

Quality of Government and the returns of Cohesion expenditure

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Institutions and quality of government

- ▶ **Growing consensus that institutions matter for economic development**
 1. **Sociology:** Tönnies, Weber, Granovetter, Coleman
 2. **Geography:** Amin, Thrift
 3. **Political Science:** Putnam
 4. **Economics:** North, Acemoglu, Rodrik

- ▶ **Quality of government will thus also matter**
 1. Government as a key organisation determining the rules of the game
 2. Quality of government mediating the efficiency of public investment

Quality of government and cohesion in the EU

- ▶ **These views have been assimilated by the EU in the application of its regional cohesion policy**
 1. If quality of government matters for the delivery of public policy
 2. Then the presence of weak governmental institutions
 - Weak rule of law
 - Corruption
 - Low quality of bureaucracy
 - Weak or unstable electoral institutions
 3. May undermine the assimilation of funds
 4. And affect the potential returns of the European Cohesion effort
- ▶ **Cap: Cohesion investment should not exceed 4% of GDP**
- ▶ **But little empirical evidence of the extent to which quality of government may affect the returns of public policies**

Aim of the presentation

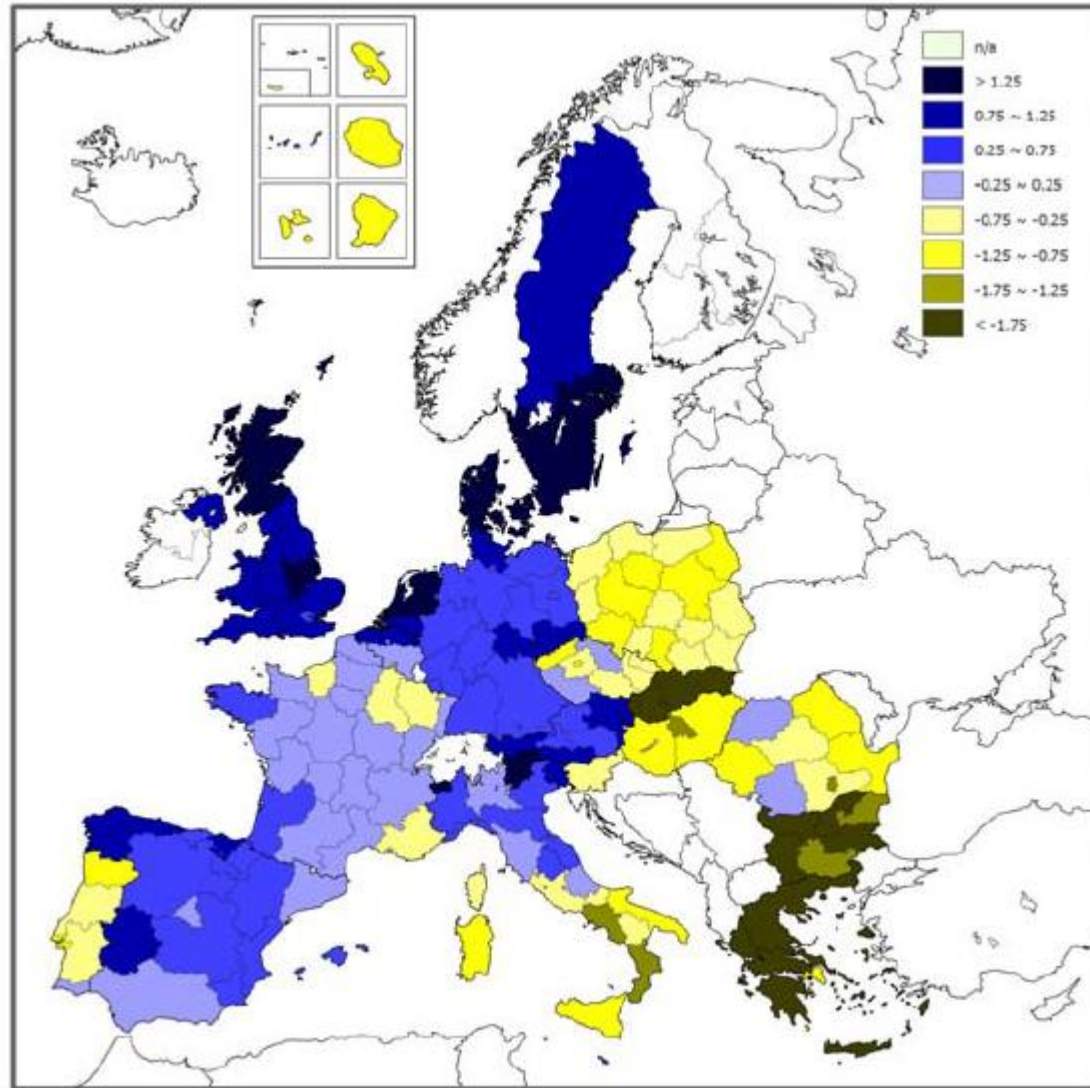
- ▶ **Explore the relationship between public investments and institutional factors, on the one hand, and regional performance, on the other**
 1. Focusing on the extent to which the quality of local or regional governments mitigates or enhances the effects of public investments
- ▶ **Is the effectiveness of cohesion expenditure in the EU mediated by the quality of government of the regions receiving funds?**
- ▶ **From a quantitative perspective**
- ▶ **Across 172 regions in the EU**

Measuring the quality of government

- ▶ **This type of analysis has been constrained by problems measuring the quality of government**
 1. Increasing data at national level
 2. But virtually nothing at a regional level, from a comparative perspective
- ▶ **Recent study by the Quality of Government Institute at the University of Gothenburg (QGI, 2010)**
 1. Development of a Quality of Government (QualGov) Composite Index
 - Rule of law
 - Corruption
 - Quality of the bureaucracy
 - Democracy and the strength of electoral institutions
 2. Survey data (2009) from some 34,000 respondents
 3. 18 EU countries, 172 regions

The Quality of Government Index

Regional quality of government index

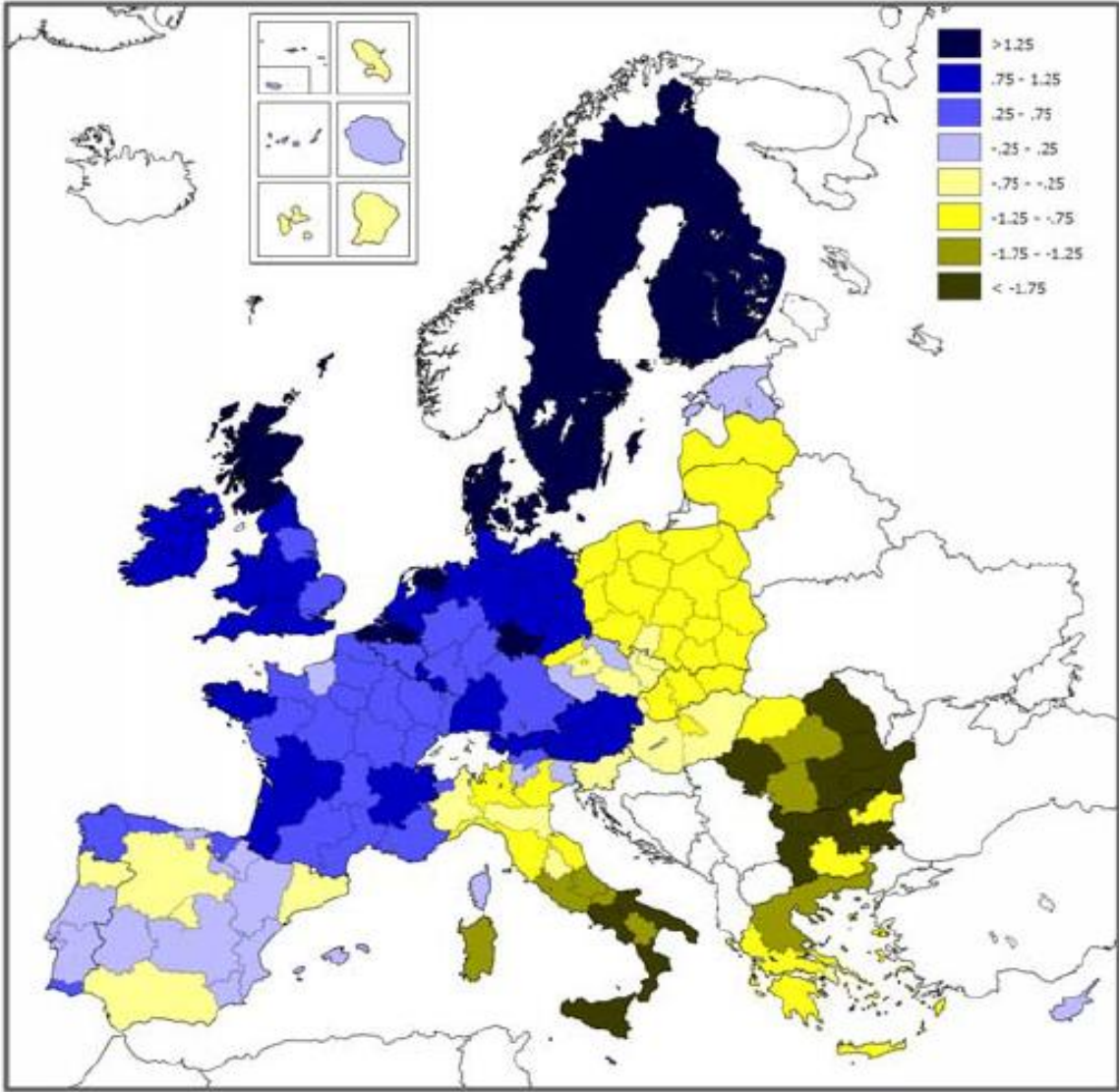


Source: Quality of Government Institute, 2010, p. 35

The Quality of Government Index

Combined quality of government index

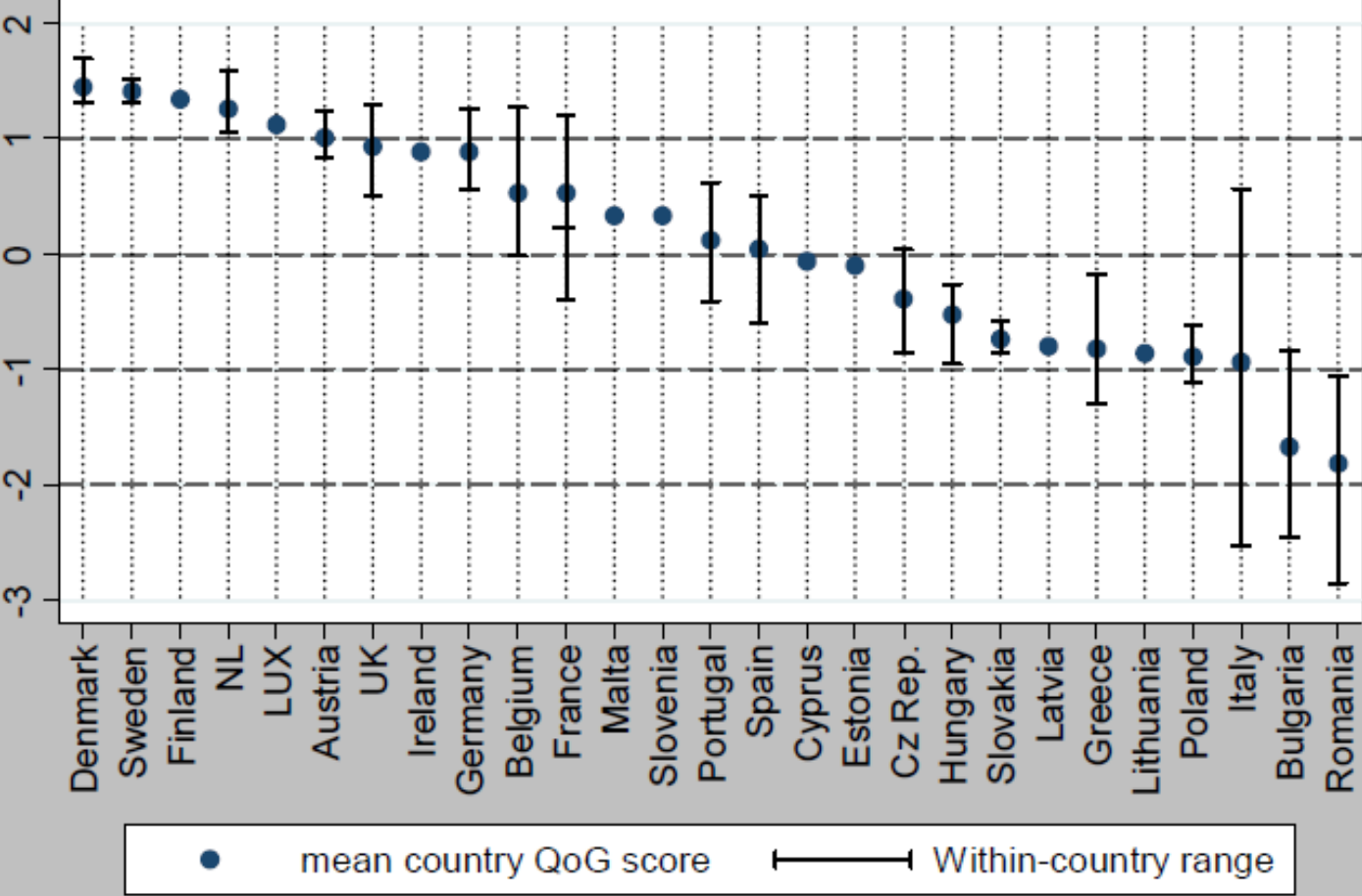
Using World Bank Governance Indicators



Source: Quality of Government Institute, 2010, p. 40

Big within- and cross-country differences

QoG in the E.U. and Subnational Variation



Source: Quality of Government Institute, 2010, p. 41

Model

$$\Delta y_i = \alpha + \beta y_i + \delta Cohesion_i + \phi QGov_i + \gamma Cohesion * QGov_i + \Phi X_i + v_i$$

► Where:

1. Δy is the average annual growth of real GDP per capita of region i over the period 1999-2005;
2. y_i is the GDP per capita in the previous period;
3. *Cohesion* represents the expenditure per capita in cohesion in region i by the EU in any given year;
4. *QGov* is a composite indicator of the quality of government in any given European region, collected by the Quality of Government Institute at the University of Gothenburg;
5. *Cohesion*QGov* is the interaction between the previous two variables;
6. X denotes a vector of control variables
 - Level of education and training of the adult population
 - Infrastructure endowment
 - Levels of employment
 - Agglomeration effects
7. v is the corresponding disturbance term.

Assumptions about quality of government

- 1. Quality of government remains stable (or changes at a very slow pace) over time**
 1. Need to interact quality of government with expenditure in order to introduce a time dimension
 2. Creation of a composite variable between quality of government and regional expenditure
 3. Giving us a general view of the returns of expenditure relative to regional quality of government
- 2. Quality of government changes at the same rate within every country, regardless of internal differences**
 1. Interpolate the quality of government composite index with a national governance variable extracted from the World Bank Governance Data
 - Rule of law
 - Governance effectiveness
 - Control of corruption
 - Voice and accountability
 2. Allows for the introduction of the main components

Assuming QoG does not change

VARIABLES	No threshold gr_gdp_pc	>80€ gr_gdp_pc	>€100 gr_gdp_pc	>€120 gr_gdp_pc	>€150 gr_gdp_pc
ln_GDPt1	-0.00278 (0.0104)	-0.0714 (0.0390)	-0.0959 (0.0454)	-0.128* (0.0571)	-0.125** (0.0526)
gov_pubexp_fix	4.54e-05* (2.44e-05)	5.41e-05* (2.76e-05)	5.79e-05* (2.62e-05)	5.60e-05** (2.27e-05)	4.89e-05** (1.94e-05)
ed_02_lf_	-0.0681* (0.0373)	-0.330** (0.120)	-0.382* (0.165)	-0.506** (0.214)	-0.527** (0.219)
ed_56_lf_	0.0119 (0.0494)	-0.138 (0.105)	-0.170 (0.138)	-0.296 (0.182)	-0.282 (0.189)
ln_transp_den_pop	0.00238 (0.00156)	0.0102 (0.00597)	0.0147 (0.00824)	0.0173* (0.00900)	0.0196* (0.0103)
er	0.000145 (0.000272)	0.000555 (0.000355)	0.000765** (0.000305)	0.000909** (0.000287)	0.000949** (0.000307)
ln_emp_den	-0.0385* (0.0200)	-0.0731* (0.0370)	-0.0665* (0.0319)	-0.0615* (0.0299)	-0.0746*** (0.0199)
ln_pop_den	0.0400* (0.0203)	0.0803* (0.0379)	0.0756* (0.0332)	0.0706* (0.0310)	0.0853*** (0.0234)
Constant	0.0581 (0.0957)	0.791* (0.419)	1.047* (0.502)	1.440* (0.659)	1.406* (0.610)
Time controls	Yes	Yes	Yes	Yes	Yes
Country controls	No	No	No	No	No
Observations	899	222	193	173	148
R-squared	0.262	0.400	0.426	0.432	0.443
Number of ctry	15	9	8	8	8

Returns to cohesion investment are greatest, the greater the investment and the better the quality of government

The relationship strengthens as the level of expenditure increases

The result for the control variables are generally as expected

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Assuming QoG does change

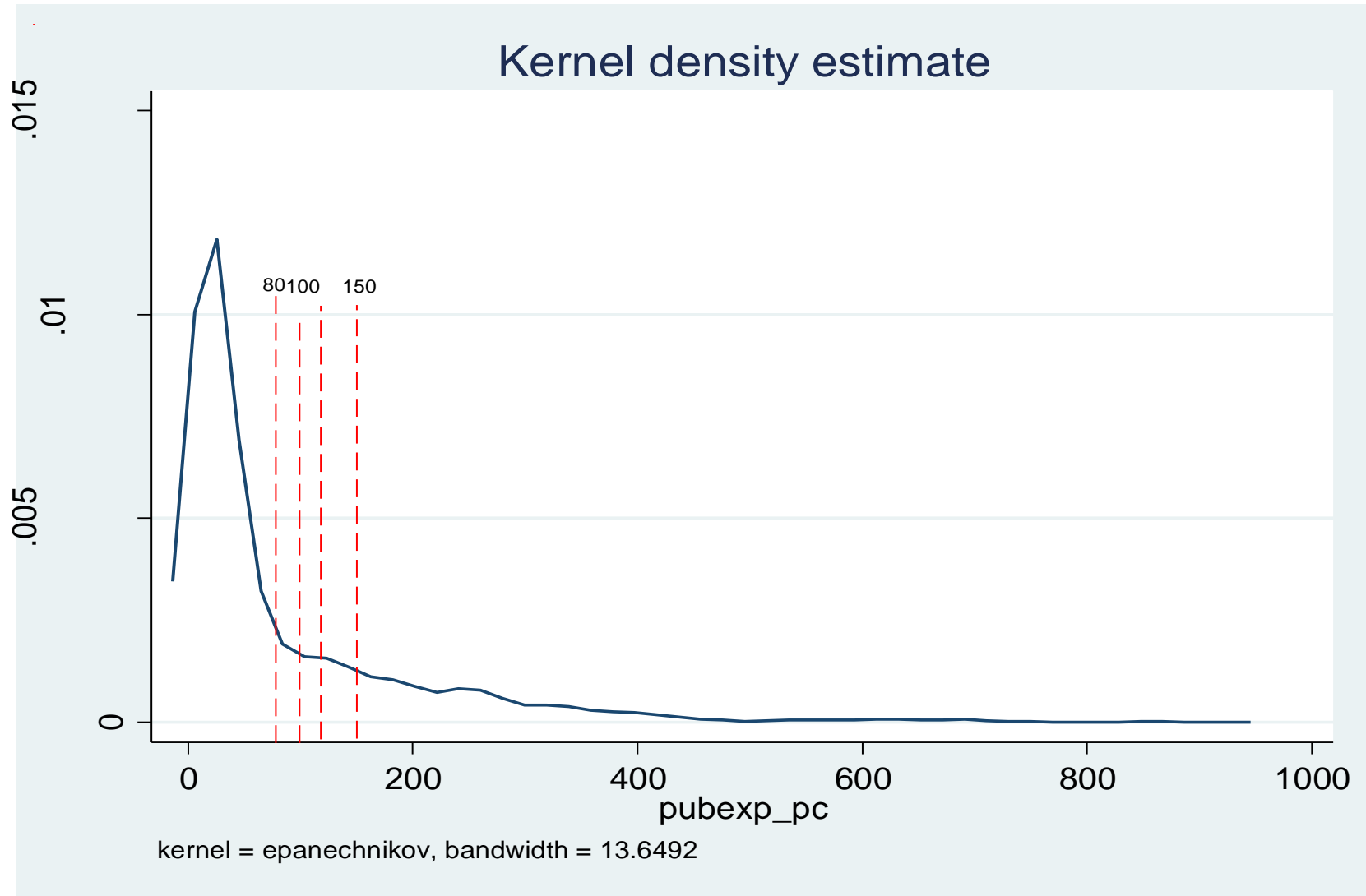
VARIABLES	(1) gr_gdp_pc	(2) gr_gdp_pc	(3) gr_gdp_pc	(4) gr_gdp_pc
ln_GDPt1	0.00220 (0.00952)	0.00244 (0.00814)	0.00175 (0.0101)	0.00180 (0.0101)
pubexp_pc	3.15e-05** (1.18e-05)		3.01e-05** (1.22e-05)	3.15e-05** (1.27e-05)
gov		0.00418 (0.00264)	0.00414 (0.00267)	0.00446 (0.00288)
gov_pubexp				-2.60e-06 (8.56e-06)
Controls	As in previous regressions			
Time controls	Yes	Yes	Yes	Yes
Country controls	Yes	Yes	Yes	Yes
Observations	941	978	941	941
R-squared	0.263	0.236	0.266	0.266
Number of ctry	17	17	17	17
Robust standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1				

Investment in Cohesion has a positive and significant association with economic growth

Regardless of the local and regional quality of government

Interaction between both factors not relevant

Unequal distribution of Cohesion expenditure



Using a threshold of €100 per head

Above a certain threshold of expenditure, investment in Cohesion ceases to be significant

Whereas quality of government becomes fundamental

And at a similar quality of government, greater investment does not lead to greater economic growth

VARIABLES	(1) gr_gdp_pc	(2) gr_gdp_pc	(3) gr_gdp_pc	(4) gr_gdp_pc
ln_GDPt1	-0.0708* (0.0383)	-0.0300 (0.0248)	-0.0870* (0.0408)	-0.0881* (0.0404)
pubexp_pc	3.06e-05 (2.41e-05)		5.67e-06 (1.77e-05)	2.08e-05* (9.22e-06)
gov		0.0124** (0.00542)	0.0158** (0.00578)	0.0257** (0.00897)
gov_pubexp				-4.31e-05** (1.44e-05)
Contorls	As in previous regressions			
Time controls	Yes	Yes	Yes	Yes
Country controls	Yes	Yes	Yes	Yes
Observations	211	248	211	211
R-squared	0.390	0.292	0.419	0.427
Number of ctry	10	14	10	10
Robust standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1				

Using different thresholds

VARIABLES	No threshold	>80€	>€100	>€120	>€150
ln_GDPt1	0.00180 (0.0101)	-0.0634* (0.0337)	-0.0881* (0.0404)	-0.118** (0.0495)	-0.108** (0.0464)
pubexp_pc	3.15e-05** (1.27e-05)	1.97e-05* (9.30e-06)	2.08e-05* (9.22e-06)	2.87e-05** (1.12e-05)	1.41e-05 (1.75e-05)
gov	0.00446 (0.00283)	0.0210** (0.00899)	0.0257** (0.00897)	0.0297*** (0.00782)	0.0369*** (0.00899)
gov_pubexp	-2.60e-06 (8.56e-06)	-3.92e-05** (1.57e-05)	-4.31e-05** (1.44e-05)	-5.50e-05** (1.73e-05)	-7.15e-05*** (1.76e-05)
Controls		As in previous regressions			
Time controls	Yes	Yes	Yes	Yes	Yes
Country controls	Yes	Yes	Yes	Yes	Yes
Observations	941	245	211	187	159
R-squared	0.266	0.387	0.427	0.430	0.441
Number of ctry	17	11	10	10	10
Robust standard errors in parentheses					
*** p<0.01, ** p<0.05, * p<0.1					

The returns of greater cohesion expenditure weaken as the threshold increases

While the impact of the quality of government becomes more and more important fundamental

As does the interaction between expenditure and quality of government

Conclusions

- ▶ **Both regional expenditure on Cohesion and quality of government make a difference for regional economic growth**
- ▶ **The greater the level of expenditure and the better the quality of the local government, the higher the economic returns of public expenditure on Cohesion**
- ▶ **Quality of government strongly mediates the returns of expenditure on Cohesion**
- ▶ **At levels of Cohesion expenditure per capita where investment may make a difference, the quality of government is a key factor determining the returns of public expenditure**
- ▶ **And, in these regions, greater levels of cohesion expenditure would not lead to greater economic growth, unless the quality of the government is significantly improved**

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More working papers on this and related issues

<http://repec.imdea.org/>

