



EUROPEAN CENTRAL BANK

EUROSYSTEM

The use of PMR at the ECB: policy and research

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***Pro-competition regulatory reforms: design,
assessment, and impact using the PMR indicators***

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1 Use of PMR for analytical work: some examples

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3 Discussion

Use of PMR in ECB's analytical work: Some examples

- **Determinants of economic resilience of countries**

- What is the role of national framework conditions, including functioning of labour and product markets, for economic resilience? – [ECB WP 1984 \(2016\)](#)

- **Drivers of structural reforms and FDI**

- When do countries implement labour and product market reforms? – [ECB WP 2078 \(2017\)](#)
- How important are structural features of countries to attract FDI? – [ECB WP 066 \(2017\)](#)

- **Determinants of EA productivity growth**

- Are the productivity gains from digitalisation dependant on the quality of institutions? – [ECB WP 2675 \(2020\)](#)
- What is the impact of corruption in the business sphere on input misallocation? Does regulatory quality matter? – [ECB WP 1950 \(2016\)](#)
- **Is productivity-enhancing reallocation muted in more regulated/concentrated markets?**

Cyclical and structural variation in resource allocation: evidence for Europe

Eric Bartelsman, Paloma Lopez-Garcia and Giorgio Presidente; [ECB WP 2210 \(2018\)](#)

- **Question:** Is productivity-enhancing reallocation (PER) of labour and capital varying over the cycle? Are there structural differences in PER across countries/size classes/sectors?
- **Notes:** 6 countries; 8 macro-sectors; 12 years (2001-2012), data from CompNet
- **Baseline specification:**
$$\Delta x_{i,c,s,t} = \beta_1 \Delta cycle_{c,s,t} + \beta_2 relTFP_{i,c,s,t-3} + \beta_3 size_{i,c,s,t-3} + FE + \varepsilon_{i,c,s,t}$$
- **Impact of regulation:**
$$\beta_3 relTFP_{i,c,s,t-3} \times Regulatory\ indicator(dummy)_{c,s,t}$$

Higher concentration decreases PER- OECD PMR not significant



	dL	dK
Prod x Concentration of sales in large firms above median	-0.231*	-0.175**
Prod x Herfindahl index above median	-0.194	-0.155*
Prod x Lerner index above median	-0.211*	-0.133
Prod x EPL (sectorialised) above median	-0.659**	0.00295

Capital and labour (mis)allocation in the euro area: some stylized facts and determinants

Elisa Gamberoni, Claire Giordano and Paloma Lopez-Garcia; [ECB WP 1981 \(2016\)](#)

- **Question:** Has resource misallocation increased over time across all countries/sectors? Can we identify some correlated factors? Focus on business cycle, market regulation, financial constraints and uncertainty
- **Notes:** 5 countries; 9 macro-sectors; 12 years (2001-2012), data from CompNet
- **Baseline specification:**
$$\Delta var(MRPI)_{t,i,j} = \beta_0 + \beta_1 var(MRPI)_{2002,i,j} + \beta_2 crisis + \beta_3 uncertainty_{t-1,i,j} + \beta_4 real\ turnover_{t/t-1,i,j} + \beta_5 creditcost_{t/t-1,i,j} + \beta_6 PMR_{t/t-1,i,j} + \beta_7 EPL_{t/t-1,i,j} + \gamma_j + \theta_i + \varepsilon_{t,i,j}$$

Worse product market regulation increases capital and labour misallocation

PMR interacted with US sector entry rate (R&Z); interpolated following the RII dynamics

Dependent variable: Changes in MRPK dispersion	(1)	(2)	(3)
Dispersion in MRPK in 2002 (ln)	-0.090 0.06	-0.088 0.07	-0.090 0.07
Changes in real turnover (t/t-1)	0.124*** 0.04	0.127*** 0.04	0.125*** 0.04
Demand uncertainty (t-1)	0.205** 0.1	0.211** 0.1	0.206** 0.1
Changes in PMR (t/t-1)	0.17	0.211**	0.212**
Changes in EPL (t/t-1)			-0.082
Crisis dummy	-0.012	-0.016*	-0.015
Constant	-0.099*	-0.097*	-0.095*
Adjusted R-squared	0.096	0.107	0.106
N	283	283	283

Dependent variable: Changes in MRPL dispersion	(1)	(2)	(3)	(4)	(5)
Dispersion in MRPL in 2002 (ln)	-0.139* -0.08	-0.142* -0.08	-0.141* -0.08	-0.145* -0.08	
Changes in cost of credit (t/t-1)	0.061 -0.11	0.05 -0.11	0.05 -0.11	0.011 -0.11	
Changes in real turnover (t/t-1)	0.099*** -0.04	0.101*** -0.04	0.101*** -0.04	0.095*** -0.04	0.096*** -0.03
Demand uncertainty (ln; t-1)	0.062	0.066	0.066	0.06	
Changes in PMR (t/t-1)		0.156**	0.156**	0.189***	0.185***
Changes in EPL (t/t-1)				0.007	0.003
Changes in PMR*changes in EPL (t/t-1)				-0.06	-0.07
Crisis dummy	-0.024***	-0.027***	-0.027***	-0.030***	-0.027***
Constant	-0.018	-0.017	-0.016	-0.011	0.036***
Adjusted R-squared	0.116	0.13	0.127	0.135	0.119
N	283	283	283	283	351

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1 Use of PMR for analytical work: some examples

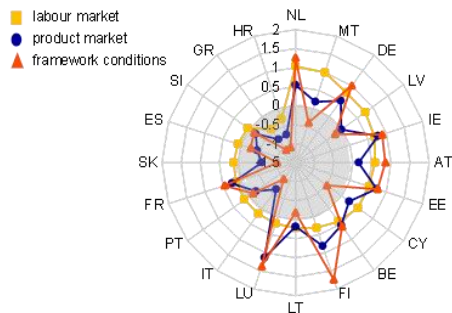
2 Use of PMR for Surveillance work

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Use in Surveillance Reports (Annual internal reports)

- Support the ECB task to monitor the macro and financial stability of countries

Gap vs. EA average
(z-scores)



Sources: OECD, World Bank, Heritage Foundation and World Economic Forum.

Notes: Each of the three dimensions (labour market, product market and framework conditions) is based on a composite indicator defined as an unweighted average of a set of indicators compiled by international organisations. Before averaging all indicators are transformed into z-scores. Zero refers to the historical euro area average. Higher values indicate better economic structures. The composite labour market indicator contains the OECD employment protection legislation, the Heritage labour market efficiency, the Fraser labour market regulation and the World Economic Forum labour market flexibility indices. The composite product market indicator contains the OECD Product Market Regulation, the Fraser Business Regulation, the World Economic Forum Domestic Competition, and the Heritage Business Freedom indices. The composite framework conditions indicator contains four World Bank governance indicators (regulatory quality, government effectiveness, absence of corruption, rule of law, political stability), the World Bank Doing Business, the World Economic Forum public institutions and the Heritage freedom and property rights indices. See Annex 3 for details on the

Long-term growth effects of structural reform episodes
(index from 1 to 6; 6 stricter regulation)

	(1) All EA countries	(2) EA excl. IE and LU
Framework conditions	1.300***	1.458***
lagged one period	1.904***	
lagged two periods	1.257	
Product market	0.340	
lagged one period	0.269	
lagged two periods	0.974*	0.490**
Labour market		
lagged two periods		1.001***
Fiscal balance (lagged one period)	-0.101**	0.036
R-squared	0.41	0.2

Source: ECB staff.

Notes: The table shows the results of a random effects panel regression for all euro area countries. The sample period 1998-2022 is divided into five 5-year windows. Framework conditions, product market and labour market are dummy variables denoted one if there is an improvement in the top 10 percentile of positive changes in one of our three composite indicators which is not succeeded by a "reversed" reform episodes, i.e. where top 10 percentile positive changes is followed by a top 10 percentile negative change. Fiscal balance is in percent of GDP. The dependent variable is 5-year real GDP/capita growth. Asterisks indicate the confidence levels (* p<0.10, ** p<0.05, *** p<0.01).

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Some suggestions going forward

- **More timely and frequent release of PMR data.**
 - This would be particularly helpful to gauge the timing of reforms and identify their effects, including their evolution over time (short-term vs. longer-term impact).
 - A second best would be the annual update of one of the PMR sub-indicators, most correlated with the aggregate [while the rest is updated every 5 years]
 - It is important that any change in the methodology is backward linked, so we have a consistent time-series with no breaks.
- **Update the NGEU-related analysis conducted in 2022 ([link](#))**
 - In particular, by comparing the expected (ex-ante) and actual (ex-post) impact of the corresponding policy measures on the PMR indicators.