Greece and the Euro:
The cost of crumbling institutions

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THE GREEK ECONOMY AND THE EURO: FROM CRISIS TO RECOVERY

TUFTS UNIVERSITY, BOSTON, 12/04/2019

The key ambition of EMU –and hope of those joining in- was that per capita incomes converge to the level of its most advanced countries.

This required that lower income countries grow faster. *But it didn't last for EA12…*

The 1992 Treaty had urged member states to attain the objectives set out in Article 130a, according to which

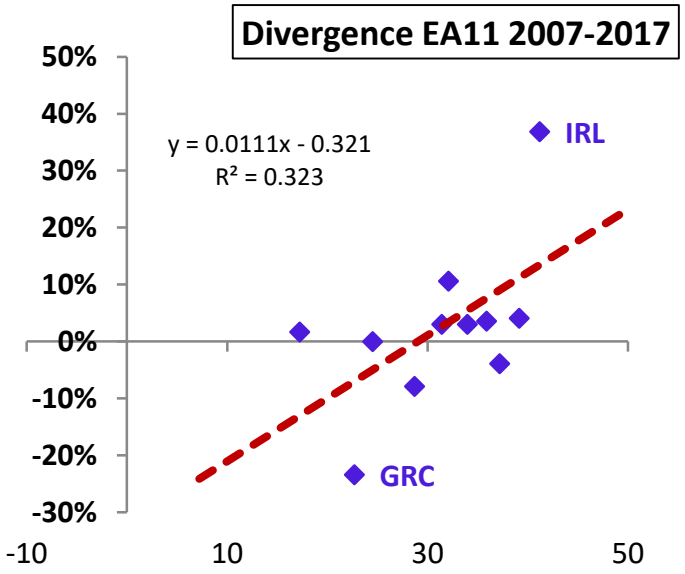
"*…the Community shall aim at reducing disparities between the levels of development of the various regions*".

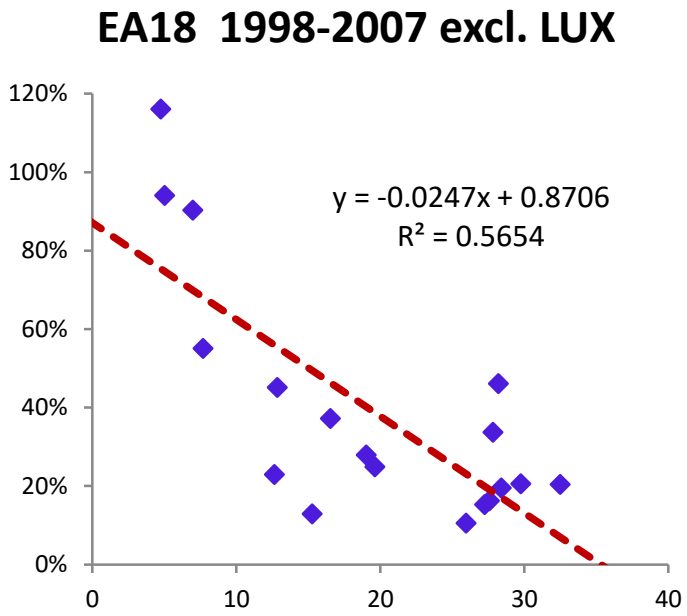
A framework of actions and reforms, known as the Lisbon Strategy, was launched after 2000 as the key to enhance growth in the post-EMU era.

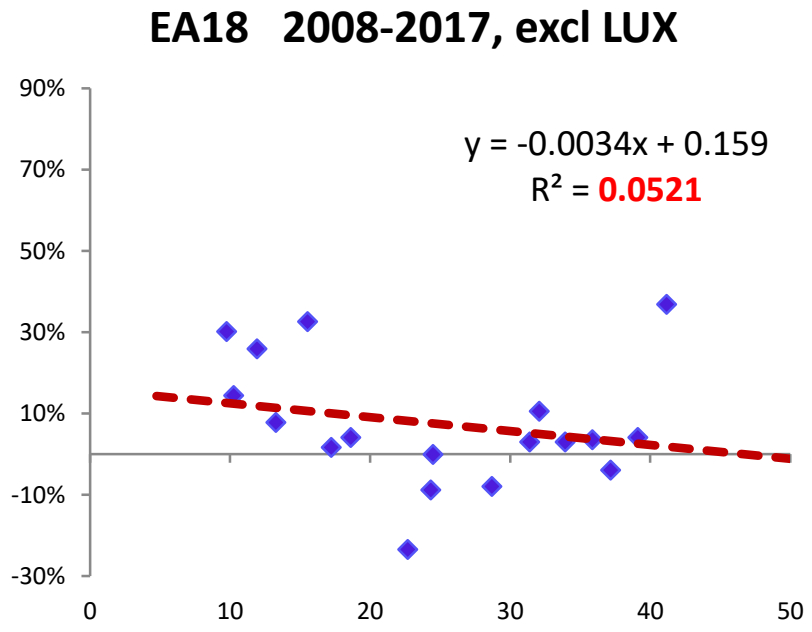
New launch in 2005 (after the Kok Report).

Again, in 2010 as the post-crisis Europe 2020 Strategy

Convergence is evident only by including the 2003 new accession countries.
Prior to 2007, they were in a catching-up process toward EMU , but subsequently the process stalled too.



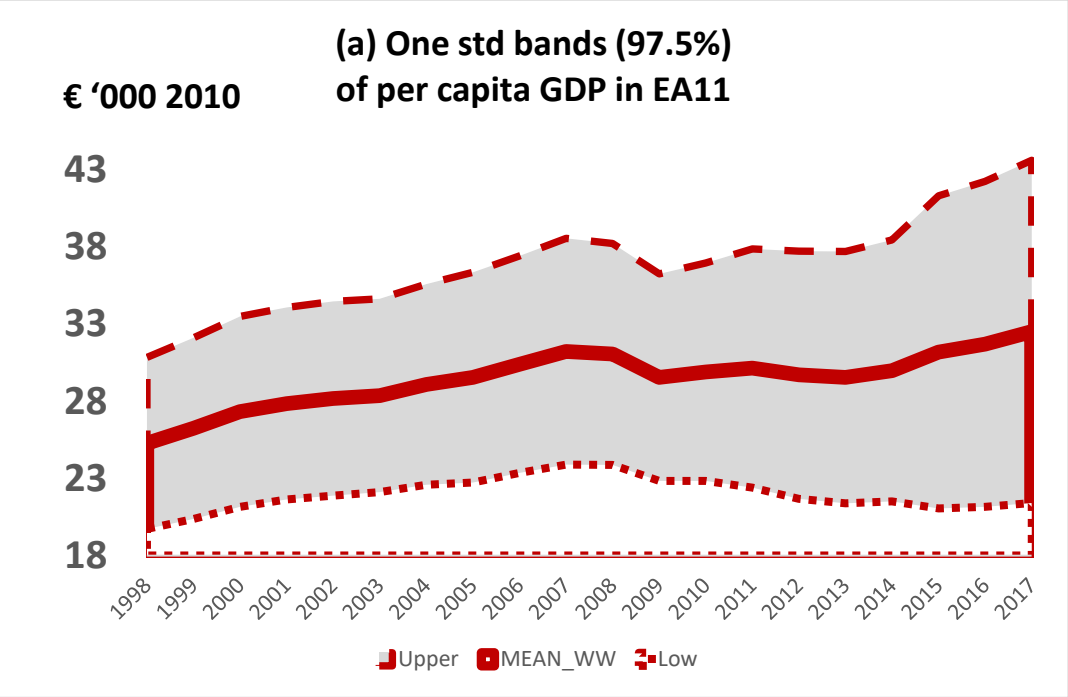


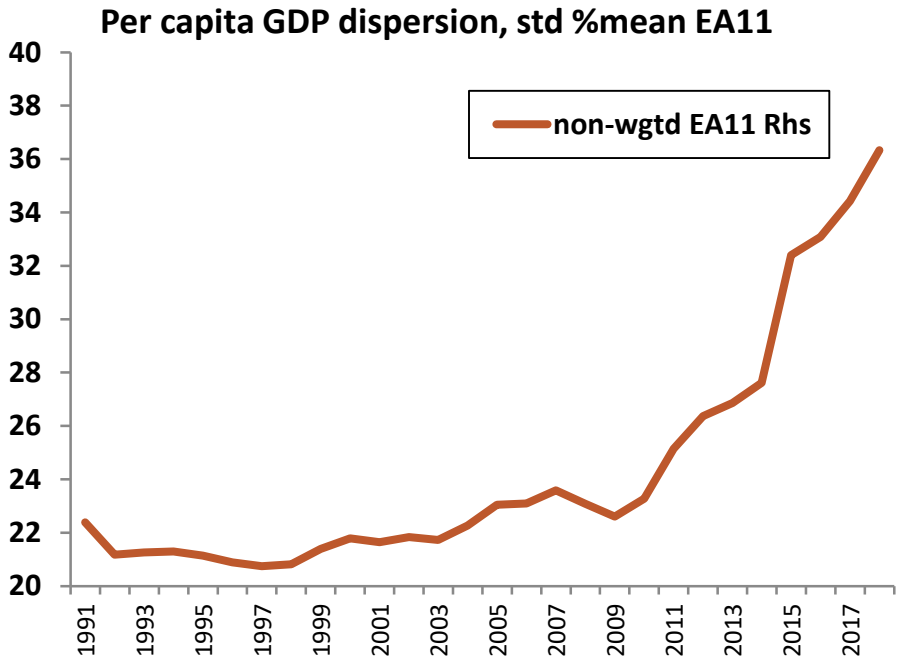


After the crisis:
Divergence among older EA

But even for that group , convergence severely *weakened* after the global crisis

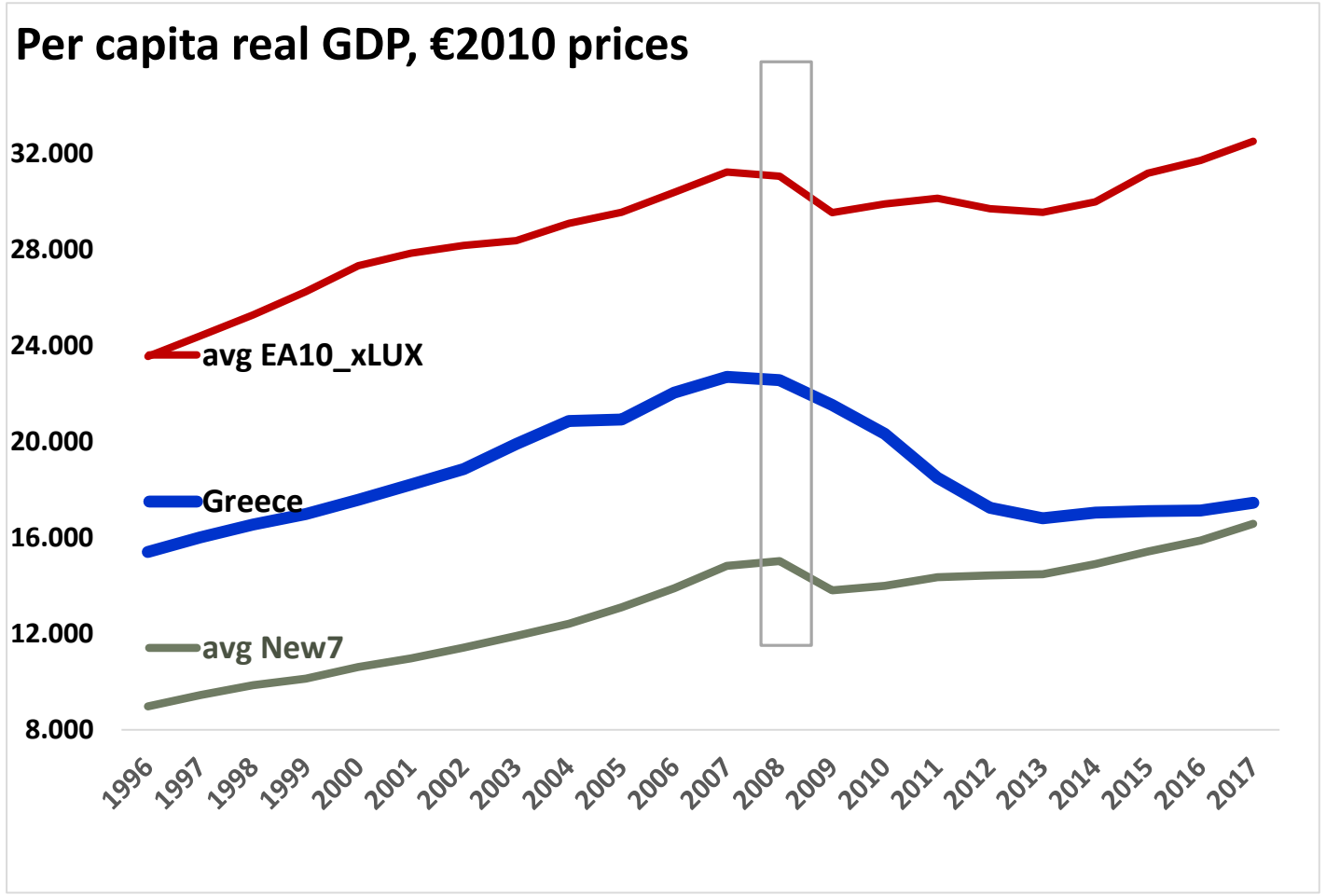
Dispersion of per capita GDP was kept around 25% of mean Euro Area level, until the global crisis. It surged afterwards, by nearly half of the previous level





After 2009, dispersion surged mainly due to the fall OF gdp in southern EA countries

Nowhere, divergence has been so strong as in Greece:
From fast convergence to the L-shaped stagnation

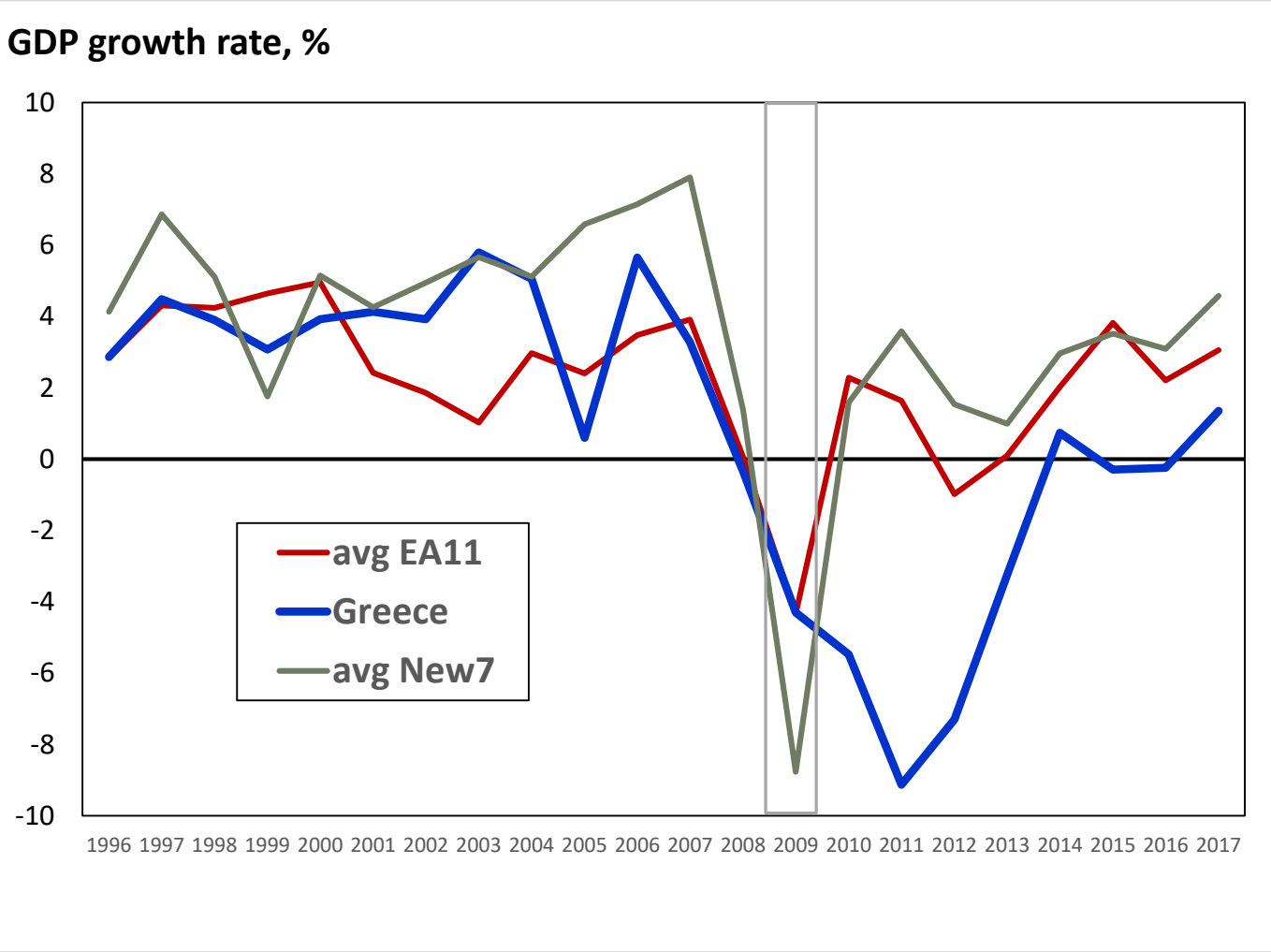


After 2009, all EA countries suffered losses in per capita income: Even more so those in southern EA countries: Spain, Portugal, Italy

But far more than elsewhere the fall was more abrupt and extensive in Greece, with pc GDP reaching the level it had back in the late 1990s.

This profoundly shifted Greece's position vis-à-vis her peers in the Euro Area and is now closer to the New accession countries

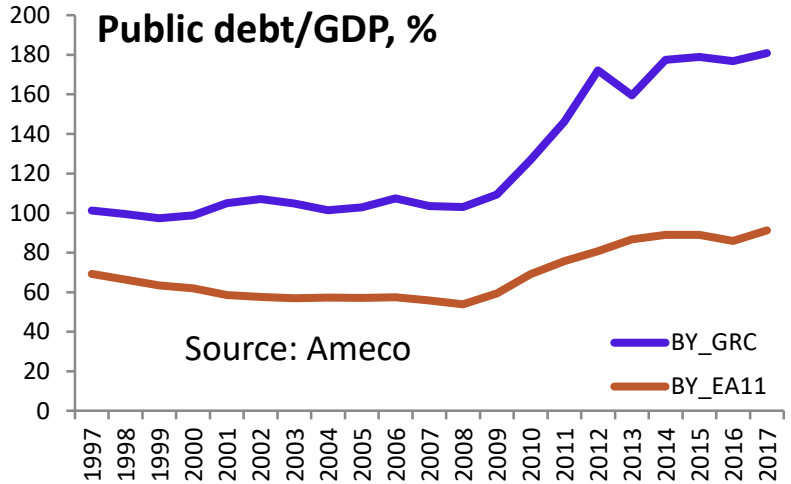
The key factor behind income divergence after 2009, obviously was the gap in GDP growth rates.

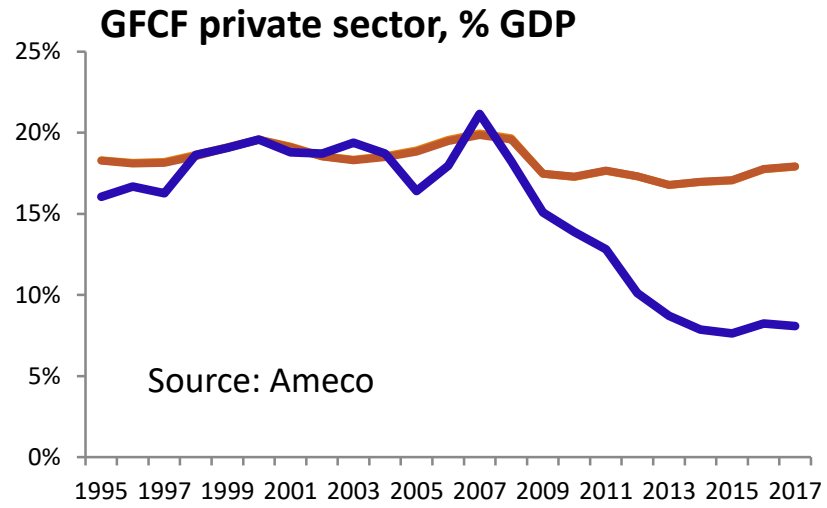


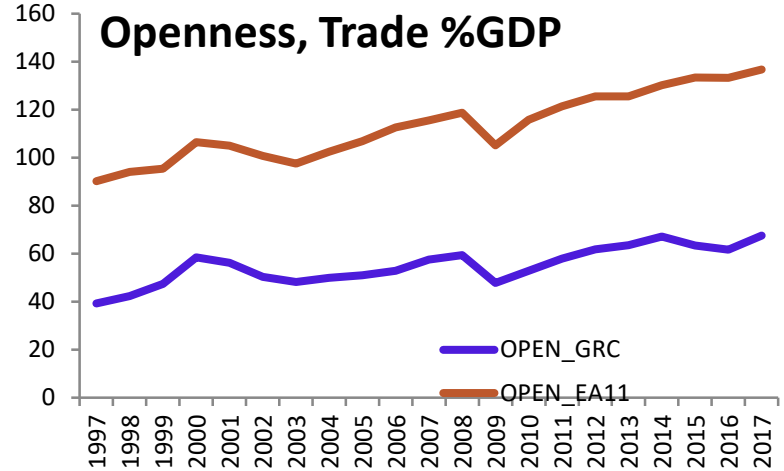
Therefore, the really interesting question is what makes growth rates to diverge so largely ?

In particular, what made Greece's growth rates to sink so low, and without an imminent lift in sight

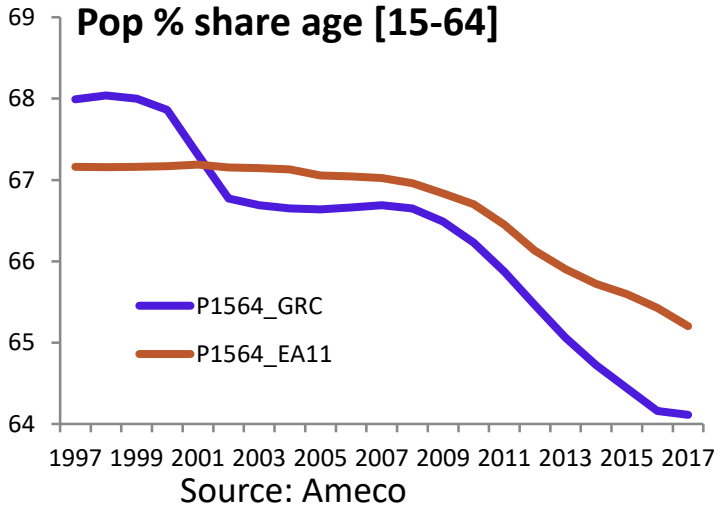
After the crisis, several economic indicators deteriorated in Greece relative to the EA peers; only few improved



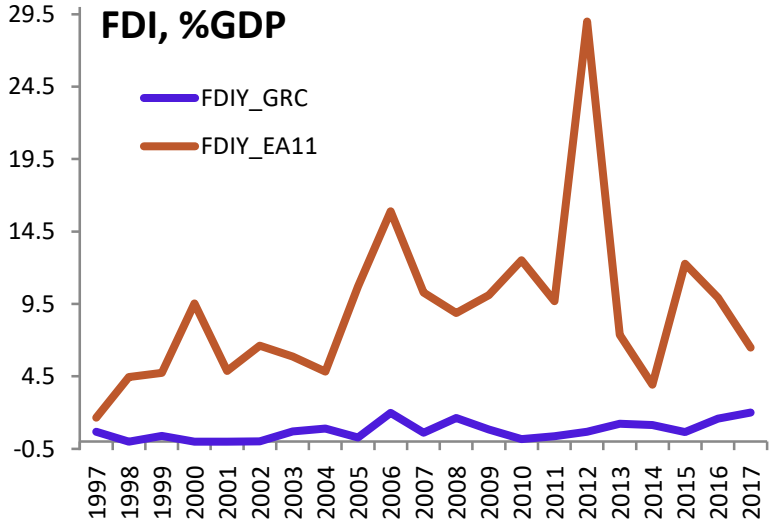




Source: World Bank



Source: Ameco



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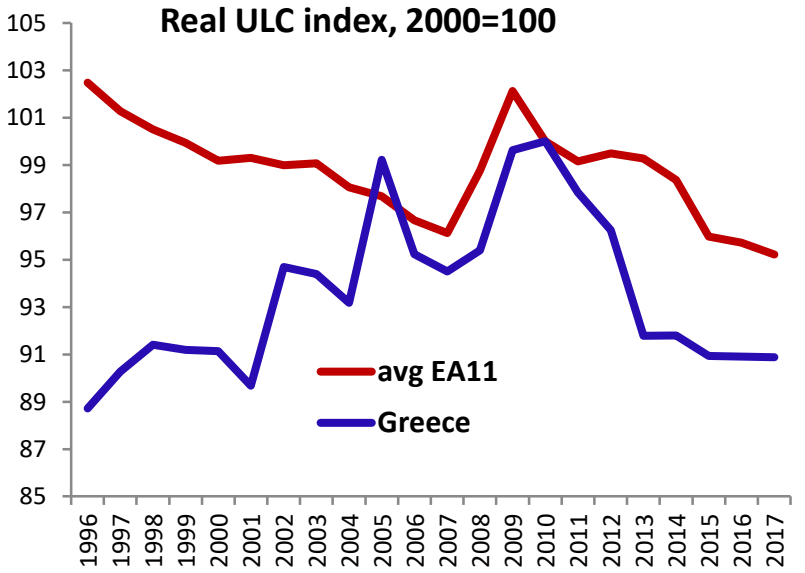


Source: Ameco

How the quality of institutions affects economic growth ? Recent evidence include:

ECB: Masuch, K., Moshammer, E. & B. Pierluigi (2016). *Working Paper* No. 1963
"Institutions, public debt and growth in Europe".

Using the six World Bank Governance Indicators and the debt burden, the paper investigates whether initial levels of the quality of institutions and public debt can help to **explain the different average real growth performances** in Europe during the last 20 years and why real convergence in the euro area seems to have been lagging behind.

Handling the WB indicators in an economic model poses some problems:
The six indicators are highly & positively correlated in EA and in each particular country as well.

Using a Principal Components Analysis obtain a weighted average with equalized variances

WWBGI =
[0.180*CCOR+0.175*GEFF+0.122*PSAV+0.168*REGQ+0.179*RLAW+0.176*VACC]

Greece: the most serious gap in the efficacy of institutions, and the highest resistance in implementing reforms

Enhanced Surveillance Report on Greece, Economic and Financial Affairs, November 2018

"… there are ***delays for several specific reform commitments*** that would need to be addressed with urgency so as to ensure that all are completed as soon as possible"

IMF Gives Downbeat View of Greek Economy at End of Bailout Era. July 31, 2018.

The IMF sees Greece's growth rate dropping sharply after a short-lived rebound. With growth lagging behind its Euro Area peers, Greece is expected to further diverge in the future

…

Examples of deteriorating institutions in Greece

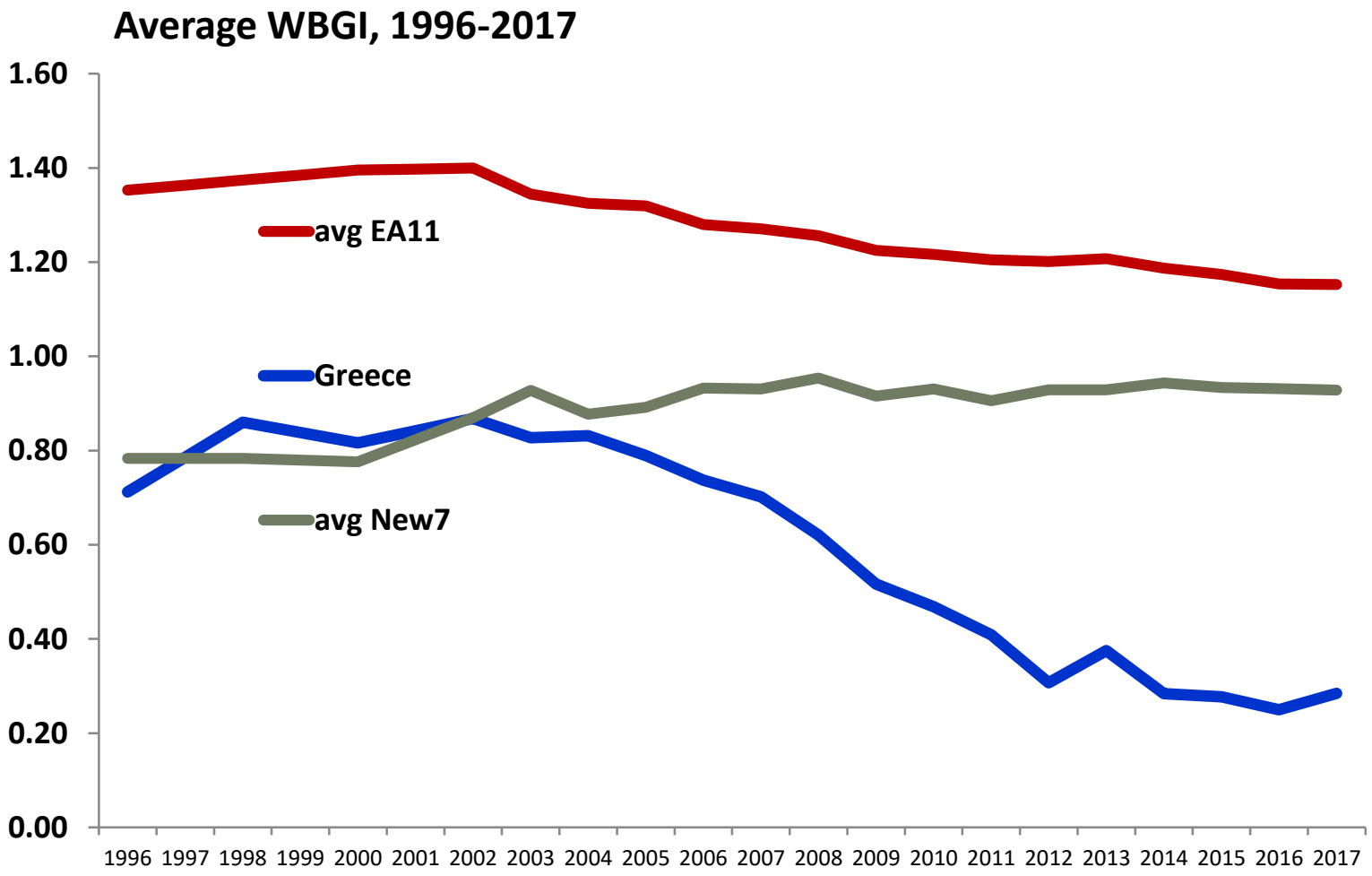
Greece has the most sclerotic Product Market Regulation,
This inhibited competition & precipitated recession
http://www.oecd.org/competition/

Country rankings for the EU: Greece scored the highest 5.0 degree of political risk in 2017. EU average was 1.6 points

Litigious civil & commercial cases	2010	2016	Rise
Time to settle	**190 days**	**640 days**	**+237%**

Non-Performing Loans, % of total	2010	2017	Change
Greece	**9.12%**	**45.57%**	**+36.5 pu**
Euro area	**5.60%**	**3.20%**	-2.4 pu

Property crimes	1998-2008	2009-2017	change
Burglaries, Thefts, robberies, etc	**73,469**	**113,326**	**+54%**



Source: World Bank

The institutional quality gap between Greece and the EA11 is widening fast .

The institutional quality gap between the New7 and the EA11 is closing steadily.

The gap widens even more sharply between Greece and the New7, and this might be detrimental to growth and convergence

Estimating an empirical growth model: Barro & Sala-i-Martin (2018) *'Economic Growth'*
Co-integration equation in ECM form:

- ***gr_world:*** world activity, other than EA
- ***netfk:*** fixed investment
- ***prims:*** public balance
- **RULC:** real ULC
- ***y(t-k) :*** pc income (convergence)
- **and… *WBGI***

growth rate per capita GDP:

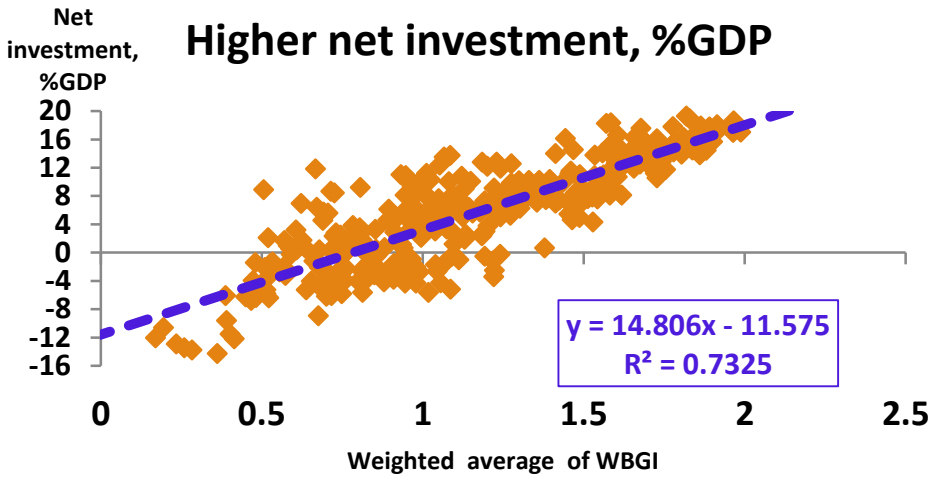
$$\Delta \ln \boldsymbol{y} = -\lambda \cdot \boldsymbol{lny}(-\mathbf{1}) + \boldsymbol{\alpha_0} + \alpha_1 \Delta \boldsymbol{lny}(-\mathbf{1})$$

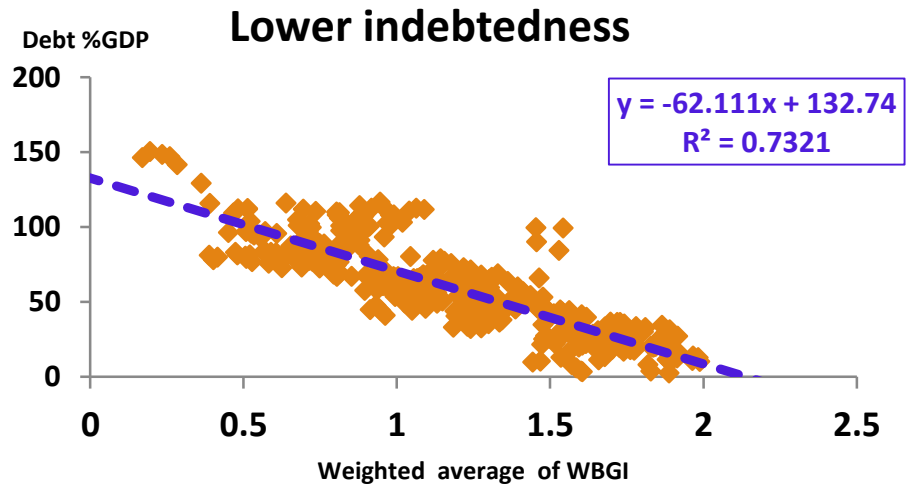
$$+ \alpha_2[grworld] + \alpha_3 \Delta netfk + \alpha_4 \Delta prims - \alpha_5 \Delta rulc \quad + \quad \boldsymbol{\alpha_6\, \Delta wbgi}$$

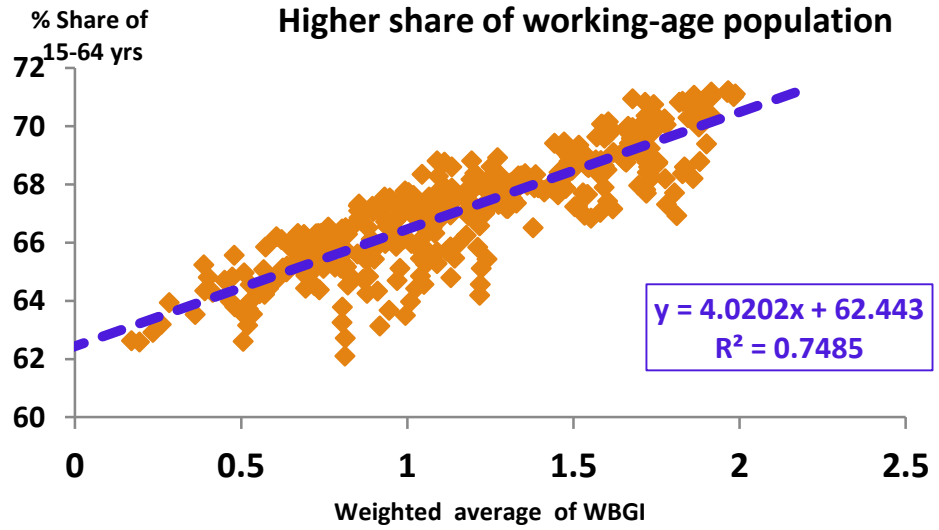
$$+ \{\boldsymbol{\beta_1 netfk}(-\mathbf{1}) + \boldsymbol{\beta_2 prims}(-\mathbf{1}) - \boldsymbol{\beta_3 rulc}(-\mathbf{1}) \quad + \quad \boldsymbol{\beta_6 wbgi}(-\mathbf{1})\}$$

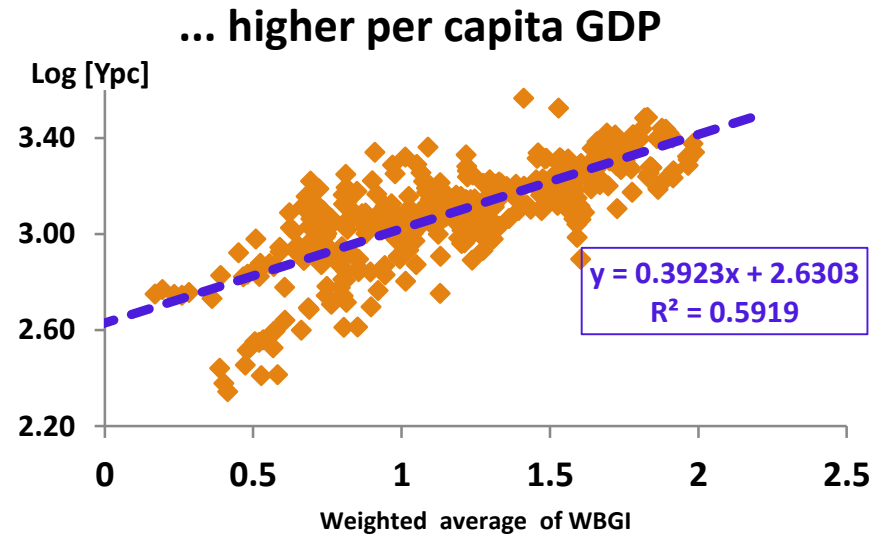
$$+\boldsymbol{\beta_4} time + \boldsymbol{\beta_5} dumPSI\_2011$$

Problem # 2. Better institutions, i.e. higher WB indicators, seem to be strongly correlated with …









Correlations obtained for 1998-2017, Euro Area 19 with country fixed adjustments

Problem #1.
Direction of causality: Tests for EA18 reveal both-way causality between pc GDP and WBGI

Model #1 ➔ Use lagged values of WBGI variables,
so that they are not Granger-caused by current growth rate of pc GDP

$$+\alpha_6 \cdot \Delta\,[WBGI\,(-1)] \; + \beta_6 \cdot [WBGI(-2)]$$

Problem # 2. Better institutions seem to be strongly correlated with other variables.

Model #2 ➔ Obtain residuals, orthogonal to Log (YPC) and other variables

$$WBGI = const + \theta_1 Log(YPC) + \theta_2 NETFK + \theta_3 GBAL + \theta_4 ULC + \boldsymbol{Res\_W}$$

In ECM equation, use the residuals as explanatory variables

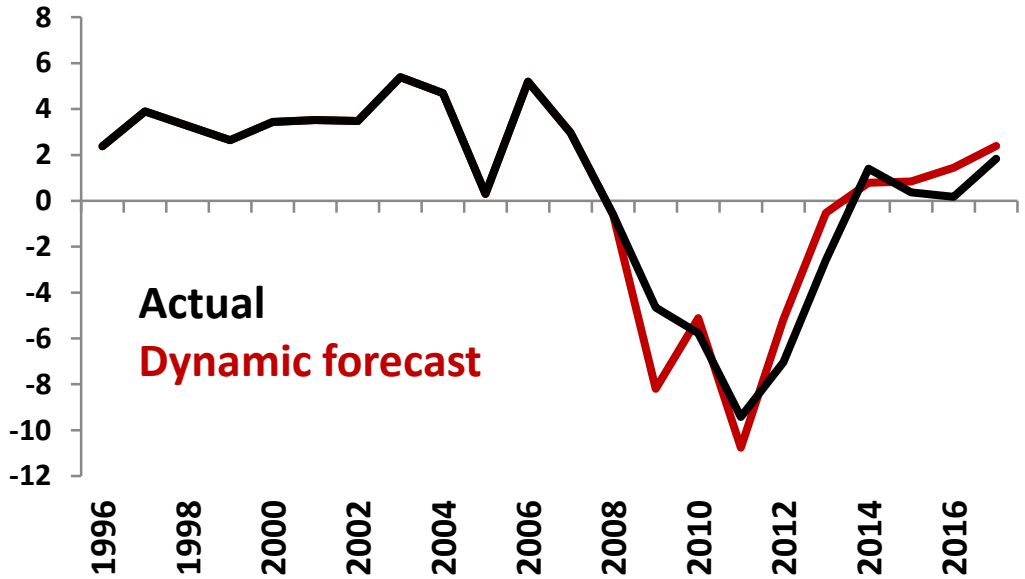
$$+\alpha_6 \cdot \Delta\,[Res\_WBJ \; + \beta_6 \cdot [Res\_WB(-1)]$$

Use EA18 (without Greece) as synthetic controls, and see how Greece would behave

growthpc(t)	Model EA18	
Explanatory variables	*Coeff.*	S.E.
const	**22.51*** **	4.853
growthpc(-1)	**0.241*** **	0.042
grworld_xea	**0.504*** **	0.081
Δ netfk	**0.506*** **	0.055
Δ prims	**0.190*** **	0.047
Δ rulc	**-0.525*** **	0.044
Log [Ypc(-1)]	**-4.845*** **	1.392
netfk(-1)	**0.072***	0.040
prims(-1)	**0.137****	0.043
rulc(-1)	**-0.133*** **	0.033
Δ(WBGI(-1)	**5.248****	2.087
WBGI(-2)	**3.261****	1.386
dummy PSI (2011)	-6.500	
Trend	0.052	0.036

Period	1998-2017	
Obs:	360	
Adj R-squared	0.723	
S.E.R.	1.960	
Hannan-Quinn	4.380	
DW stat	1.813	

Goodness of fit



Hypothesis:

➔ **Assume that there was no erosion of institutional capacity after 2008.**

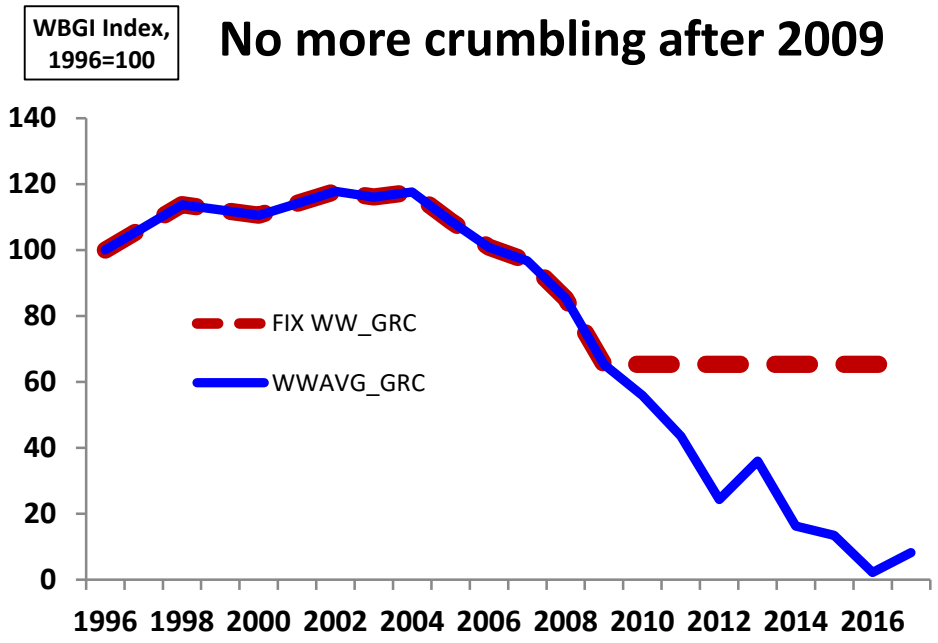
➔ **Obtain a counterfactual run of Model #1 with higher institutional capacity and effectiveness.**

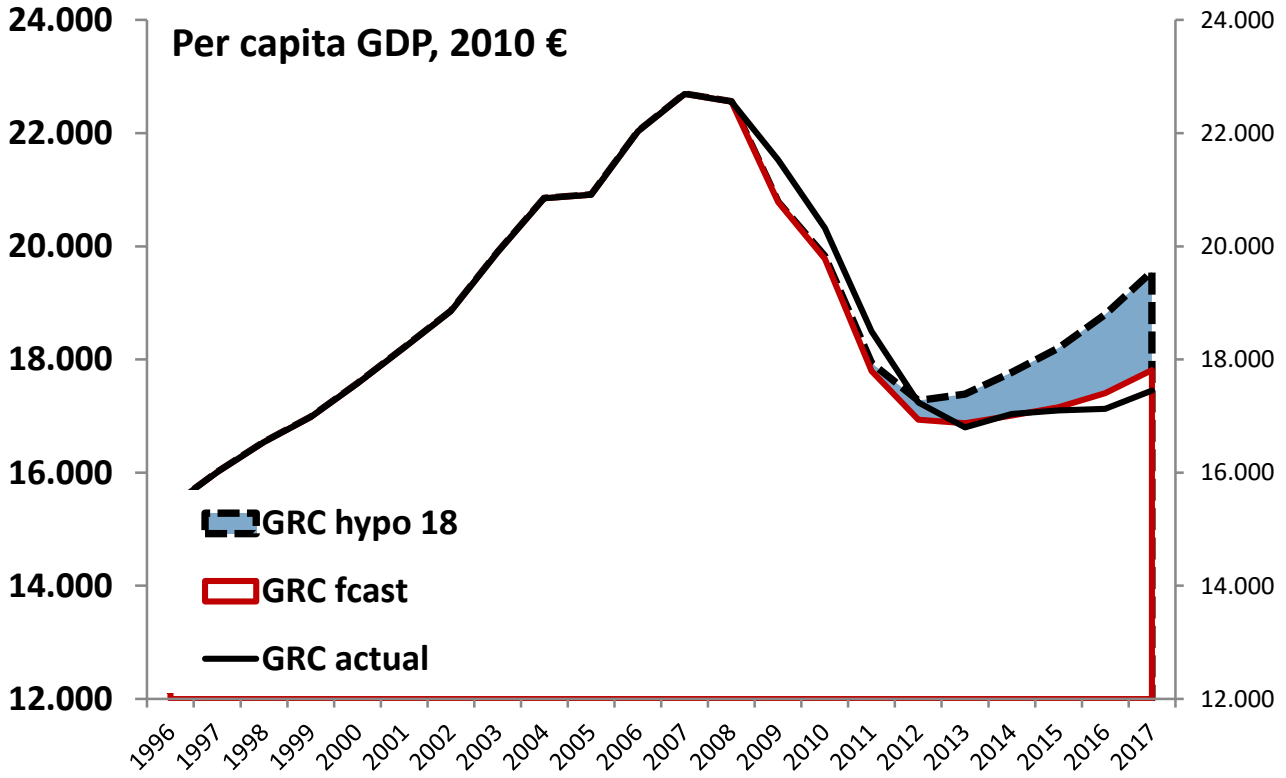
The Good-Governance dividend:

In 2017: per capita GDP would have been higher by €uro 1,435 and keep going up!

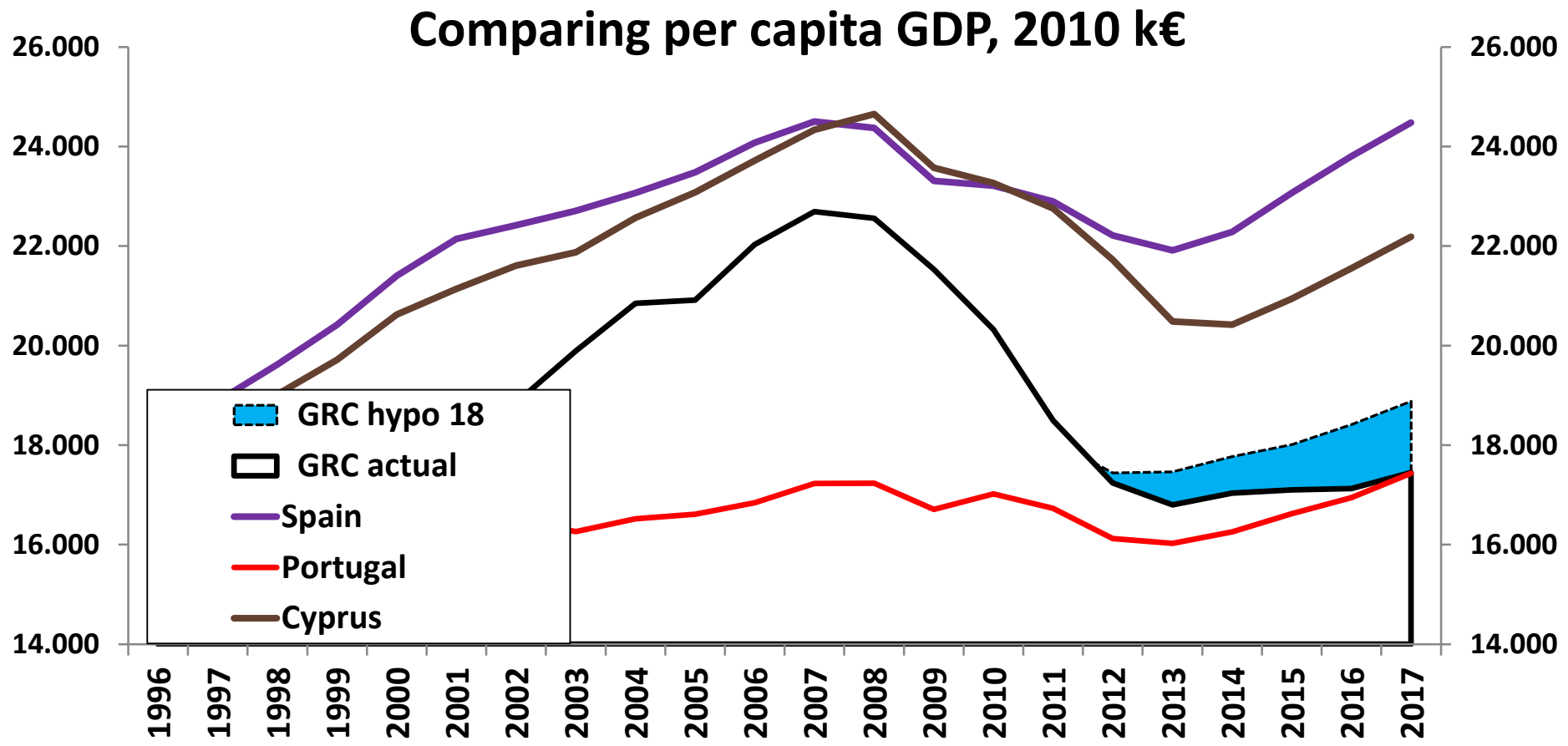
Using a discount rate of 5%, GDP losses

Present Value = € 44 bn, 2010 prices





Greece would have behaved in a manner similar to the other countries, undergoing the same sort of adjustment and fiscal rehabilitation



Set priorities in each particular group of institutions

A non-exhaustive list of possible suggestions:

Area	Action
Rule of Law	**Judicial effectiveness, Law enforcement, Cut exceptions, Law rationalization.**
Political stability & avoidance of violence	**Stable electoral system, fixed terms, consensual politics, spread arbitration processes**
Regulatory Quality	Market reforms, strong competition authorities, binding regulations and enforcement
Government effectiveness	Leaner government with fewer decision layers, best practice benchmarking
Control of corruption	Auditing, transparency, effective sanctions for offenders, public bans. Reform corporate governance
Voice & Accountability	Public auditing, policy assessments & citizens' response