EUROPEAN CENTRAL BANK

EUROSYSTEM

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What drives wages in CEE EU countries? A comparative Phillips curve approach from macro and micro perspective

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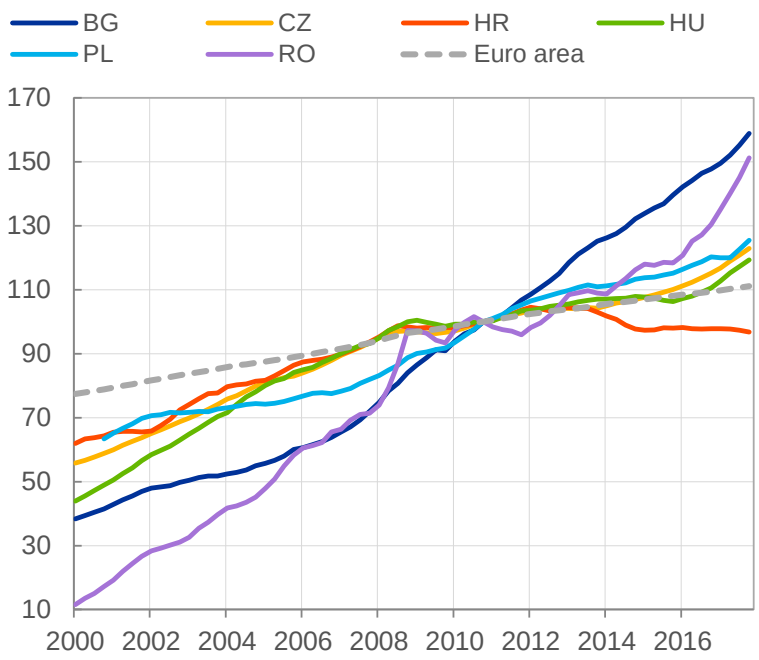
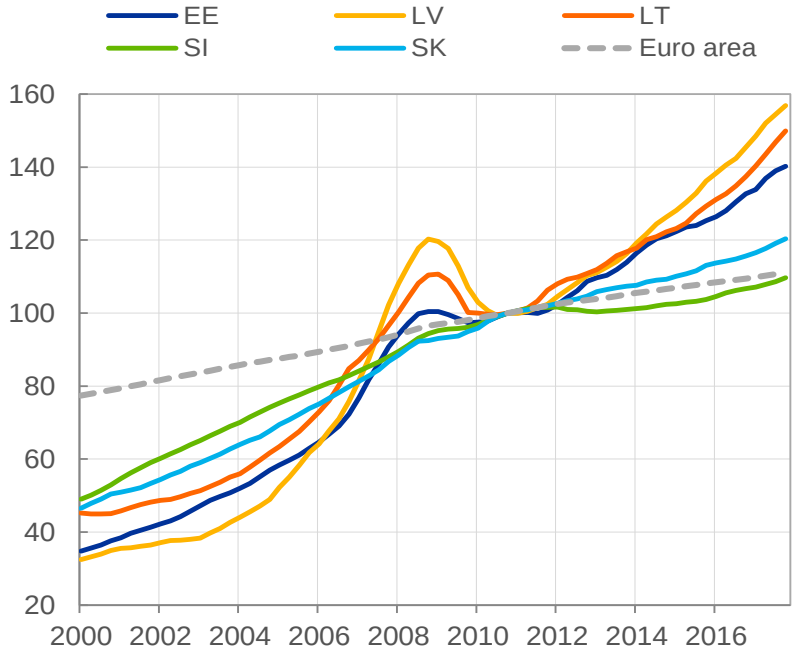
In contrast to the EA, wage growth has started to pick up in CEE countries, amid economic upswing and labour market shortages

Compensation per employee, non-EA CEE countries
(2014Q4=1)



Compensation per employee, EA CEE countries
(2014Q4=1)



Souce: Eurostat.

Note: Last observation: 2017Q4.

Five main questions and answers: Overview

1. Can wage developments in both regions be explained by the wage Phillips curve relationship? YES

2. Are there fundamental differences in wage growth responsiveness in the CEE and euro area countries? YES, steeper P.C. in CEE countries

3. Has the relationship changed in the post-crisis period? YES, flattening in the euro area

4. Is the role of other factors in wage P.C. estimates relevant (e.g. LM institutions, emigration, min. wage)? YES

5. Does micro data-based analysis confirm the macro results and help explain wage developments? YES

Data, definitions & country groupings

- Two types of data:
  - Macro data: Eurostat, quarterly data; All EU countries; 2000Q1- 2017Q4
  - Micro-aggregated data: CompNet 6th vintage; 13 EU countries; 56 2-digit industries; 2004-15
- Two definitions of labour market slack:
  - **Macro part**: headline unemployment rate minus NAIRU
  - **Micro part**: 1.) sector job creation rate (JCR) minus sector-specific JCR trend

    2.) sector job destruction rate (JDR) minus sector-specific JDR trend

    3.) net JCR (JCR-JDR). More here
- Country groupings:
  - CEE EU countries: 11 countries (both EA and non-EA) in the macro part; 6 in the micro one (HR, CZ, HU, LT, RO, SI)
  - EA countries: 19 EA countries in the macro part and 9 EA in the micro one (BE, FI, FR, IT, NL, PT, ES, SI, LT – SE added in pooled EU regressions)

Dynamic reduced form specification:

- **2-way Fixed Effects**

$$\Delta w_{i,t} = \beta_1 ugap_{i,t-1} + \beta_2 \Pi_{i,t-1} + \beta_3 \Delta PROD_{i,t} [+ \beta_4 \Delta w.a.pop_{i,t-1}] + \tau_t + \gamma_i + \varepsilon_{i,t}$$

Labour market slack: ugap: unemployment rate – NAIRU

Alternatives: unemployment, broad unemployment gap (U6), employment

w- compensation per employee

Π – HICP inflation

- **Dynamic Common Correlated Effects (Chudik and Pesaran, 2015)**

$$\Delta w_{i,t} = \beta_{i,0} + \beta_{i,1} ugap_{i,t-1} + \beta_{i,2} \Pi_{i,t-1} + \beta_{i,3} \Delta PROD_{i,t} [+ \beta_{i,4} \Delta w.a.pop_{i,t-1}] + \sum_j \gamma_{i,j} f_{j,t} + \varepsilon_{i,t}$$

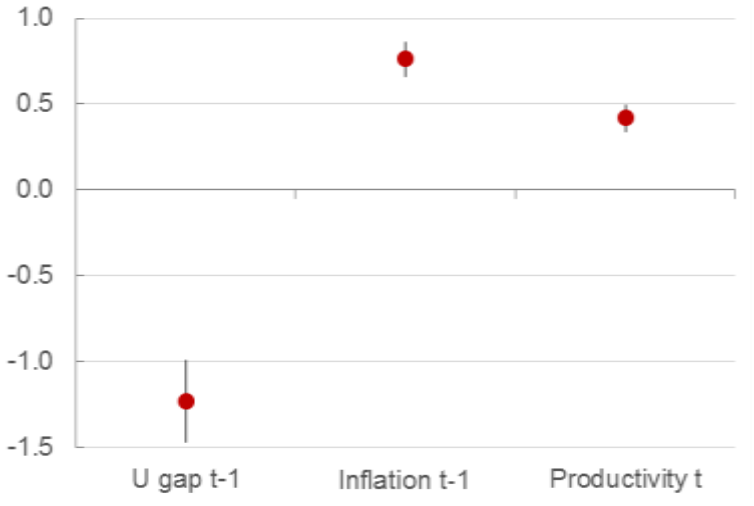
Where fj,t – cross-sectional averages

Accounts for:

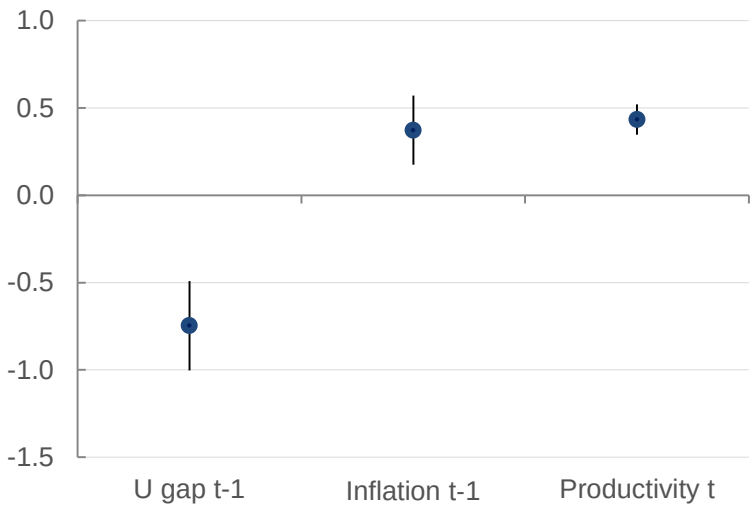
- Heterogeneity and Endogeneity of regressors
- Cross-sectional dependence

Wage growth can be well explained by labour market slack, past inflation and productivity growth; there is steeper P.C. in CEE countries

Estimated P.C. coefficients, EU CEE countries



Estimated P.C. coefficients, euro ara countries



Notes: Own calculations based on Eurostat quarterly NA data over 2000Q1-2017Q4. *Based on two-way FE. All coefficients are significant at the 1% confidence level.* Dependent variable: compensation per employee, annualized quarterly growth rate, 4-quarter moving averages. Productivity is also defined as annualized quarterly growth rate, 4-quarter moving averages. U gap = Unemployment rate - NAIRU. Inflation is included as 4-quarter moving averages.

Dynamic Common Correlated Effects (DCCE) confirms the differences

Dependent variable: compensation per employee	2-way fixed effects			Dynamic Common correlated effects		
	CEE EU	Euro area	EU	CEE EU	Euro area	EU
U gap $_{t-1}$	-1.230***	-0.747***	-0.669***	-2.574*	-0.652***	-0.832***
	(0.241)	(0.256)	(0.217)	(1.423)	(0.148)	(0.273)
Inflation $_{t-1}$	0.762***	0.373*	0.772***	0.352*	0.217*	0.283***
	(0.099)	(0.198)	(0.140)	(0.193)	(0.127)	(0.111)
Productivity $_{t}$	0.419***	0.434***	0.452***	0.537***	0.219***	0.150***
	(0.078)	(0.087)	(0.061)	(0.063)	(0.077)	(0.049)
Constant	2.662*	1.338**	1.573***	2.662*	0.926*	0.420
	(1.347)	(0.559)	(0.449)	(1.347)	(0.488)	(0.536)
Observations	743	1,292	1,899	743	1292	1899
R-squared	0.551	0.454	0.432	0.551	0.740	0.43
Number of id	11	19	28	11	19	28
CD statistics (p-value)	0.000	0.000	0.000	0.605	0.4861	0.978

Dependent variable: compensation per employee, annualized quarterly growth rate, 4-quarter moving averages. Productivity is also defined as annualized quarterly growth rate, 4-quarter moving averages. U gap = Unemployment rate - NAIRU. Inflation is included as 4-quarter moving averages. Sample is of quarterly frequency 2000Q1-2017Q4. Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1. CD test p-values: null hypothesis of Cross-sectional independence.

Micro-based wage regressions confirm the macro results (CompNet data)

Dependent variable: Sector mean wage growth	(1) CEE EU	(2) Euro area	(3) EU
Sector productivity growth $_t$	0.676***	0.175***	0.667***
	(0.0232)	(0.0199)	(0.0240)
$HICP_{t-1}$	1.901***	-0.536***	0.787***
	(0.415)	(0.149)	(0.241)
Net job creation $_{t-1}$	0.219**	0.220***	0.241***
	(0.0920)	(0.0440)	(0.0546)
Constant	0.0517***	0.0235**	0.0498***
	(0.0108)	(0.0106)	(0.0106)
Observations	2,727	3,840	6,029
R-squared	0.674	0.200	0.625
Number of x	290	421	659

Notes: explanatory variables are sectoral mean productivity growth, aggregate HICP inflation, mean job creation (destruction) deviation from the sectoral trend; and sector value added deflator. Country-sector panel of 13 countries. FE regression with clustered errors at the country-sector level. Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10.

In each country and year there is information on median wage and productivity growth as well as labour market slack for 56 business sector industries (defined at the 2-digit industry level, according got the NACE rev.2 system). 13 EU countries.

Differently from the non-CEE EA, there is downward flexibility of nominal wages in CEE region (CompNet data)

Dependent variable: growth in mean nominal wage of sector	CEE EU		non-CEE euro area	
Productivity growth $_t$	0.639***	0.621***	0.219***	0.213***
	(0.0226)	(0.0246)	(0.0277)	(0.0294)
Inflation $_{t-1}$	1.741***	2.044***	0.0967	-0.0451
	(0.342)	(0.374)	(0.186)	(0.197)
Job creation gap$_{t-1}$	0.161+		0.247***	
	(0.101)		(0.0661)	
Job destruction gap$_{t-1}$		-0.387***		-0.0524
		(0.119)		(0.0793)
Constant	0.0601***	0.0511***	0.0442***	0.0420***
	(0.0102)	(0.0108)	(0.00838)	(0.00897)
Observations	2,907	3,018	3,071	3,151
R-squared	0.650	0.633	0.187	0.176
Number of x	290	306	322	330

Source: Own calculations based on CompNet 6th vintage data set, full sample
Notes: Two-way FE estimation with errors clustered at the country*sector level. Data at the country-sector-year level.

*** p<0.01, ** p<0.05, * p<0.10, +. p<0.15

1. Job creation gap:

When the labour market is tightening, wages increase in both the EA and the CEE regions

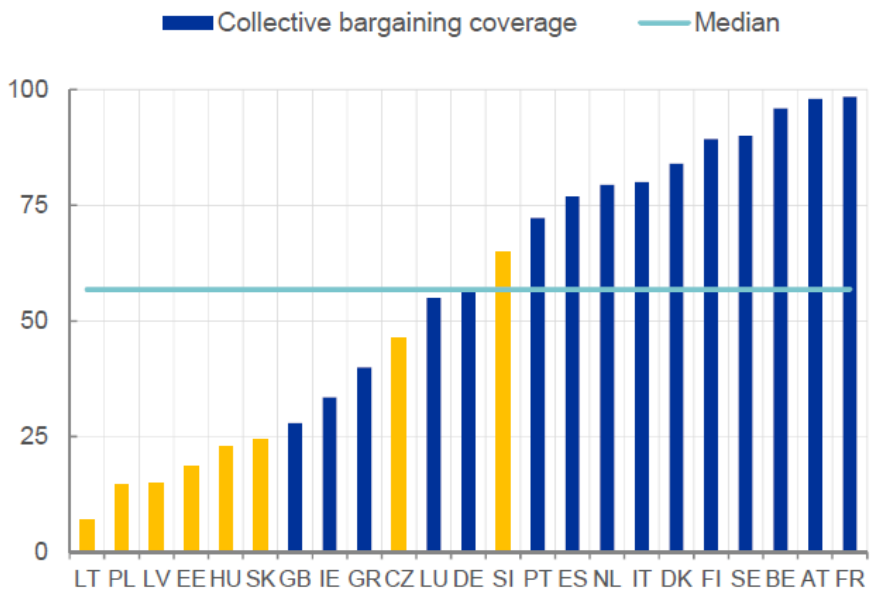
- More in the EA

2. Job destruction gap:

When there is slack in the labour market, wages respond (downwards) only in CEE region

Labour market institutions are different in EU countries, with less collective bargaining coverage and union density in CEE countries

Collective bargaining coverage by country
(in % of the workforce)



Source: OECD.
Notes: data refer to 2015. For some countries, missing data for 2015 have been completed using 2014 and 2013 data. CEE EU countries are shown in yellow.

The impact of LM institutions on the P.C. slope in EU

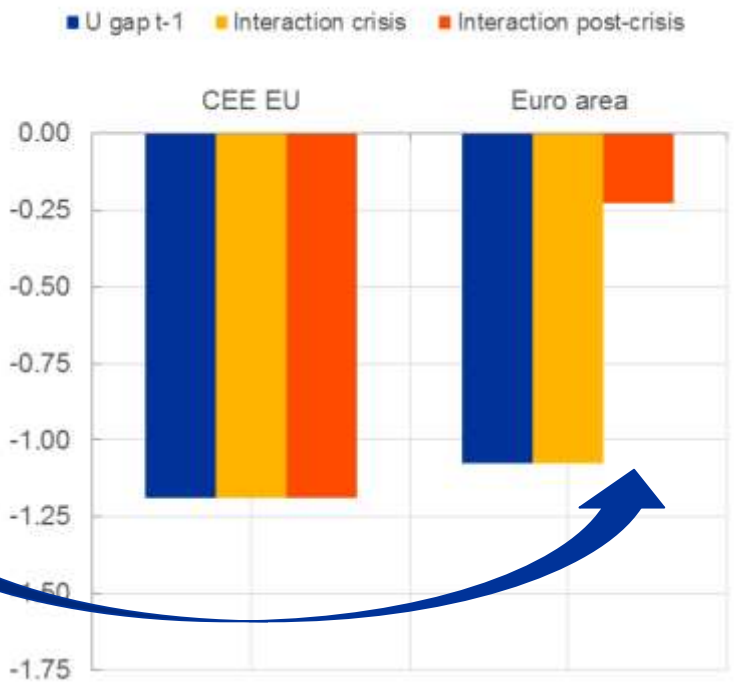
Dependent variable: compensation per employee	
Inflation $_{t-1}$	0.402**
	(0.170)
Productivity $_{t}$	0.403***
	(0.069)
U gap $_{t-1}$	-0.833**
	(0.299)
Bargaining coverage * U gap $_{t-1}$	0.578*
	(0.295)
Constant	1.749***
	(0.523)
Observations	1,559
R-squared	0.474
Number of id	23

Notes: Panel of 23 EU countries, with low/high wage bargaining coverage defined as below/above the EU median.

Wages became significantly less reactive to labour market slack in the post-2013 period in the euro area than in the CEE economies.

Dependent variable: compensation per employee	CEE EU	Euro area
Inflation $_{t-1}$	0.759***	0.362*
	(0.106)	(0.204)
Productivity $_{t}$	0.401***	0.445***
	(0.0828)	(0.076)
U gap $_{t-1}$	-1.188***	-1.077**
	(0.310)	(0.450)
U gap $_{t-1}$ * crisis	-0.310	-0.061
	(0.418)	(0.226)
U gap $_{t-1}$ * post-crisis	0.705	0.851*
	(0.456)	(0.503)
Constant	3.527**	1.396***
	(1.354)	(0.465)
Observations	743	1,292
R-squared	0.556	0.490
Number of id	11	19

LM Slack coefficient in the pre-crisis, crisis and post-crisis period



Dependent variable: compensation per employee, annualized quarterly growth rate, 4-quarter moving averages. Productivity is also defined as annualized quarterly growth rate, 4-quarter moving averages. U gap = Unemployment rate - NAIRU. Inflation is included as 4-quarter moving averages. Sample is of quarterly frequency 2000Q1-2017Q4. Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1. **"Crisis" refers to the period 2009Q1-2012Q4.**

Flattening of wage P.C. in the euro area confirmed by micro-based regressions

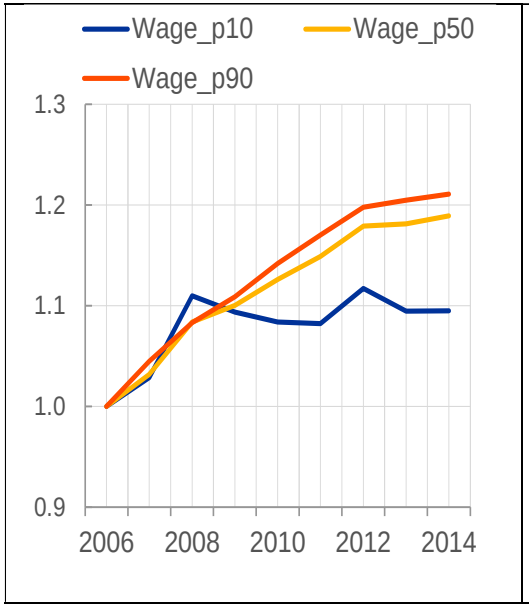
Dependent variable: Sector mean wage growth	(1) CEE EU	(2) Euro area	(3) EU
Sector productivity growth $_t$	0.676***	0.175***	0.667***
	(0.0231)	(0.0197)	(0.0240)
HICP $_{t-1}$	1.834***	-0.550***	0.781***
	(0.425)	(0.150)	(0.245)
Net job creation $_{t-1}$	0.124	0.229**	0.192**
	(0.126)	(0.0938)	(0.0832)
Net job creation *crisis $_{t-1}$	0.263	0.0596	0.130
	(0.205)	(0.120)	(0.125)
Net job creation *post-crisis $_{t-1}$	-0.265	-0.273**	-0.168
	(0.279)	(0.106)	(0.185)
Constant	0.0604***	0.0304***	0.0543***
	(0.0125)	(0.0104)	(0.0112)
Observations	2,727	3,840	6,029
R-squared	0.674	0.204	0.625
Number of x	290	421	659

Notes: explanatory variables are sectoral mean productivity growth, aggregate HICP inflation, mean job creation (destruction) deviation from the sectoral trend; and sector value added deflator. Country-sector panel of 13 countries. FE regression with clustered errors at the country-sector level. Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10.

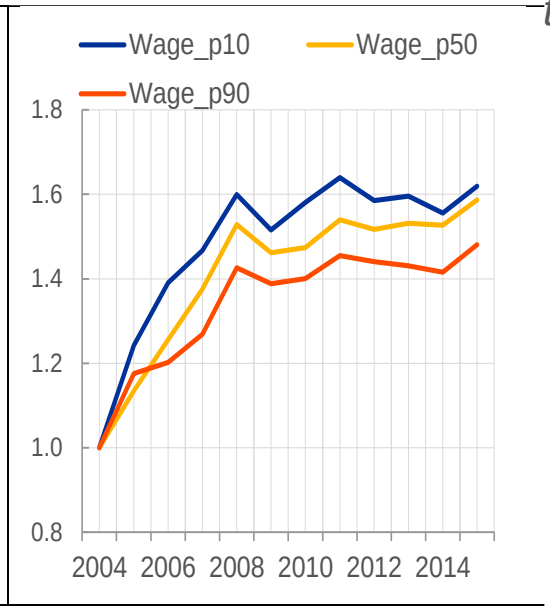
Wedge between the median and bottom wages has increased since the crisis in the (non-CEE) EA, not so in the CEE region

Median, the top and the bottom wages of the sector distribution
(2004=1)

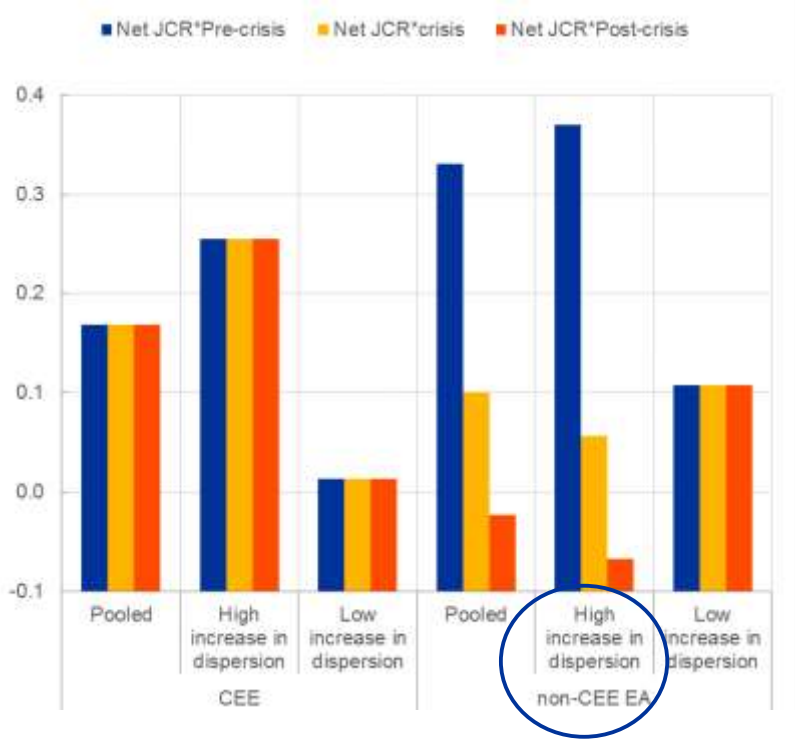
Non-CEE EA countries



CEE EU countries



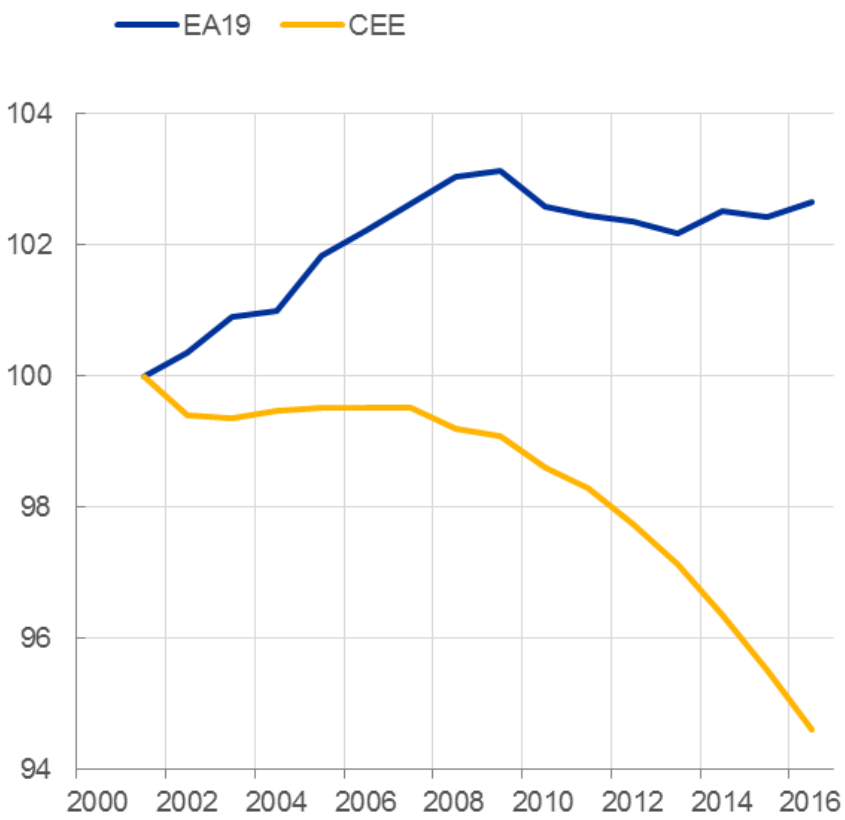
Estimated coefficient of NET Job Creation in sectors where wage dispersion has increased since 2010 more and less than the country median



Sources: CompNet 6th vintage, full sample
Notes: Computed at the 2-digit industry level and then aggregated up using sector employment weights.

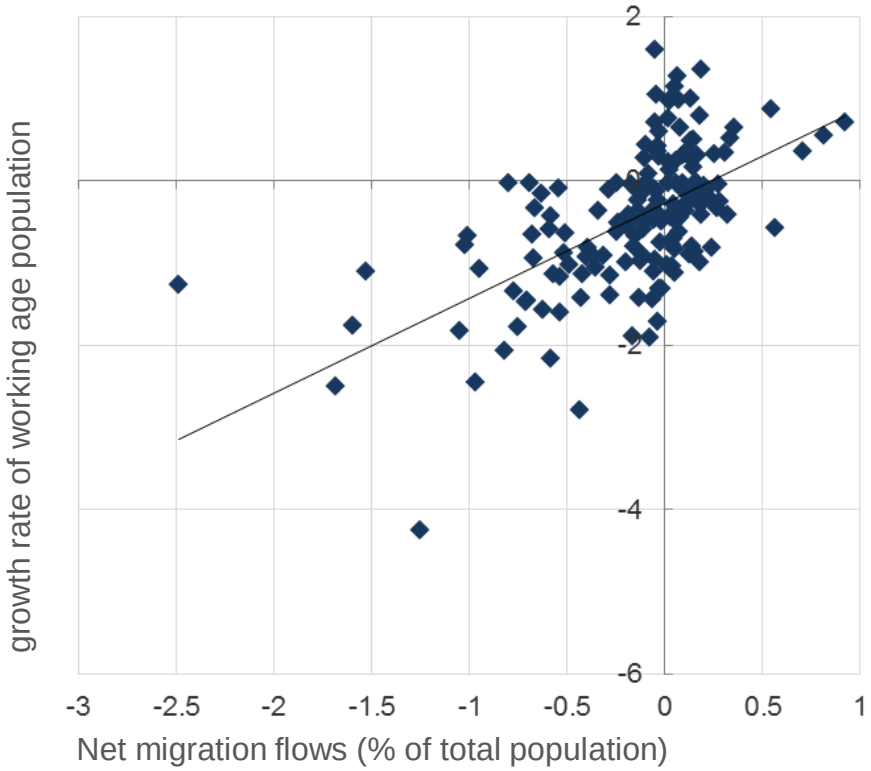
Large drop in WAP in the CEE region, related to migration outflows, has contributed to decrease labour supply

Population aged 15-64, EA and CEE regions
2001=100



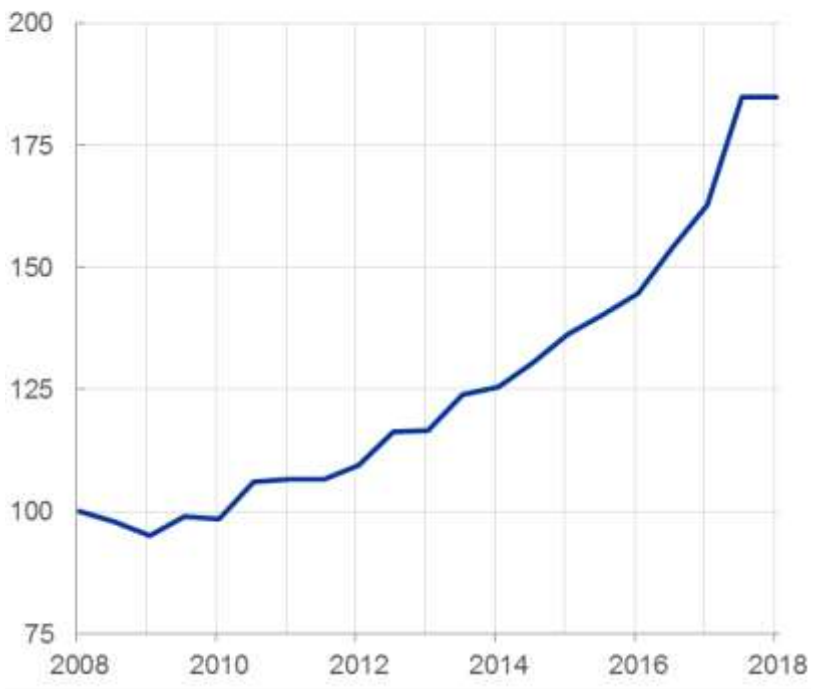
Souce: Eurostat.

Net migration flows and growth rate of working age population in the CEE countries (2000-2017)



Minimum wages have increased in CEE countries, with a spill-over effect to the rest of the economy

Minimum wage in the CEE countries
index 2008H2=100



Notes: weigthed average by working age population.
Souce: Eurostat.

Impact of minimum wages and changes in working age population in the CEE region

Dependent variable: compensation per employee	2000-2017		2009-2017
Inflation $_{t-1}$	0.751***	0.753***	-1.021**
	(0.096)	(0.102)	(0.355)
Productivity $_{t}$	0.413***	0.415***	0.347***
	(0.082)	(0.078)	(0.062)
U gap $_{t-1}$	-1.236***	-1.230***	-1.148***
	(0.241)	(0.244)	(0.232)
Mininum wage $_{t-1}$	0.008**		
	(0.003)		
Working age pop. $_{t-1}$		-0.022	-0.311***
		(0.044)	(0.089)
Constant	2.777*	2.680*	12.770***
	(1.345)	(1.372)	(2.280)
Observations	710	737	396
R-squared	0.564	0.556	0.428
Number of id	11	11	11

•Notes: Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.10.

Conclusions

1. The wage Phillips curve are alive in CEE and euro area countries

- **Dynamic short-run macro models** are well suited for wage estimations in the EU countries' panels (better than long-term/error-correction models)
- **Micro-based estimations** confirm macro results & offer additional insights

2. Higher wage responsiveness & steeper P.C. in the CEE region, also due to the institutional and structural differences

- **Downward wage rigidity** only in CEE region

3. Post-crisis flattening of the wage Phillips curve only in the euro area (not in CEE countries)

- A composition effect (**increased wage inequality at the bottom of the wage distribution**) helps understand this.

Thank you!

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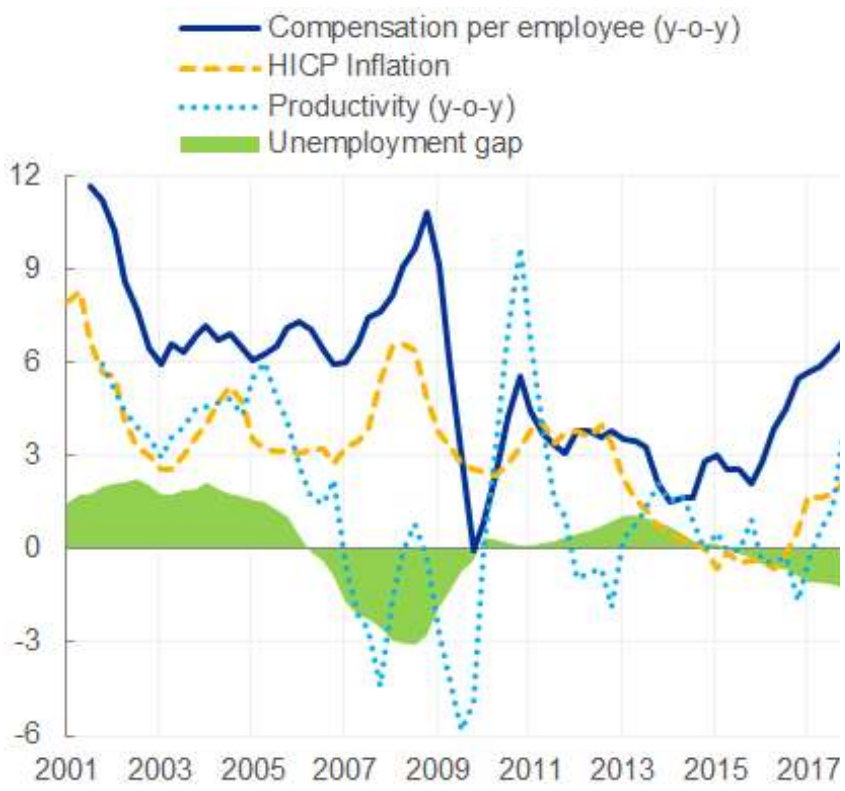
Additional results

- No convexity in wage P.C. (spline term insignificant)
- Estimates robust to alternative LM measures (broad UR, headline UR, vacancy rate, employment gap)
- 4-q MAV replaced by trend
- Macro sectoral results (industry as proxy for the private sector; industry vs sectoral sector)
- Long-term/error-correction models don't work well in the CEE EU countries (as well as in the euro area and EU country panels); no cointegration found
- Country by country results hold for most of the countries
- Weighed OLS yield consistent results
- Top 20% most productive firm wages react only to LPROD & infl. (not to labour market)
- Flattening of the wage P.C. in the EA in low productive firms (bottom 80%)

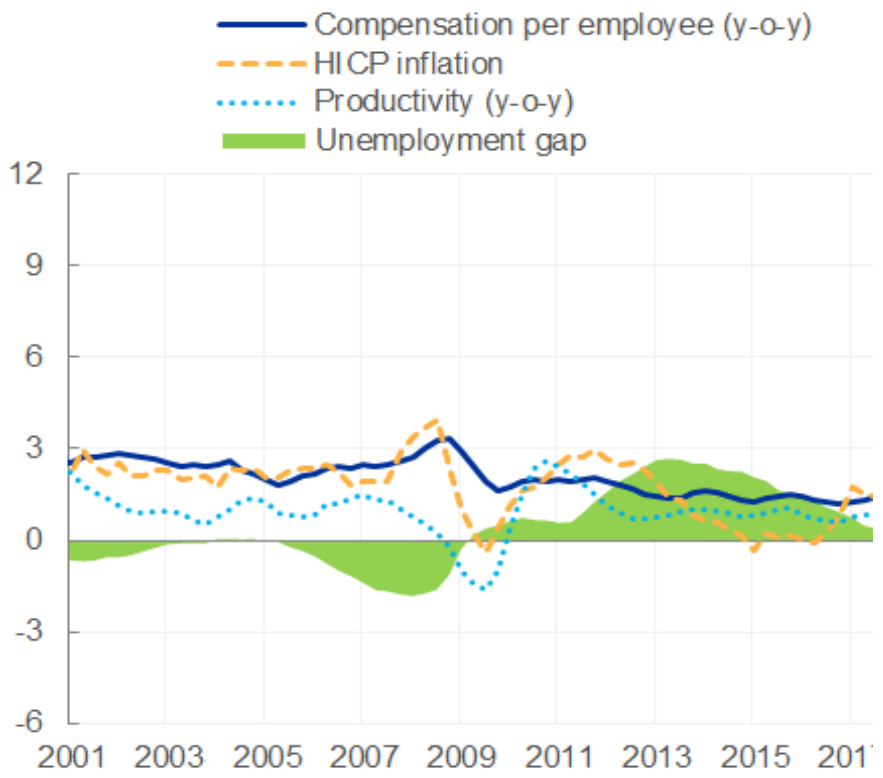
Reserve slides

Eyeballing of the (macro) data

CEE EU

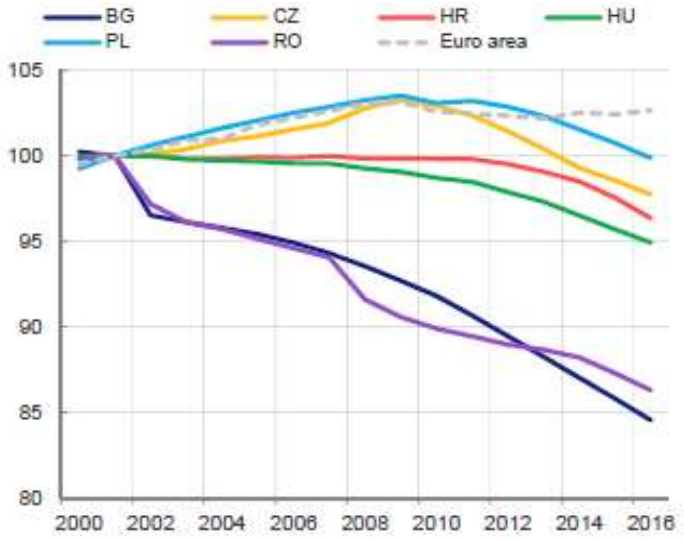


Euro area

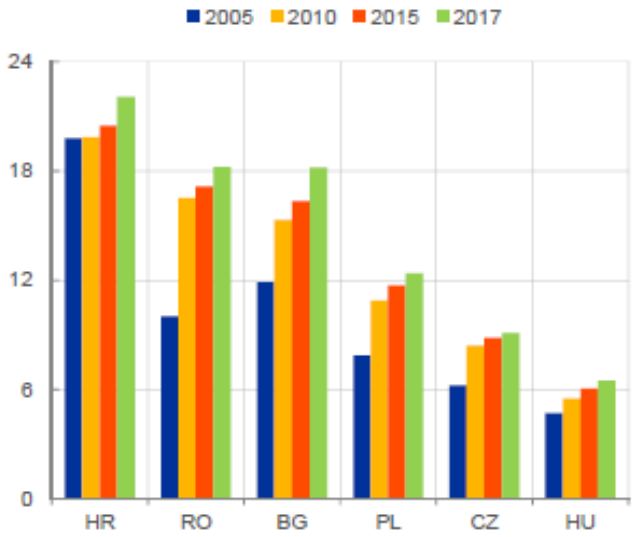


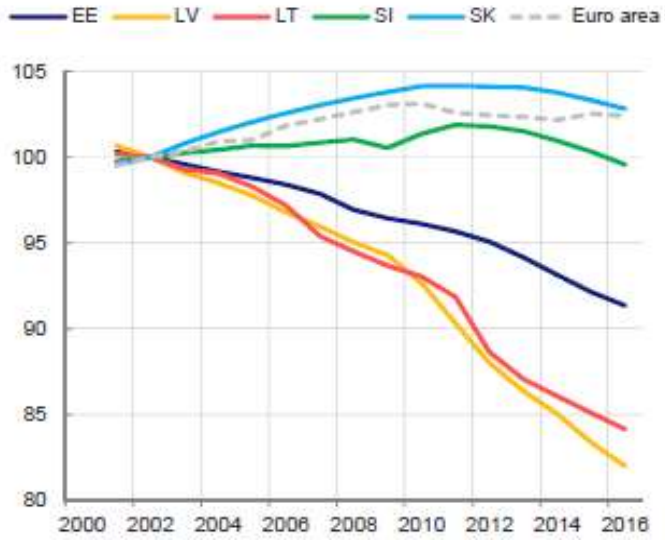
Other factors: demographics

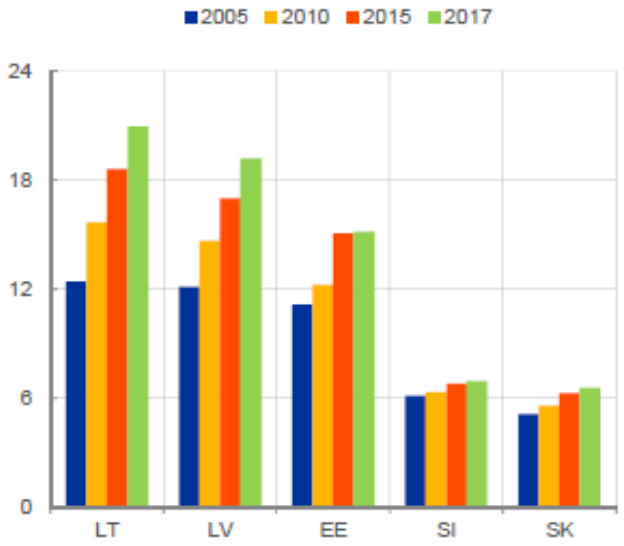
Population aged 15-64, index 100=2005



International migrant stock, % of total population



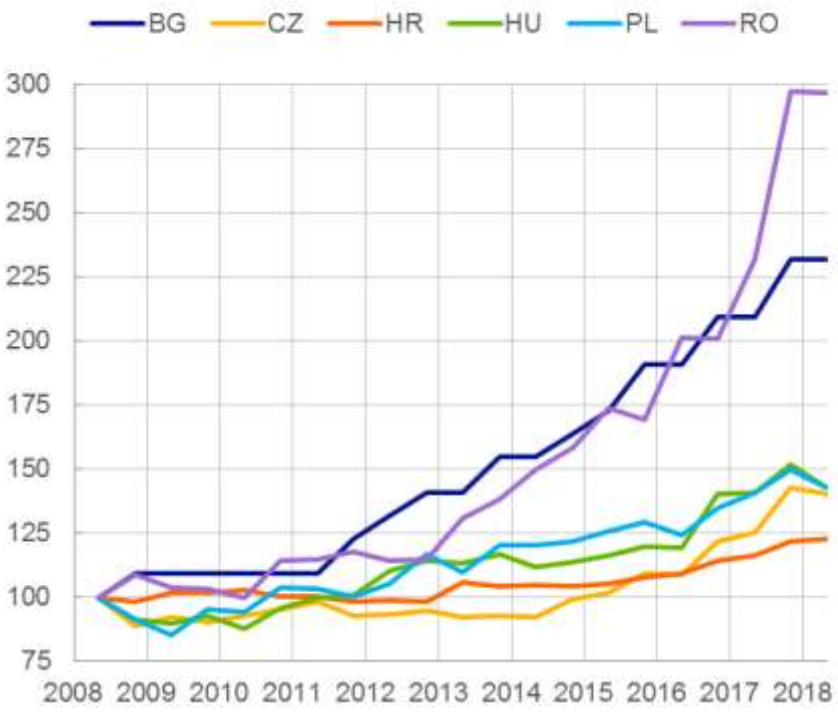


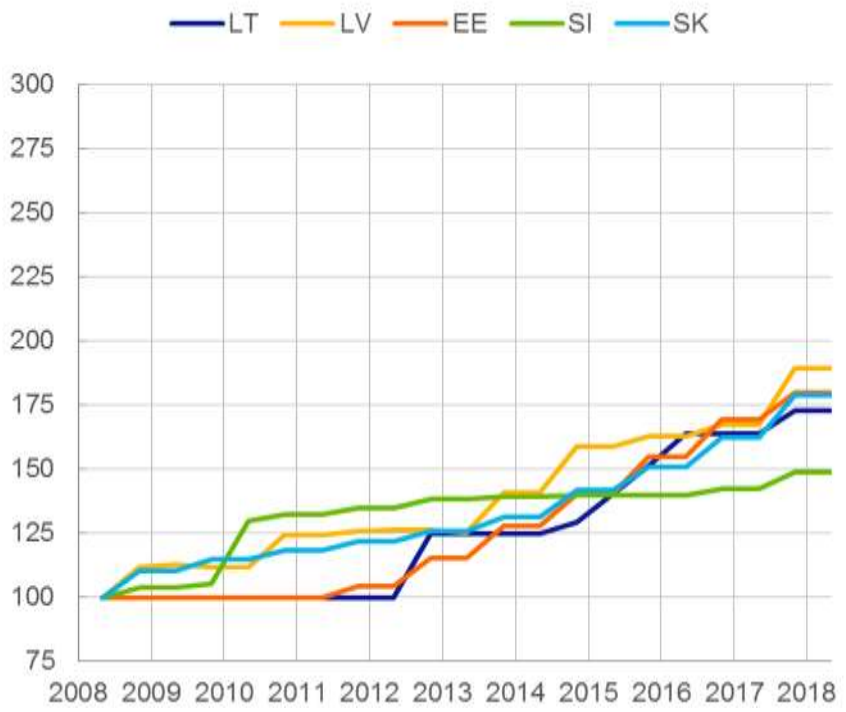


Souce: Eurostat, United Nations and International Migrant Statistics

Minimum wages

Minimum wage in the CEE countries,
index 2008H2=100

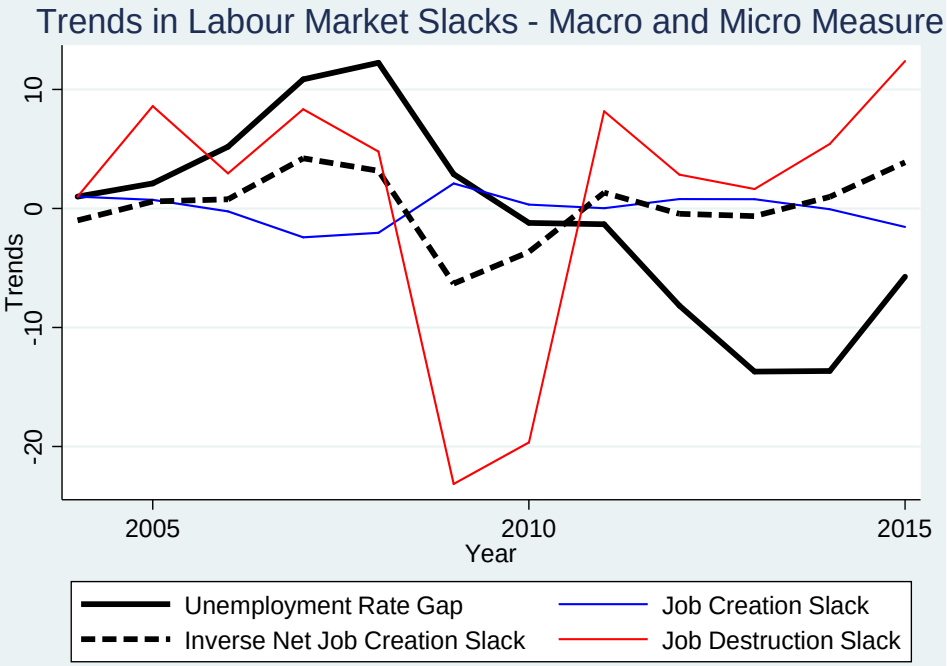




Notes: weigthed average by working age population.
Souce: Eurostat.

Estimation of Phillips' curves at the sector level using CompNet c

Comparison of aggregate labour market slack with CompNet-based sector measures of slack
(annual growth rates)

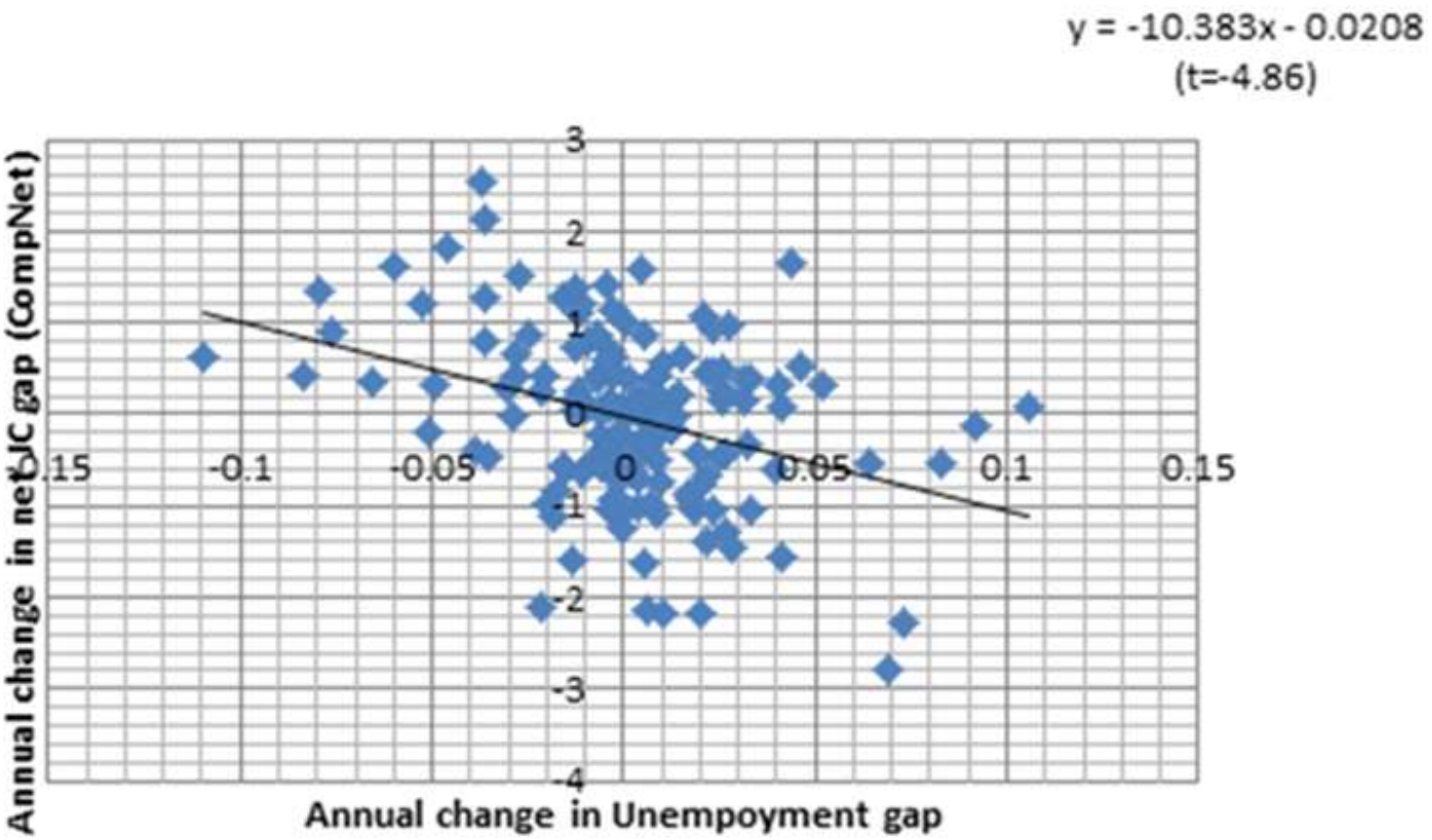


Source: 6th vintage of CompNet, full sample.
Notes: UR gap is measured by headline UR minus NAIRU, provided by Eurostat and AMECO. JCR and JDR slack are measured as sector jcr (jdr) minus the sector-specific trend jcr (jdr). We show the inverse of net jcr. Countries included: BE, CZ, FI,HU, IT, LT, PT,RO, SP, SE.

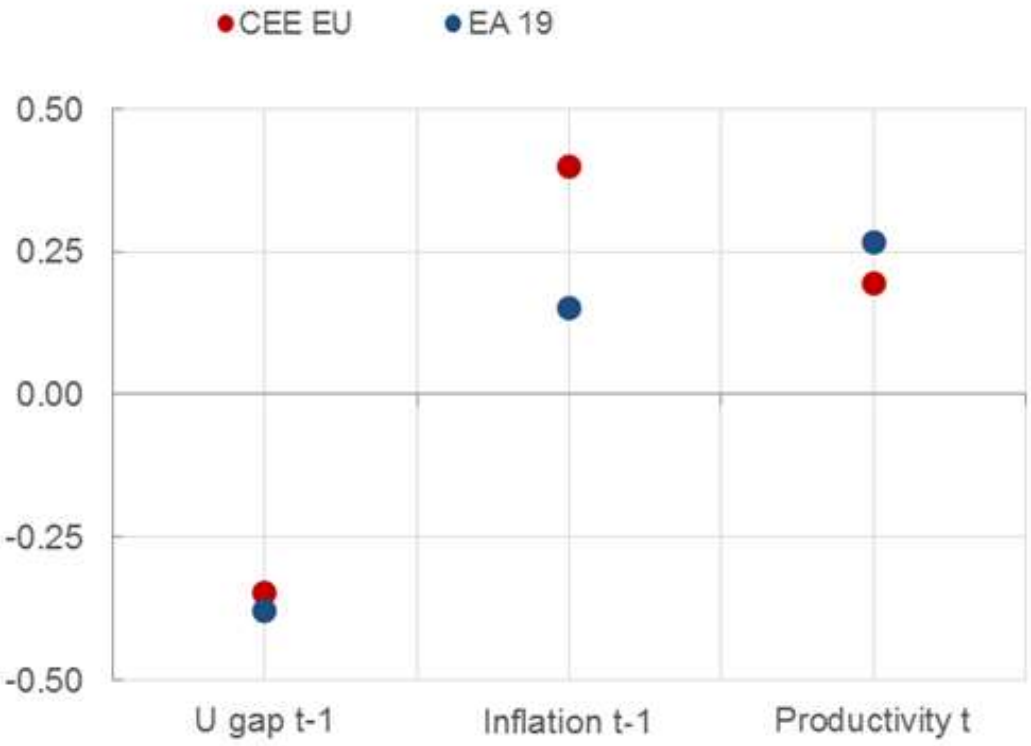
We construct from sector job flows a sector-specific indicator of LM slack

- Compute the deviation of job creation (JC), job destruction (JD) and net JC rates to the country-sector specific trend
  - We capture whether JC in a country-sector-year is above its trend, i.e. the sector LM is tight
  - Or the JD is below its trend, i.e. there is LM slack
- The inverse of the (aggregated) Net JC measure of slack correlates well with the usual ones but we gain the adjustment margin and the granularity

Labour market slack: macro and CompNet measure



Estimated wage Phillips curve coefficients using the standardised betas



2. Long-run equilibrium relationship

- **Mean Group Estimator (MGE),** with and w/o cross-sectional dependence (Pesaran, 2006; Pesaran & Smith, 1995)

$$ln\,(w_{i,t}) = \beta_{i,1} ln\,(price_{\,i,t-1}) + \beta_{i,2} ln\,(PROD_{i,t(4qma)}) + e_{\,i,t}$$

The dynamic error-correction wage equation:

$$\Delta\, ln(w_{i,t}) = \beta_{i,1}\, \Delta ln(price_{\,i,t-1}) + \beta_{i,2}\, \Delta ln(PROD_{i,t(4qma)}) +$$

$$+\beta_{i,3}\, ugap_{\,i,t-1} + \beta_{i,4}\, \Delta\, ln(w.a.pop_{\,i,t}) + \delta\, \hat{e}_{\,i,t} + \sum_{j} \gamma_{i,j} f_{\,j,t} + \varepsilon_{\,i,t}$$

Where $\hat{e}_{\,i,t}$ is the error correction term, and δ measures the speed of adjustment to a random shock.

Results: Long-term wage relationship

	MGE			CCEMGE		
	(1)	(2)	(3)	(4)	(5)	(6)
	CEE EU	EA19	EU28	CEE EU	EA19	EU28
Inflation	0.707***	1.028***	0.966***	0.191	1.065***	0.668***
	[0132]	[0.079]	[0.082]	[0.439]	[0.196]	[0.227]
Productivity	1.200***	0.490***	0.677***	0.791**	0.083	0.380**
	[0190]	[0.176]	[0.151]	[0.333]	[0.160]	[0.180]
Constant	5.111***	2.823**	2.295***	2.668*	1.151	1.063
	[1.322]	[0.949]	[0.856]	[1.475]	[1.408]	[1.232]
N	754	1311	1927	754	1311	1927
Countries	11	19	28	11	19	28
CD statistics (p-value)	0.000	0.000	0.000	0.027	0.000	0.027

Dependant Variable: MGE: mean-group estimator, CCEMGE: common correlated effects mean group estimator

Results: sectoral wage (services & industry): 2-way FE estimator

	CEE EU		EU28		EA19	
	Services	Industry	Services	Industry	Services	Industry
UE gap	-1.089***	-1.083***	-0.610***	-0.551***	-0.739***	-0.600***
	[0.233]	[0.230]	[0.201]	[0.176]	[0.234]	[0.204]
Inflation$_{(t-1)}$[1]	0.738***	0.985***	0.765***	0.897***	0.383	0.309
	[0.088]	[0.190]	[0.113]	[0.238]	[0.252]	[0.289]
Productivity[1]	0.364**	0.389**	0.380***	0.157**	0.442**	0.115
	[0.149]	[0.124]	[0.113]	[0.065]	[0.174]	[0.067]
N	743	743	1831	1831	1224	1224
r2	0.447	0.468	0.350	0.307	0.414	0.289

Dependent variable: compensation per employee, annualized quarterly growth rate. UE gap=Unemployment rate-NAIRU.
[1] 4 -quarter moving average of quarterly growth rates (annualized). [2] annualized quarterly change, lagged

Micro-based wage regressions: HICP over time (CompNet)

VARIABLES	(1) CEE EU	(2) EA	(3) EU
Sector productivity growth $_t$	0.666***	0.166***	0.664***
	(0.0229)	(0.0199)	(0.0240)
HICP (pre-crisis period)$_{t-1}$	5.413***	3.762***	3.118***
	(0.812)	(0.332)	(0.286)
HICP*crisis $_{t-1}$	4.004***	-5.389***	-3.086***
	(0.809)	(0.400)	(0.337)
HICP*post-crisis $_{t-1}$	11.79***	-2.589***	-4.265***
	(1.604)	(0.578)	(0.514)
Net job creation $_t$	0.197**	0.142***	0.203***
	(0.0905)	(0.0390)	(0.0538)
Constant	0.00851	0.0440***	0.0417***
	(0.0123)	(0.0113)	(0.0110)
Observations	2,727	3,840	6,029
R-squared	0.682	0.277	0.630
Number of x	290	421	659

Notes: explanatory variables are sectoral mean productivity growth, aggregate HICP inflation, mean job creation (destruction) deviation from the sectoral trend; and sector value added deflator. Country-sector panel of 13 countries. FE regression with clustered errors at the country-sector level. Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10.

Possible role of increasing wage dispersion in the euro area (CompNet)

	(1)	(2)	(3)	(4)
	CEE EU	CEE EU	Non CEE euro area	Non CEE euro area
Dependent variable: Sector mean wage growth	Low dispersion	High dispersion	Low dispersion	High dispersion
Sector productivity growth $_{t}$	0.661***	0.694***	0.199***	0.146***
	(0.0334)	(0.0317)	(0.0277)	(0.0258)
HICP (pre-crisis period) $_{t-1}$	1.801***	1.834***	-0.502**	-0.640***
	(0.612)	(0.595)	(0.203)	(0.243)
Net job creation (pre-crisis) $_{t-1}$	-0.345	0.316**	0.184+	0.243+
	(0.354)	(0.136)	(0.117)	(0.151)
Net job creation, *crisis $_{t-1}$	0.829*	-0.0253	0.0270	0.185
	(0.427)	(0.260)	(0.153)	(0.154)
Net job creation *post-crisis $_{t-1}$	0.232	-0.521	-0.111	-0.417**
	(0.486)	(0.392)	(0.128)	(0.176)
Constant	0.0478**	0.0729***	0.0252**	0.0370**
	(0.0184)	(0.0167)	(0.0116)	(0.0169)
Observations	1,342	1,385	2,628	1,212
R-squared	0.660	0.690	0.187	0.274
Number of x	143	147	290	131

Notes: explanatory variables are sectoral mean productivity growth, aggregate HICP inflation, mean job creation (destruction) deviation from the sectoral trend; and sector value added deflator. Country-sector panel of 13 countries. FE regression with clustered errors at the country-sector level. Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10.

Micro-based panel regressions in Manufacturing and Services (CompNet)

Dependent variable: Nominal wage growth (sectoral mean)	CEE EU		EA	
	(2) Manufacturing	(4) Services	(6) Manufacturing	(8) Services
Productivity $_t$	0.633***	0.657***	0.166***	0.182***
	[0.031]	[0.037]	[0.030]	[0.025]
Inflation $_{t-1}$	1.036*	2.053***	-0.596**	-0.317*
	[0.571]	[0.464]	[0.247]	[0.173]
Net job creation gap $_t$	-0.127	0.196*	0.0127	0.307***
	[0.458]	[0.101]	[0.213]	[0.076]
Net job creation gap $_t$ x crisis	0.763	-0.140	0.495*	-0.168*
	[0.507]	[0.247]	[0.252]	[0.101]
Net job creation gap $_t$ x post-crisis	-0.087	-0.262	-0.251	-0.236**
	[0.512]	[0.406]	[0.236]	[0.111]
Constant	0.082***	0.049***	0.054**	0.019**
	[0.024]	[0.013]	[0.023]	[0.007]
Observations	1,209	1,508	1,627	2,190
R-squared	0.621	0.683	0.173	0.226
Number of clusters	116	155	169	229

Notes: explanatory variables are sectoral mean productivity growth, aggregate HICP inflation, mean job creation (destruction) deviation from the sectoral trend; and sector value added deflator. Country-sector panel of 13 countries. FE regression with clustered errors at the country-sector level. Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10.

Micro-based results driven by "bottom" 80% productive firms (CompNet)

Dependent variable: Nominal wage growth (sectoral mean)	CEE EU				EA			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	High Productivity		Low Productivity		High Productivity		Low Productivity	
Productivity $_t$	0.577***	0.578***	0.727***	0.728***	0.080**	0.083**	0.165***	0.167***
	[0.038]	[0.039]	[0.034]	[0.034]	[0.031]	[0.032]	[0.025]	[0.025]
Inflation $_{t-1}$	1.724	1.621	1.242***	1.171***	0.235	0.200	-0.558***	-0.541***
	[1.084]	[1.135]	[0.367]	[0.366]	[0.410]	[0.404]	[0.166]	[0.165]
Net job creation gap $_t$	0.044	0.375	0.322***	-0.230	0.027	0.100	0.267***	0.218**
	[0.162]	[0.231]	[0.107]	[0.222]	[0.051]	[0.123]	[0.048]	[0.108]
Net job creation gap $_t$ x crisis		-0.564		0.847***		-0.076		0.160
		[0.346]		[0.274]		[0.151]		[0.137]
Net job creation gap $_t$ x post-crisis		-0.604		0.225		-0.268		-0.268**
		[0.945]		[0.290]		[0.188]		[0.121]
Constant	0.044	0.048	0.053***	0.061***	0.027**	0.032**	0.026*	0.035***
	[0.027]	[0.030]	[0.011]	[0.012]	[0.011]	[0.016]	[0.013]	[0.013]
Observations	633	633	2,095	2,095	613	613	3,153	3,153
R-squared	0.698	0.699	0.704	0.706	0.093	0.096	0.184	0.190
Number of clusters	102	102	238	238	116	116	374	374

Notes: explanatory variables are sectoral mean productivity growth, aggregate HICP inflation, mean job creation (destruction) deviation from the sectoral trend; and sector value added deflator. Country-sector panel of 13 countries. FE regression with clustered errors at the country-sector level. Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.10.