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Why labor market performance differed across countries

The impact of institutions and labor market policy

Nero-Meeting, OECD, Paris, June 20th, 2011

Karl Aiginger, Thomas Horvath, Helmut Mahringer (WIFO)

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- **Goals and the results of *Aiginger* (2011)**
 - LMP vs. OMP – preview
 - Explanation of LMP
 - Conclusions

Twin paper on OMP: *Aiginger, K., Why performance differed across countries in the Recent Crisis, WIFO Working Paper 387/2011* (Presented also at Nero 2010).

Aiginger, K., The Great Recession versus the Great Depression; Economics: E-Journal, Vol. 4, 2010-18.

Goals:

- To explain Labor Market Performance (LMP)
- In general and **relative** to Output Market Performance (OMP)
- During the crisis – and as far as possible – in the aftermath

Facts:

- Simultaneous start of the crisis
- Length, depth “finally” very different
- GDP in some countries not rebounded, inflation fears in others
- Persistent high unemployment vs. upcoming labor shortage.

WIFO ■ How to measure OMP during the crisis

- Output Market Performance (= GDP dynamics)
 - Indicators for growth performance
 - Rate of change in GDP in 2009 (“crisis decline”)
 - Cumulative change in GDP 2008-2010 (“3-year performance”)
 - Decrease in quarterly GDP from pre-crisis peak to trough (“steepness of the crisis”)
 - Growth 2008-2010 relative to pre-crisis trend (2000-2007)
- ⇒ Each indicator grasps some element of severeness
- ⇒ All correlated but not perfectly (⇒ PCA; OMP).

OMP = f (pre-crisis conditions, structure); 39 countries

Results:

- Pre-crisis budget/debt irrelevant
- Current account
- Specifically high pre-crisis GDP growth
- High credit growth mattered

Structure not very important, Asian dummy

Fiscal packages did matter, related to three determinants

Three **significant** determinants strongly intercorrelated.

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Data and scope

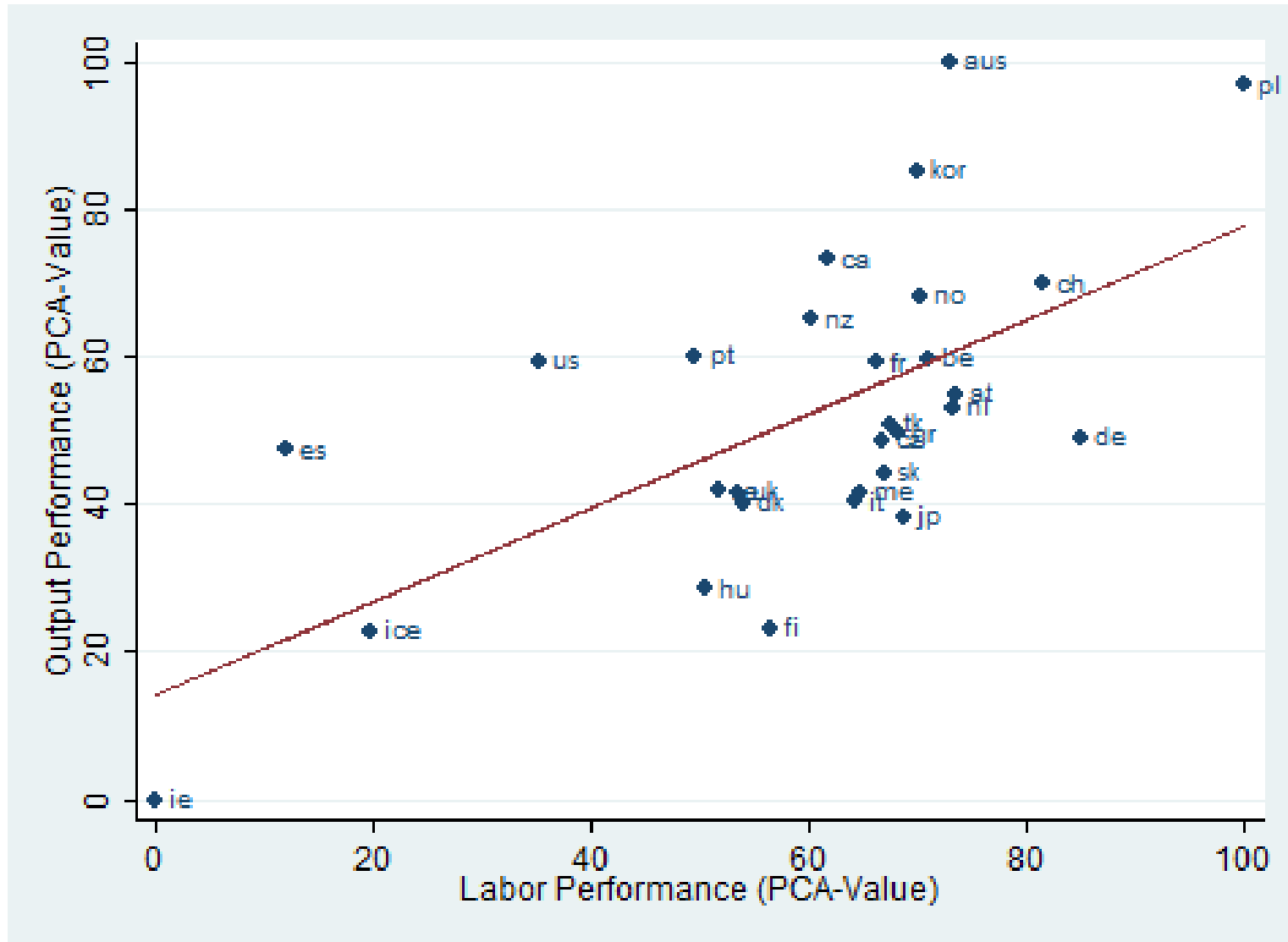
- Composite indicators for LMP (parallel to OMP)
- Performance for 29 countries (industrial plus Mexico, Turkey)
- “In crisis” performance 2008/10, “post crisis” 2011/12

Determinants of LMP

- Pre-crisis conditions (fiscal, financial, competitiveness)
- Structure (size, GDP/capita, openness, manufacturing)
- Labor market policy institutions
- OMP (two sets of equations; without/including OMP).

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- Indicators of labor market performance (LMP)
 - Change in employment, unemployment and labor force participation rates in 2009 („crisis decline“)
 - Employment levels during the crisis (2008-2010) relative to pre-crisis levels (2000-2007)
 - Unemployment and participation rates (2008-2010) relative to pre-crisis rates (2000-2007)
 - Technique (LMP **and** OMP): Principal component analysis
 - Factor loading of first component
 - Explains 90% of total variation
 - First component is OMP resp. LMP measure.

OMP vs. LMP: A close relation with outliers



5 countries with best LMP (PI, DE; CH, AUT; NL)

- With **DE** (AUT, NL) as **big** (small) surprise: low (medium) OMP
- Japan, Hungary, Finland are offline too (better LMP than OMP)

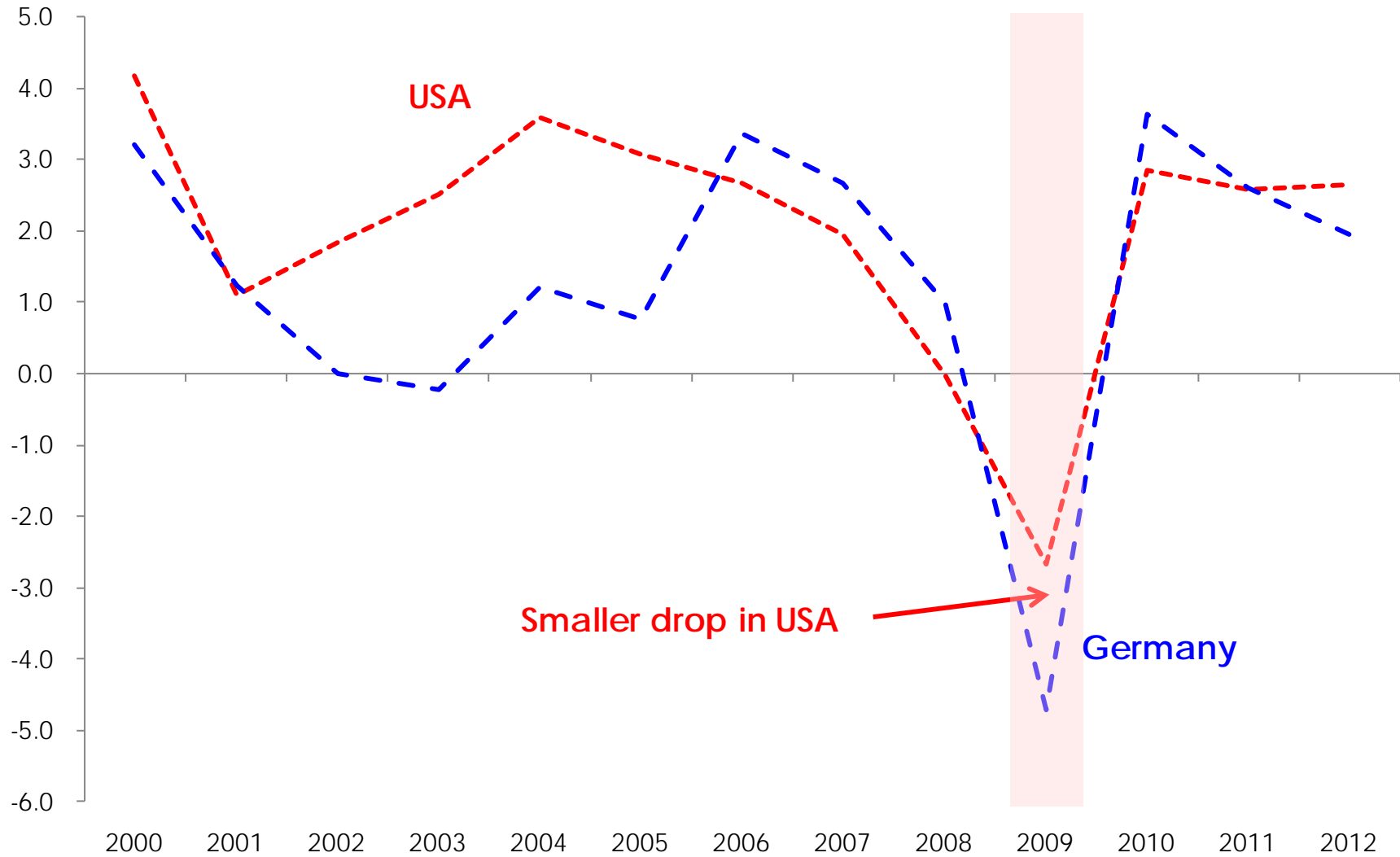
5 countries with worst LMP (IRL, ESP, ICE, US, P)

- With **USA** (P, ESP) as **big** (small) surprise; good OMP
- Australia Korea, are offline too (excellent OMP, medium LMP)

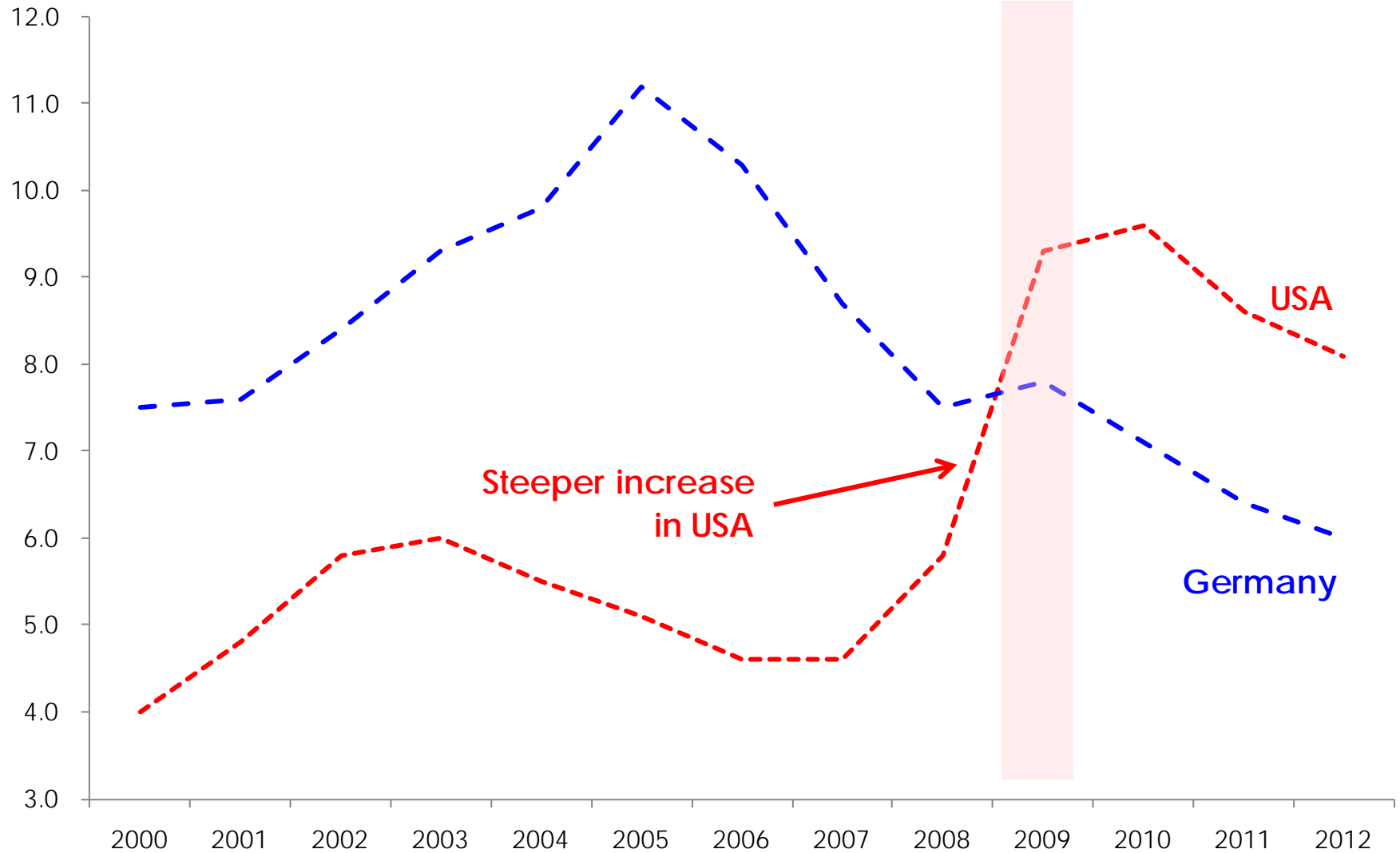
⇒ **Facit: the main story is US vs. Germany**

⇒ **For “Off line cases”, we need econometrics**

⇒ **LMP vs. OMP are correlated with $R = 0.6$**



Unemployment: USA vs. Germany



- The impact of employment protection (EPL)
- Importance of external flexibility (higher and fire)
- Internal flexibility (work sharing, part time; wage bargaining
- see also *OECD*, Policy Note 5, 2011)

Steps:

1. We investigate impact on LMP (excluding OMP)
2. On the LMP/OMP nexus (including OMP)
3. Tentative feedbacks on post-crisis period.

Several countries had “assisted firm level deals”

- Less hours plus long-term employment guarantees
- Partly subsidized by government schemes
- These schemes could be drags on recovery
 - Reducing necessary restructuring, shifts of employment
 - Normalizing working time prevents employment rebound
- Or they can
 - support quick recovery
 - reduce uncertainty, loss of human capital
 - increasing investment/consumption/quick recovery.

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- We assess the effect of **pre-crisis conditions**
 - Fiscal situation, trade competitiveness, credit growth, inflation
 - Macroeconomic **structure**
 - Size, openness, share manufacturing/finance
 - Labor market institution
 - EPL, ALMP
 - Shares of part time and temporary employment
 - Replacement rate
 - Level of training, education.

	Coefficient	t-value	R ²
Budget surplus/deficit (relative to GDP) 2007	-0.2569	(-0.295)	0.003
Budget surplus/deficit (relative to GDP) 2000 -2007; change	1.0196	(1.004)	0.036
Public debt (relative to GDP) 2007	0.1271	(1.090)	0.042
<i>Current account (relative to GDP) 2007</i>	<i>1.2687**</i>	<i>(2.588)</i>	<i>0.199</i>
<i>Current account (relative to GDP) 2000 - 2007; average</i>	<i>1.1682*</i>	<i>(1.957)</i>	<i>0.124</i>
<i>Domestic credits; growth 2001/2007</i>	<i>-0.1362***</i>	<i>(-3.581)</i>	<i>0.322</i>
<i>Domestic credits (relative to GDP); 2007</i>	<i>-0.0057</i>	<i>(-0.406)</i>	<i>0.006</i>
<i>Growth of real GDP 2000/ 2007</i>	<i>-4.0010</i>	<i>(-1.389)</i>	<i>0.067</i>
Consumer prices; 2000-2007; average	-0.1002	(-0.119)	0.001
Foreign exchange reserves (relative to GDP); 2007	0.1249	(0.576)	0.012

Macro structure	Coefficient	t-value	R ²
Openness 2007	0.0452	(0.435)	0.007
Government size 2007	-0.1052	(-0.306)	0.003
Share of manufacturing 2007	0.8531	(1.002)	0.036
Share of financial sector 2007	-1.9183	(-1.207)	0.051
GDP 2007	-0.0015	(-0.728)	0.019
GDP per capita 2007	-0.6401	(-1.312)	0.060
Country risk evaluation	0.2962	(0.840)	0.025

⇒ **Size of economy and share of manufacturing less important than in OMP explanations.**

	Coefficient	t-value	R ² adj.
Employment protection legislation	5.0336	(1.360)	0.030
Active labor market policy	-0.2704	(-0.040)	-0.037
Participation in (non) formal education	-0.1540	(-0.777)	-0.018
Replacement rate	-0.1354	(-0.545)	-0.026
Share secondary education	0.1030	(0.683)	-0.020
Average tenure	8.0523*	(2.048)	0.151
Share part time	0.4322	(1.427)	0.036
Bargaining coverage	0.1092	(0.730)	-0.025
Change in unemployment rate 2007	-8.5622***	(-3.368)	0.270
Output performance (OMP)	0.5298***	(3.789)	0.323

Impact of labor market structure on LMP: Multiple regressions **without** output performance

EPL 2008	ALMP	Part time	Rep	EDU	Tenure	UR 07	R ² adj.
8.33 (1.60)				0.34 (1.79)	3.55 (1.38)		0.133
11.38** (2.36)		0.61** (1.97)		0.31* (1.91)	1.51 (0.63)		0.233
7.50 (1.58)		0.74** (2.50)		0.01 (0.05)		-9.36** (-2.74)	0.396
11.34** (2.79)	15.08** (2.11)		-0.28 (-1.21)	0.36** (2.28)			0.482
11.59** (2.78)		0.58 (1.99)		0.28** (1.77)			0.207

EPL 2008	ALMP	Part time	UR 07	EDU	PC out	R ² adj.
10.33** (2.66)					0.59*** (4.76)	0.486
11.53** (2.88)		0.41 (1.19)			0.56** (4.40)	0.490
6.81** (2.67)	-2.26 (-0.47)	0.45* (1.93)	-7.14*** (-3.56)		0.25*** (2.88)	0.586
17.22** (4.33)				0.42** (2.65)	0.60** (5.54)	0.645
8.31** (2.26)	12.04 (1.60)	0.18 (0.54)			0.33** (2.69)	0.455
18.59** (4.54)		0.42 (1.43)		0.42 (2.67)	0.56** (5.08)	0.649

The impact of pre-Crisis conditions on LMP is:

- Positive related to current balances
- Negatively to credit growth
- Negative impact of output growth, **however** not significant

⇒ Similar to OMP explanations in *Aiginger (2011)*

⇒ Economic structure and past GDP growth less significant.

Institutions of labor market single equations

- Tenure significantly positive
- Employment protection insignificantly positive
- Part-time share insignificantly positive

⇒ Strong impact of past improvements in labor market performance (hysteresis)

⇒ Strong impact of output performance.

OMP **plus** labor market institutions

- Employment protection **highly significant**
- Some impact: part-time, education
- Output performance plus pre-crisis trend of unemployment: highly significant

⇒ **Positive impact of employment protection**
– if combined with OMP – is a strong result

⇒ **Differences between OMP and LMP strongly influenced by EPL.**

	Unemployment rate						GDP growth				
	2009	2010	2011	2012	2010-2008	2012-2010	2009	2010	2011	2012	Ø 2011/2012
Germany	7,8	7,1	6,4	6,0	-0,4	-1,1	-4,7	3,6	2,6	1,9	2,3
Austria	4,8	4,4	4,3	4,2	0,6	-0,2	-3,9	2,0	2,4	2,0	2,2
Netherlands	3,7	4,5	4,2	4,0	1,4	-0,5	-3,9	1,8	1,9	1,7	1,8
Average Top 3	5,4	5,3	5,0	4,7	0,5	-0,6	-4,2	2,5	2,3	1,9	2,1
USA	9,3	9,6	8,6	8,1	3,8	-1,5	-2,7	2,9	2,6	2,7	2,6
Portugal	9,6	11,0	12,3	13,0	3,3	2,0	-2,5	1,3	-2,2	-1,8	-2,0
Spain	18,0	20,1	20,6	20,2	8,8	0,1	-3,7	-0,1	0,8	1,5	1,1
Average Low 3	12,3	13,6	13,8	13,8	5,3	0,2	-3,0	1,3	0,4	0,8	0,6

⇒ No negative feedback: top 3 output perform low 3 in 2011/12 (so far).

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- Pre-crisis conditions
 - Good current account position benefits LMP
 - Credit growth reduces LMP
 - Economic structure has no significant effect
 - Positively related to EPL and output performance
 - Better LMP if unemployment decreased in 2007 (hysteresis).

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- LMP is positively related to employment protection after taking output performance into account
 - In-crisis LMP seems to benefit post-crisis growth
 - The role of EPL is highlighted from a different perspective
 - EPL might help to preserve human capital in times of rapid changes, when companies tend to dismiss too many workers
 - Specifically if combined with “assisted firm level” deals and pre-crisis increases in flexible part-time contracts (Germany).

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- Preliminary findings: crisis not over everywhere
 - Mainly industrialized countries
 - Results depend on inclusion/exclusion of OMP; UR07
 - Real world labor market policy in crisis rather complex
 - EPL + part time + firm level bargains + government assistance
 - Interrelation between pre-crisis institutions and in-crisis management should be investigated
- ⇒ **Coefficients on labor market institutions rather unstable.**

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- Crisis has become finally very different across countries
 - OMP depended on current accounts, credit/GDP growth
 - LMP on first two plus unemployment trend at start
 - EPL has nowhere a negative impact, together with OPM a positive
 - Combinations with part time, education, ALMP important
- ⇒ The crisis provides a rich agenda for further research and for improvement of LM.

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EPL	almp	part time	temp emp	rep	train	union	R ²
-0.4988 (-0.698)							0.018
-0.0305 (-0.045)	-2.9171** (-2.402)						0.196
-0.7288 (-1.004)		-0.0832 (-1.405)					0.092
-0.6749 (-0.808)			0.0352 (0.450)				0.026
-0.2154 (-0.261)	-1.7565 (-1.324)			-0.0932* (-1.905)	-0.0284 (-0.871)		0.298
-1.0091 (-1.195)		-0.0949 (-1.565)	0.0517 (0.667)			-0.0238 (-1.094)	0.145
-1.0476 (-1.364)	-2.5111** (-2.331)	-0.0819* (-1.752)	0.0975 (1.615)	-0.0734* (-1.853)	-0.0755** (-2.820)		0.592

Impact of LMP and EPL on post-crisis growth (2011, 2012, predicted)

	GDP growth 2011	GDP growth 2011	GDP growth 2011	GDP growth 2011	GDP growth 2012	GDP growth 2012	GDP growth 2012	GDP growth 2012
pc labor	0.0287** (2.377)	0.0281* (1.739)	0.0209 (1.099)	0.0326** (2.212)	0.0101 (0.930)	-0.0032 (-0.238)	-0.0003 (-0.023)	0.0053 (0.431)
pc outp		0.0009 (0.059)	0.0075 (0.406)	0.0012 (0.087)		0.0195 (1.482)	0.0173 (1.250)	0.0169 (1.439)
epl			0.5788 (1.274)	0.4328 (1.177)			-0.1754 (-0.517)	-0.1531 (-0.501)
almp				-1.2668* (-1.974)				-0.9451* (-1.772)
part time				-0.0322 (-1.020)				-0.0513* (-1.958)
Constant	0.8643 (1.131)	0.8546 (1.039)	-0.3013 (-0.234)	0.8350 (0.761)	2.2076*** (3.210)	2.0054*** (2.964)	2.3048** (2.403)	3.2464*** (3.560)