |
| Variance components | 0,302 *** | | 0,302 *** | | 0,302 *** | |
| N | 57798 | | 57798 | | 57798 | |
| N | 21 | | 21 | | 21 | |
| Macro iterations | 2 | | 2 | | 2 | |
| degrees of freedom | 17 | | 17 | | 17 | |

*Dependent variable: unemployed: yes/no, each country has an equal weight, Population average model with robust standard errors, controlled for age, gender and country of birth, reference: male, aged 30-49 years, born in the country of residence, * significant at 10 percent-level, ** significant at 5 percent level, *** significant at 1 percent level*

MLA: Predicted probabilities (highly-skilled)



Low innovation performance = 2.4, mean innovation performance = 4.4, high innovation performance = 7.3, source: own calculation

MLA: Labour market institutions (highly-skilled)

Labour market institutions: unemployment benefits, active labour market policies, bargaining coverage

- size and direction of the EPL coefficients (main + interaction effect) change largely due to the control of labour market institutions
- EPL only remains significant under minimal innovation performance, but not the interaction effect. The innovation coefficient now becomes negative and significant
- Bargaining coverage is positive and highly significant.

To sum up...

- The effects of EPL on the individual probability to be unemployed differ due to the skill-level acquired.
- For the low-skilled the effect of EPL is mediated by the level of technological progress in a country, while the strictness of other labour market institutions only plays a minor role
- The unemployment risks of the highly-skilled are hardly effected by the level of EPL. There is no interaction with the innovation performance of a country. Bargaining coverage seems to be a more important determinant.



What we can conclude from that:

- Inequalities are larger in less developed countries when labour markets are flexible and in countries with high innovation potential when EPL is rigid.
- Analyses that do not take differences due to skill and the economic structure into account lead to biased results
- **No confirmation that more flexible labour markets reduces unemployment !**

Thank you!

Comments (now or later) are very welcome...

Jenny Bennett
University of Cologne
bennett@wiso.uni-koeln.de



Correlation table

| | EPL | Union coverage | Unemployment Benefits | ALMP | Innovation Performance | Low-skilled Unemployment rate |
|----------------------------------|--------------|----------------|-----------------------|--------------|------------------------|-------------------------------|
| Union coverage | 0,428 | | | | | |
| Unemployment Benefits | 0,355 | 0,272 | | | | |
| ALMP | 0,129 | 0,614 | 0,053 | | | |
| Innovation Performance | -0,169 | 0,323 | 0,167 | 0,534 | | |
| Low-skilled Unemployment Rate | -0,274 | -0,371 | -0,279 | -0,343 | -0,37 | |
| Highly-skilled unemployment rate | 0,395 | 0,345 | -0,001 | 0,03 | -0,263 | 0,062 |

Bold print = significant at 10 percent level