

14/01/2015

Economic crisis, regional inequalities and development

*Οικονομική κρίση, περιφερειακές ανισότητες και
περιφερειακή ανάπτυξη*

Γιάννης Ψυχάρης

Τμήμα Οικονομικής και Περιφερειακής Ανάπτυξης

Πάντειο Πανεπιστήμιο Κοινωνικών και Πολιτικών Επιστημών

Σκοπός και στόχοι

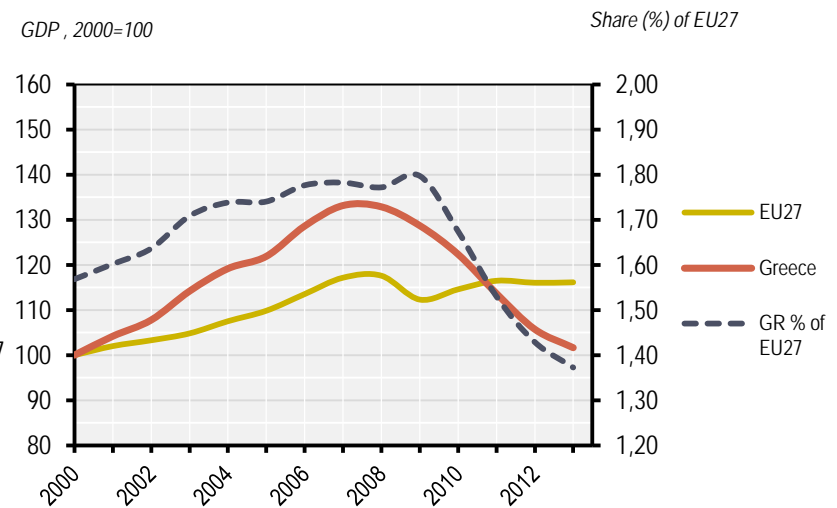
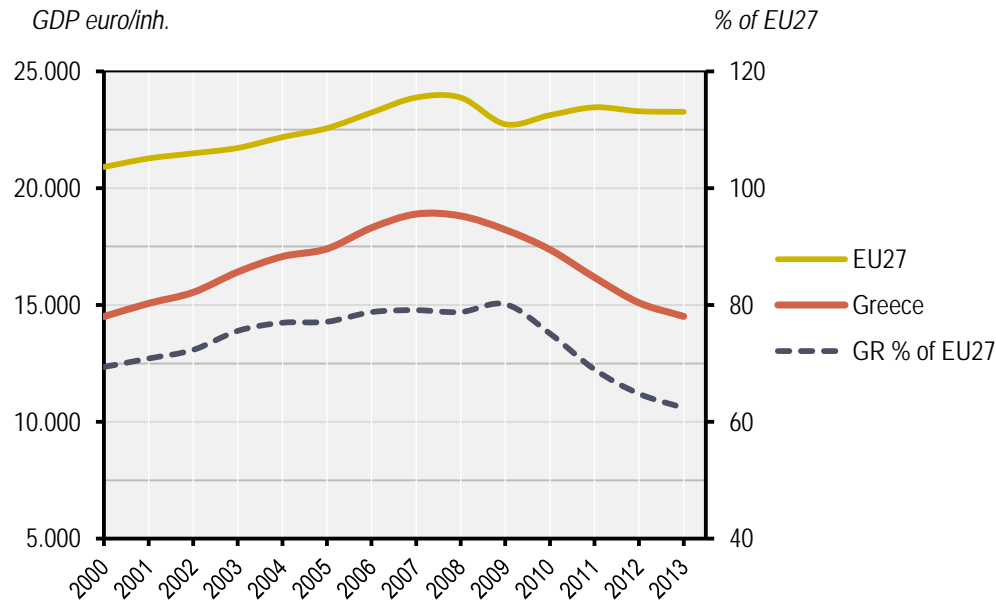
Η γεωγραφική διάσταση της οικονομικής κρίσης

- Οικονομική κρίση και οικονομική γεωγραφία
- Δημοσιονομική κρίση και οικονομική κρίση – συσχέτιση και φορά αιτιότητας
- Οικονομική κύκλοι, περιφερειακές ανισότητες και περιφερειακή πολιτική

Η γεωγραφική διάσταση της οικονομικής κρίσης στην Ελλάδα

- Χωρική Ανάλυση ΑΕΠ, ανεργίας, εισοδήματος
- Περιγραφική ανάλυση – εξέλιξη των περιφερειακών ανισοτήτων
- Χαρτογραφική ανάλυση και μια πρώτη

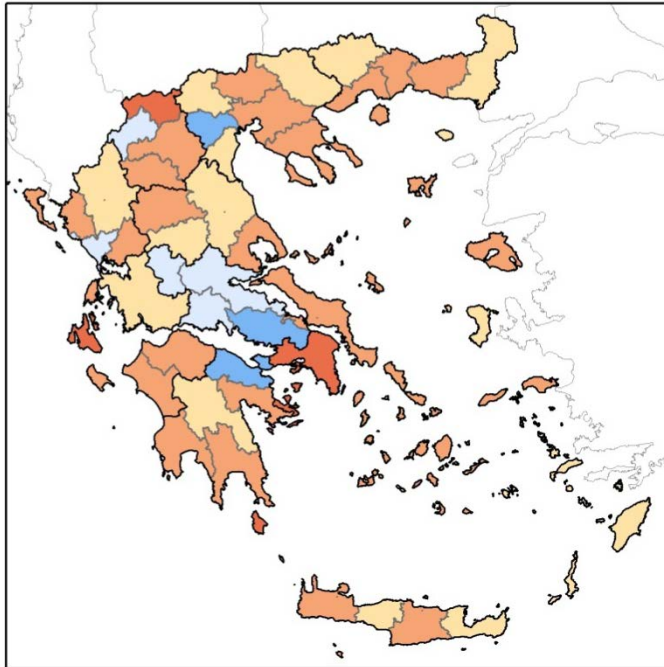
Gross domestic product at 2005 market prices per capita – National level



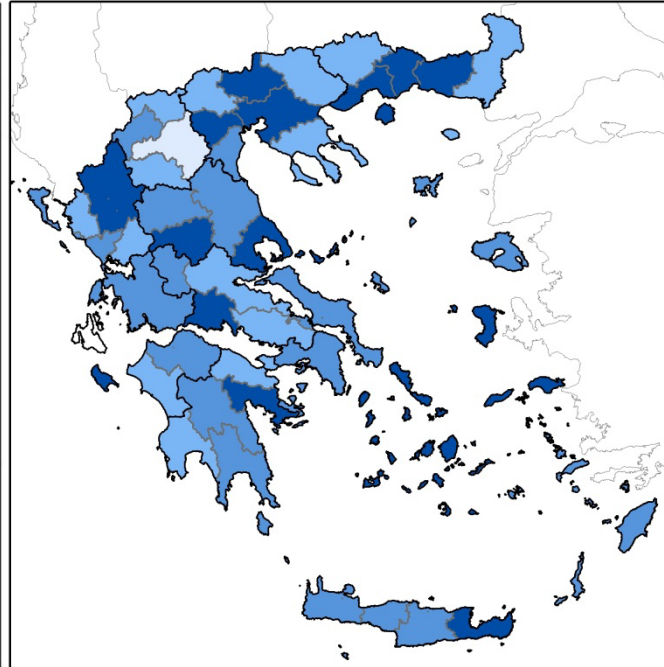
	Gross domestic product at 2005 market prices		Gross domestic product at 2005 market prices per capita	
	European Union (27 countries)	Greece	European Union (27 countries)	Greece
Change 2000-08	17.60%	32.87%	14.18%	29.67%
Change 2009-13	3.41%	-21.02%	2.34%	-20.35%
Change 2000-13	16.13%	1.64%	11.28%	0.04%
CAGR 2000-08	2.05%	3.62%	1.67%	3.30%
CAGR 2009-13	0.84%	-5.73%	0.58%	-5.53%
CAGR 2000-13	1.16%	0.13%	0.83%	0.00%

Gross domestic product at 2005 market prices per capita – Regional NUTS III level

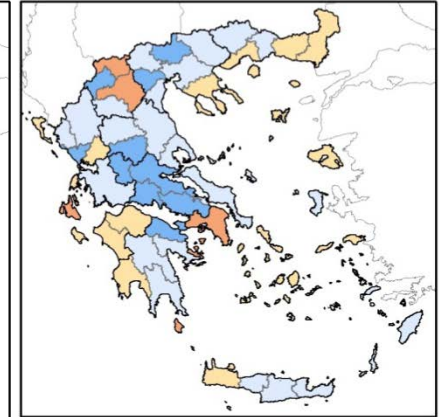
GDP per capita, Compound Annual Growth Rate
(Period 2000-2008)



GDP per capita, Compound Annual Growth Rate
(Period 2009-2011)



GDP per capita, Compound Annual Growth Rate
(2000-2011)

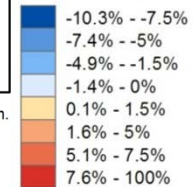


0 50 100 200
km.

— NUTSII Borders

GDP per capita

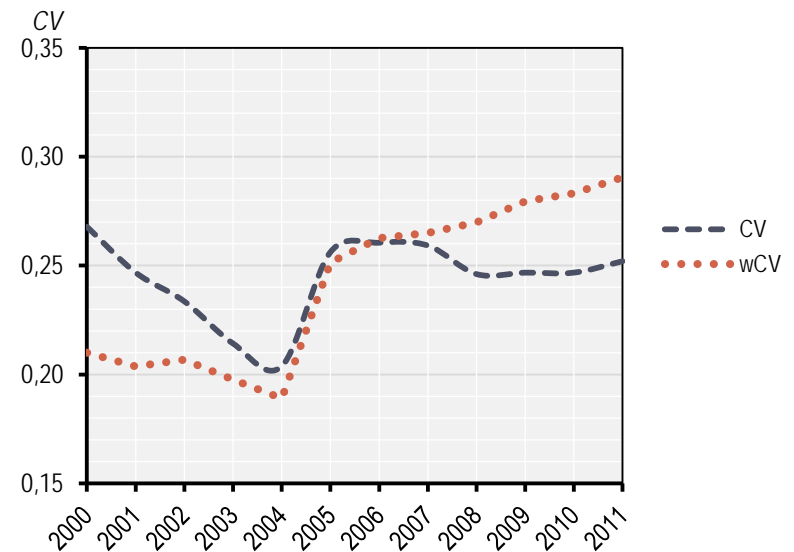
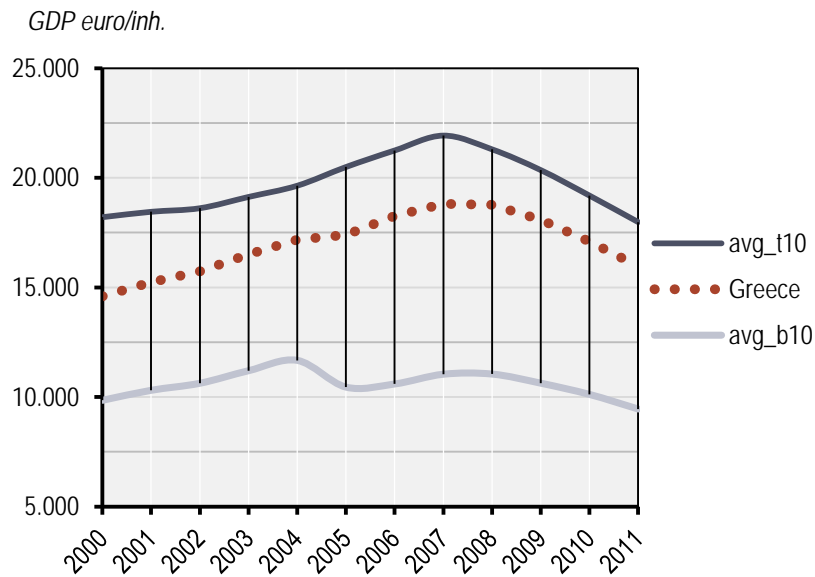
Compound Annual Growth Rate - CAGR



0 50 100 200
km.

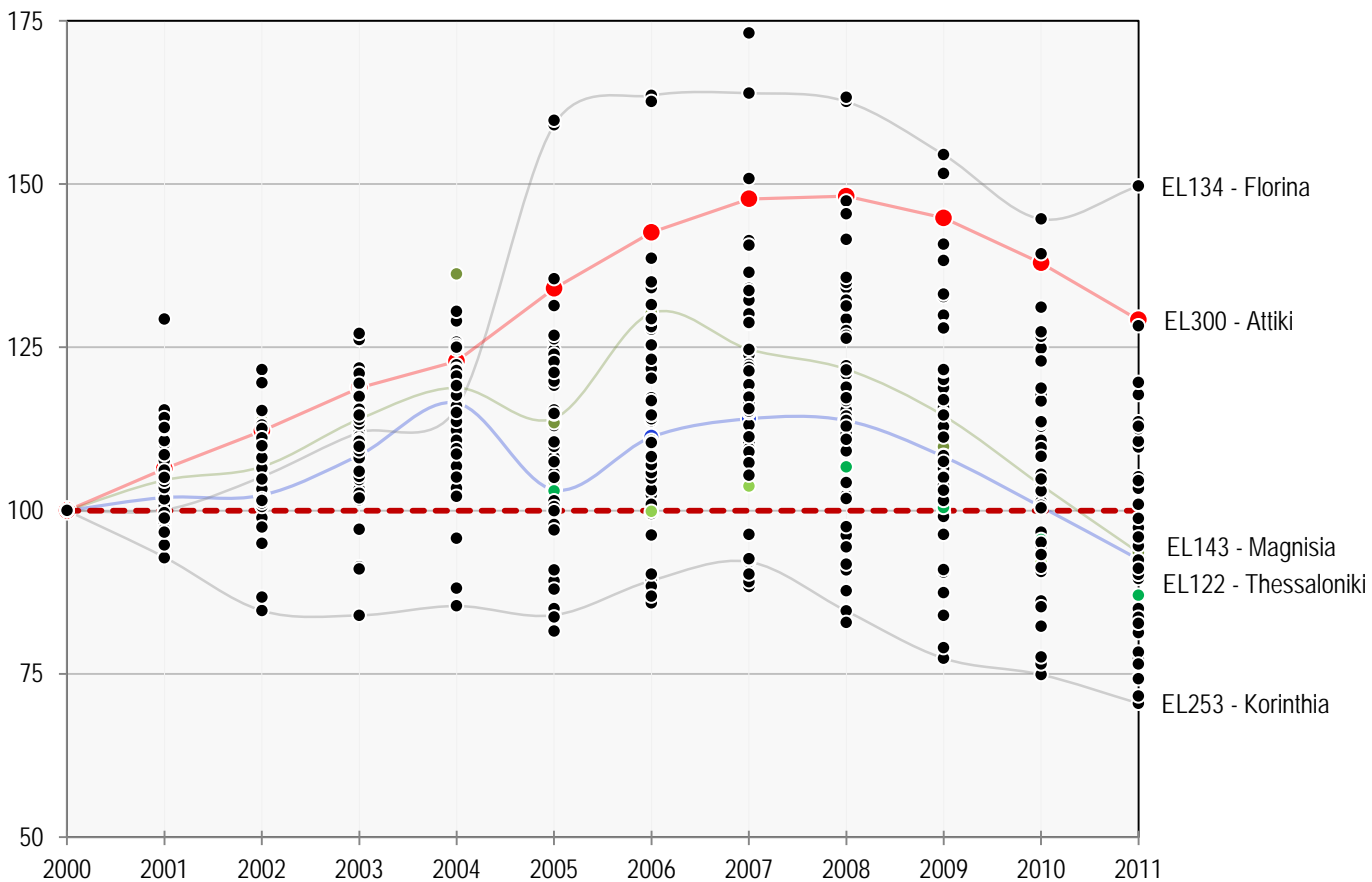
Gross domestic product at 2005 market prices per capita - Regional inequalities

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
max/min tb	1.8	1.8	1.8	1.7	1.7	2.0	2.0	2.0	1.9	1.9	1.9	1.9
max/min	3.4	3.4	3.1	2.8	2.5	2.9	2.9	2.8	2.6	2.6	2.8	2.9
CV	0.268	0.247	0.234	0.214	0.204	0.256	0.261	0.259	0.246	0.247	0.247	0.252
wCV	0.210	0.206	0.209	0.200	0.191	0.253	0.265	0.267	0.272	0.282	0.286	0.293

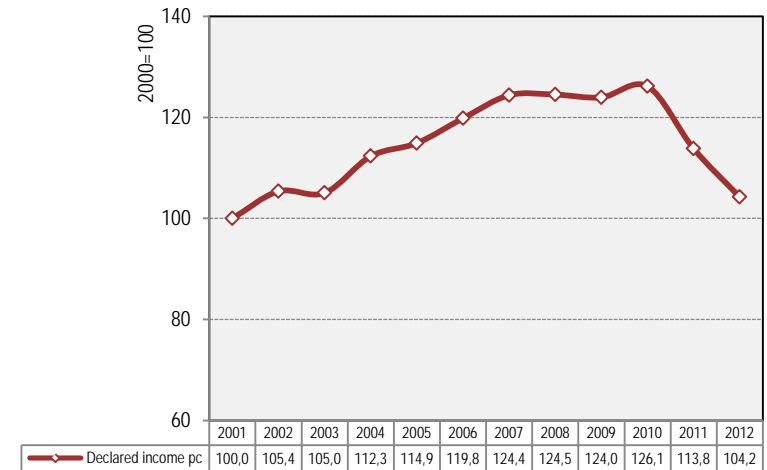
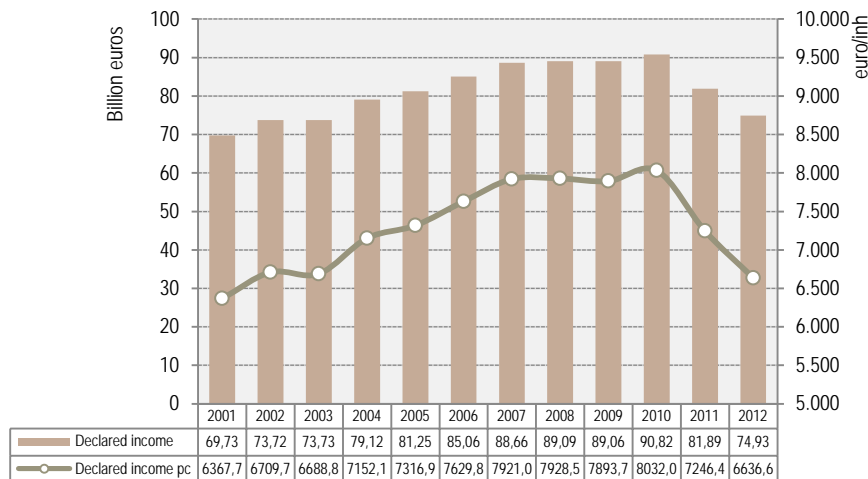


Gross domestic product at 2005 market prices per capita, NUTS3 2000=100

GDP pc, 2000=100



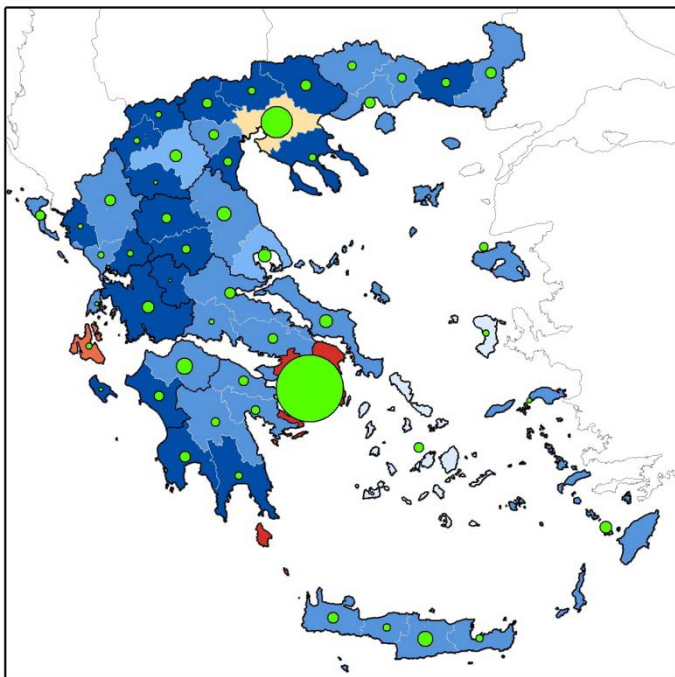
Declared income at 2005 market prices per capita – National level



Declared income	
Greece	
Change 2001-08	4.2%
Change 2009-12	-15.9%
Change 2001-12	4.2%
CAGR 2001-08	3.2%
CAGR 2009-12	-5.6%
CAGR 2001-12	0.4%

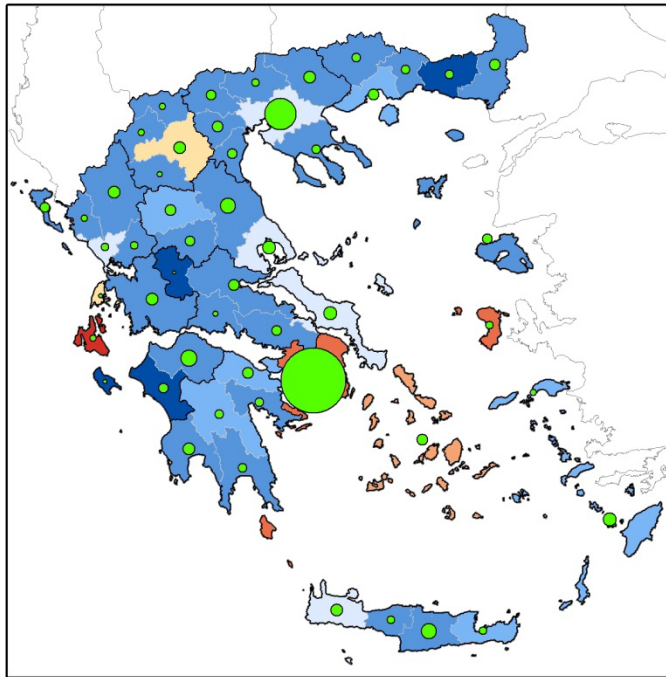
Declared income at 2005 market prices per capita, NUTS3

Declared income per capita
2001



Greece = 6,120 euro/inhabitant (current market prices)
6,370 euro/inhabitant (st. market prices 2005)

Declared income per capita
2012

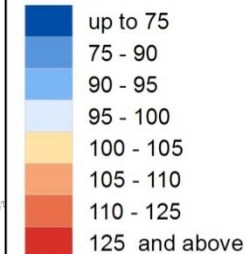


Greece = 7,660 euro/inhabitant (current market prices)
6,640 euro/inhabitant (st. market prices 2005)

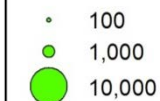
— NUTSII Borders

Declared income per capita

100 = Greece



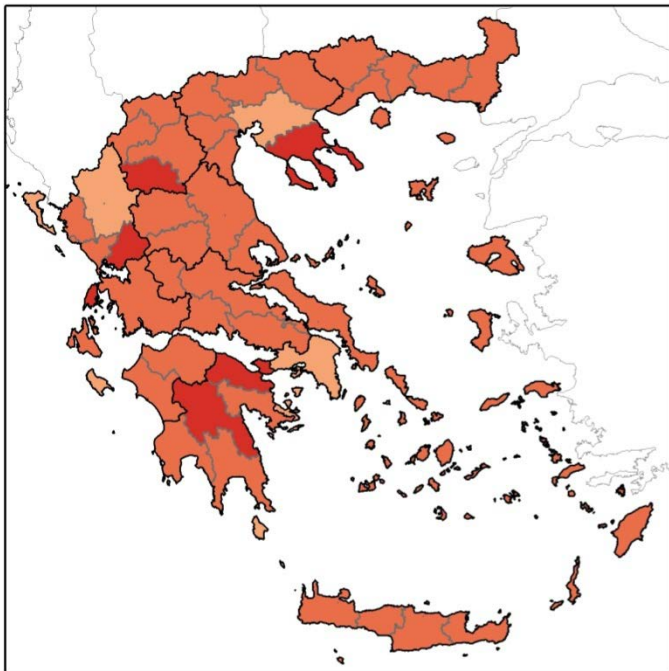
Declared income, mil. euros (st. 2005)



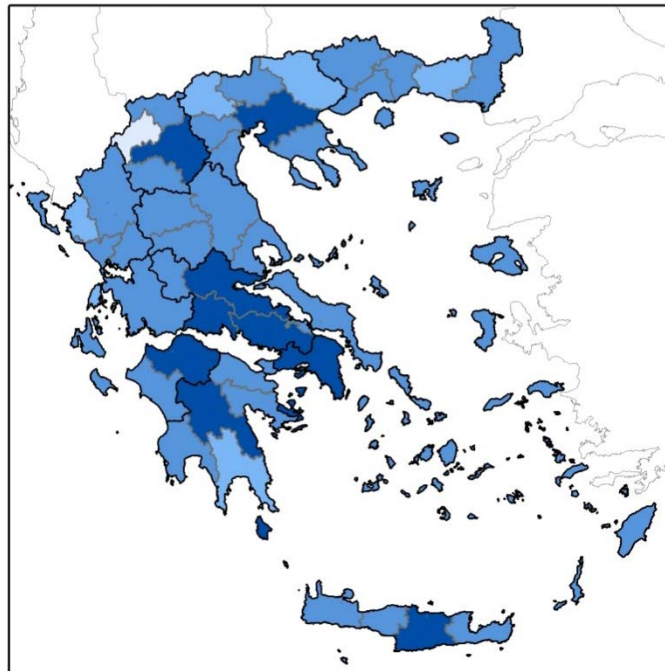
0 50 100 200 km.

Declared income at 2005 market prices per capita, NUTS3 Compound Annual Growth Rate - CAGR

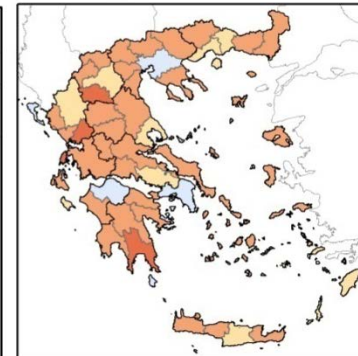
Declared income per capita, Compound Annual Growth Rate,
(Period 2001-2008)



Declared income per capita, Compound Annual Growth Rate
(Period 2009-2012)



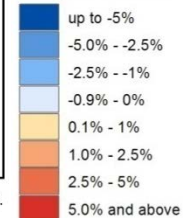
Declared income per capita, Compound Annual Growth Rate
(2001-2012)



0 50 100 200 km.

— NUTSIII Borders

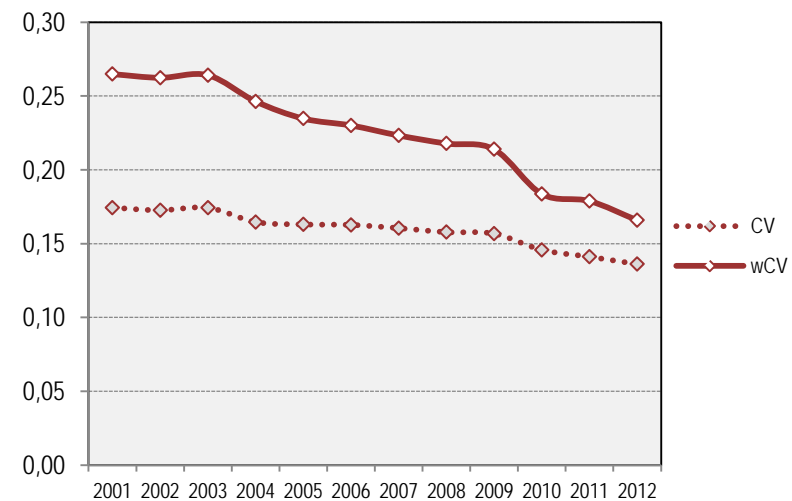
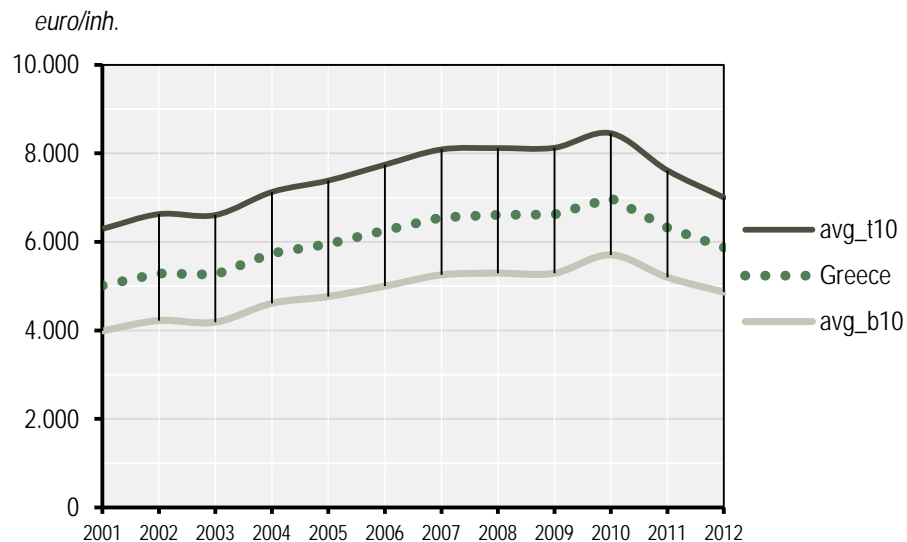
**Declared income per capita
Compound Annual Growth Rate**



0 50 100 200 km.

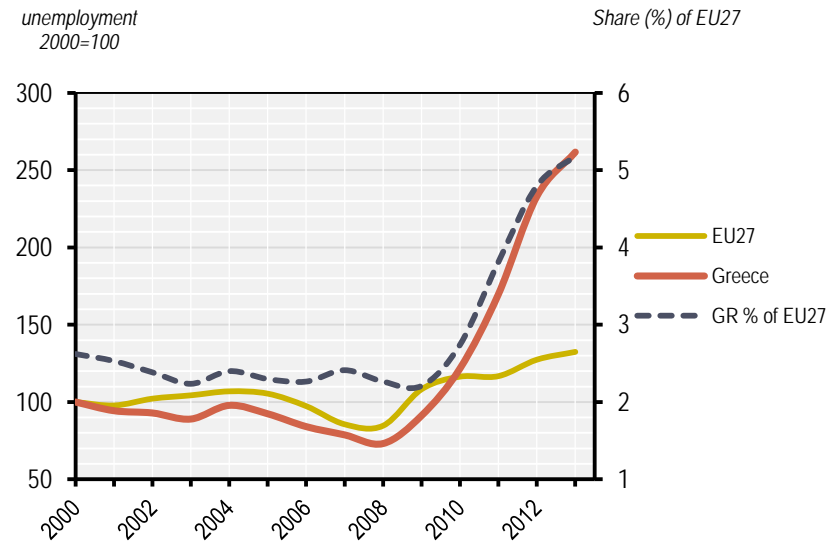
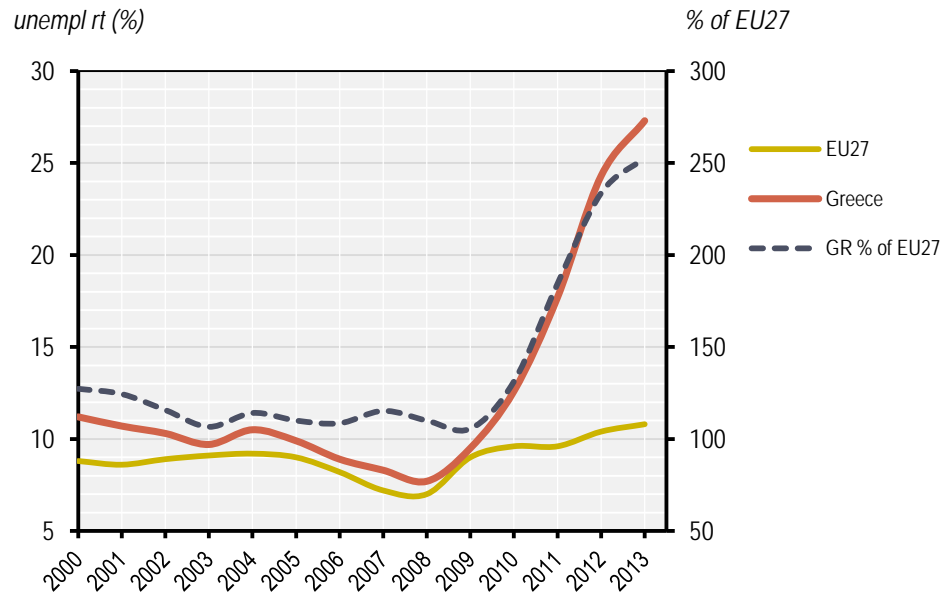
Declared income at 2005 market prices per capita, NUTS3 Inequality

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
max/min tb	1.58	1.57	1.58	1.55	1.55	1.55	1.54	1.53	1.54	1.48	1.46	1.44
max/min	2.50	2.47	2.46	2.37	2.34	2.36	2.33	2.37	2.39	2.18	2.13	2.16
CV	0.174	0.173	0.174	0.165	0.163	0.163	0.161	0.158	0.157	0.146	0.141	0.136
wCV	0.265	0.262	0.264	0.246	0.235	0.230	0.223	0.218	0.214	0.184	0.179	0.166



Unemployment rate – National level

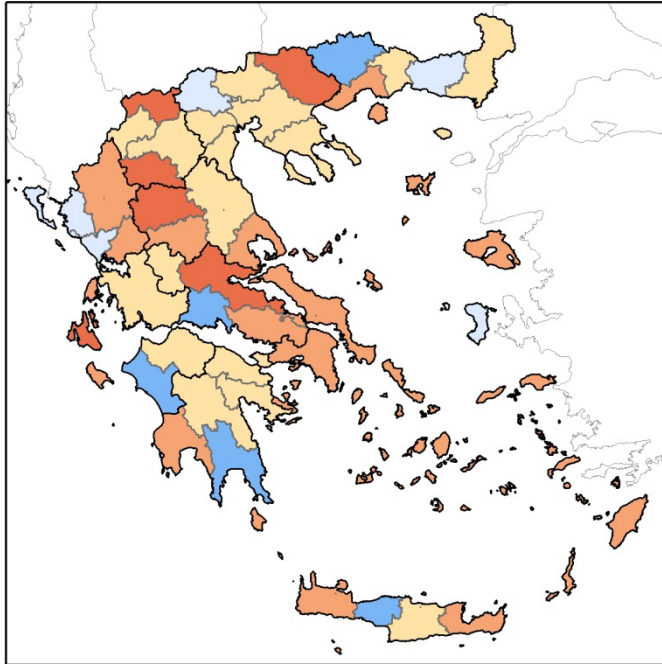
Definition EUROSTAT



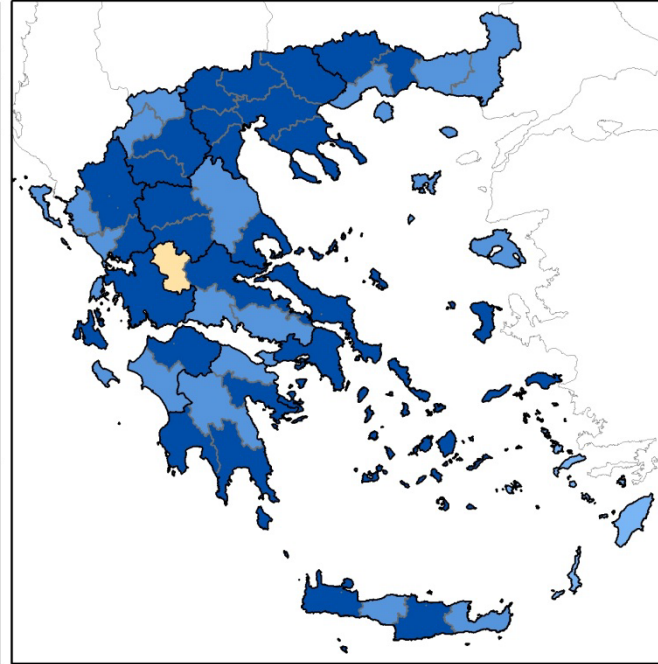
Unemployment rate		
	European Union (27 countries)	Greece
Change 2000-08	-20.45%	-31.25%
Change 2009-13	20.00%	187.37%
Change 2000-13	22.73%	143.75%
CAGR 2000-08	-2.82%	-4.58%
CAGR 2009-13	4.66%	30.20%
CAGR 2000-13	1.59%	7.09%

Unemployment rate –NUTS3

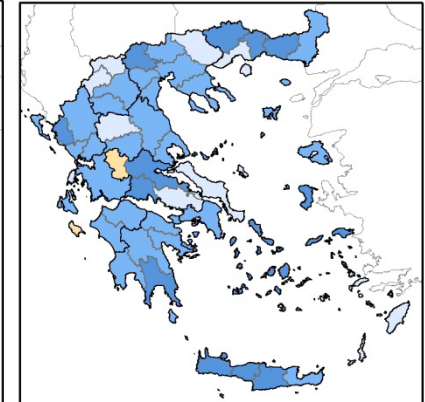
Unemployment rt, Compound Annual Growth Rate
(Period 2001-2008)



Unemployment rt, Compound Annual Growth Rate
(Period 2009-2013)



Unemployment rt, Compound Annual Growth Rate
(2000-2013)

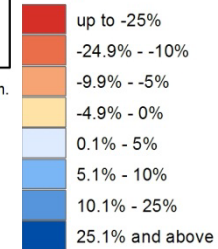


0 50 100 200 km.

— NUTSII Borders

Unemployment rt

Compound Annual Growth Rate - CAGR



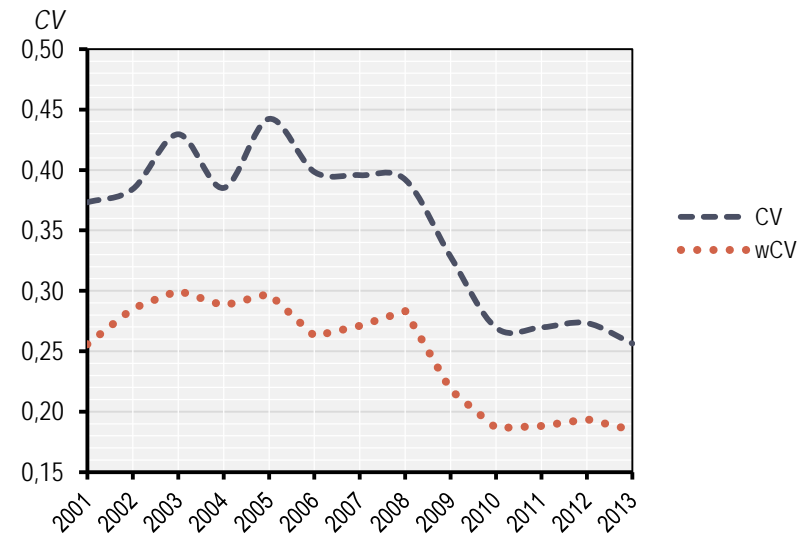
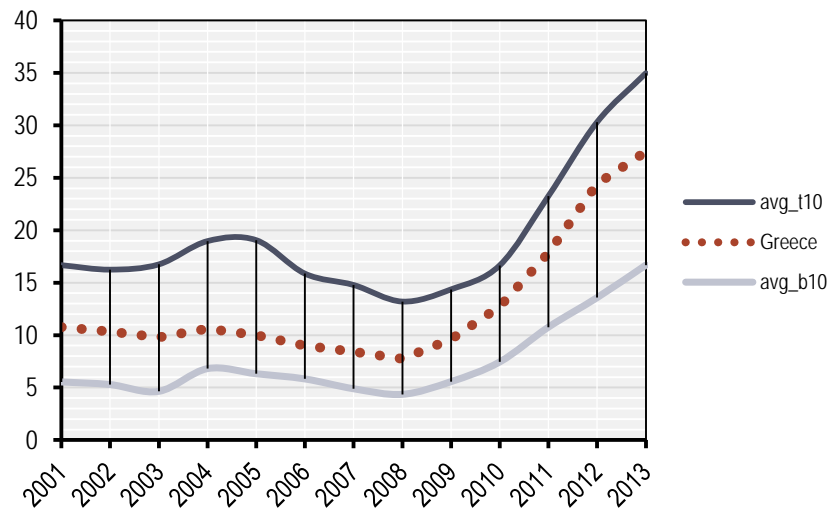
0 50 100 200 km.

Unemployment rate

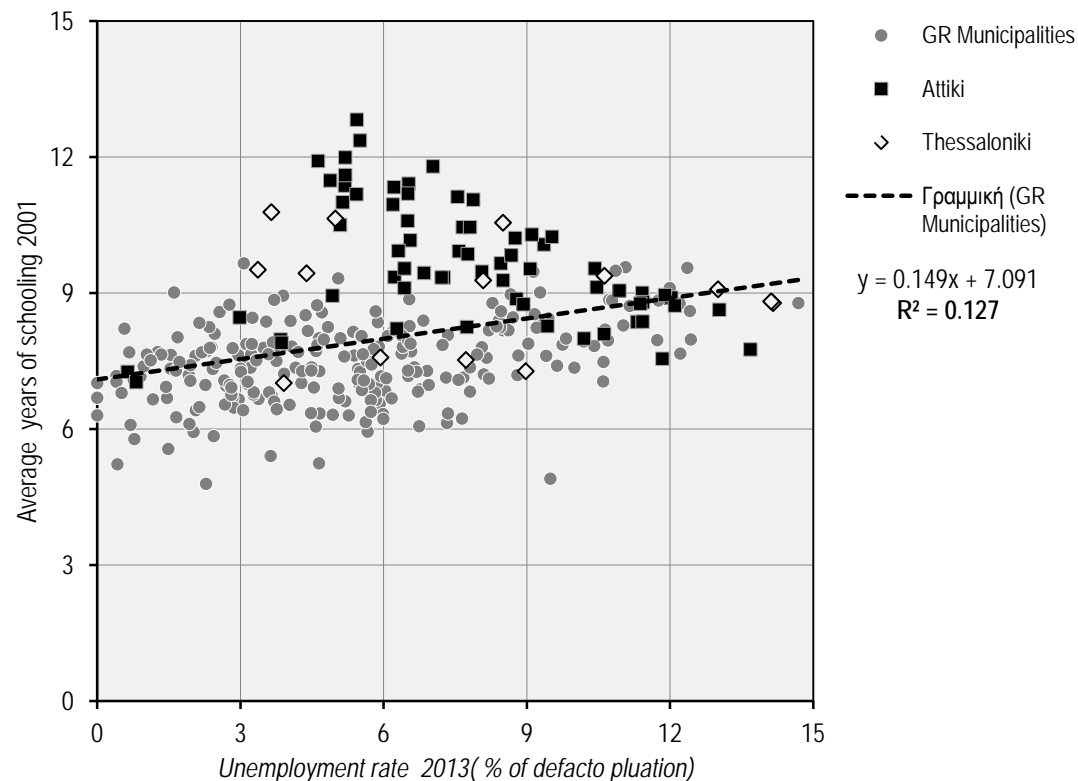
Trends in regional inequality

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
max/min tb		3.0	3.1	3.6	2.8	3.0	2.7	3.0	3.0	2.6	2.2	2.2	2.2	2.1
max/min		5.7	5.9	10.7	4.4	5.5	6.0	7.4	6.9	6.8	4.3	3.5	3.9	2.7
CV		0.373	0.384	0.430	0.385	0.442	0.398	0.396	0.392	0.328	0.269	0.270	0.273	0.256
wCV		0.256	0.285	0.300	0.288	0.298	0.262	0.271	0.283	0.218	0.186	0.188	0.194	0.185

GDP euro/inh.

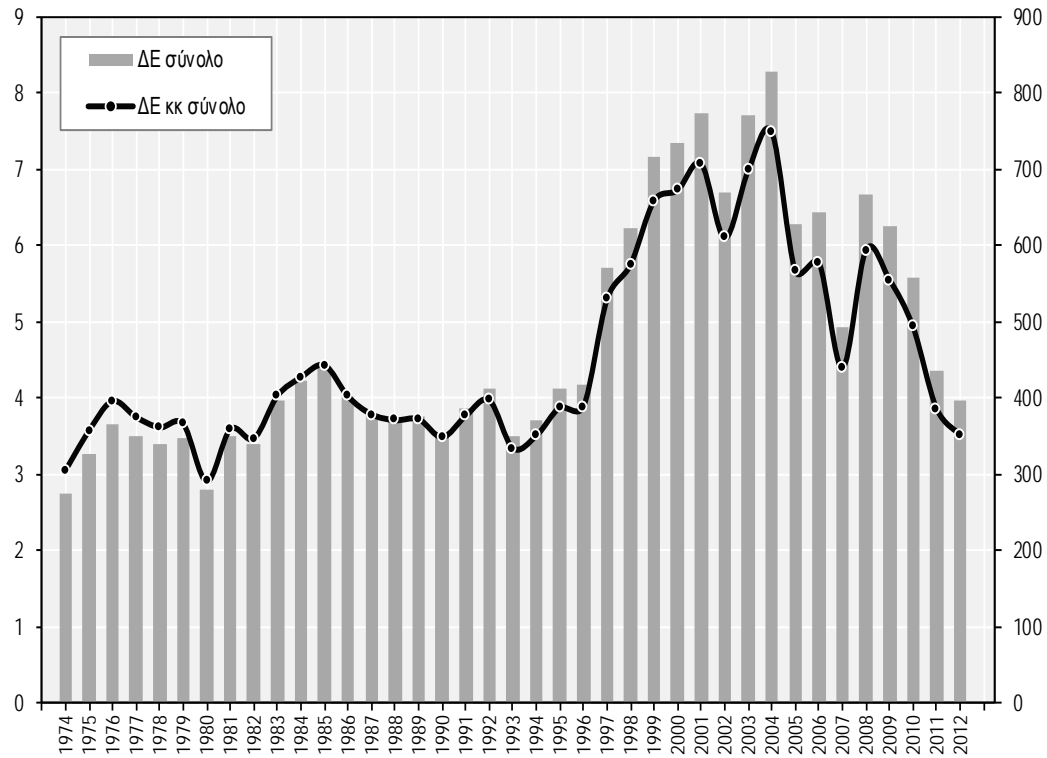


Unemployment rate 2013 (% of defacto population) and Average years of schooling 2001, Greek Municipalities



ΔΕ, δις ευρώ

ΔΕ κκ, ευρώ/κατ.



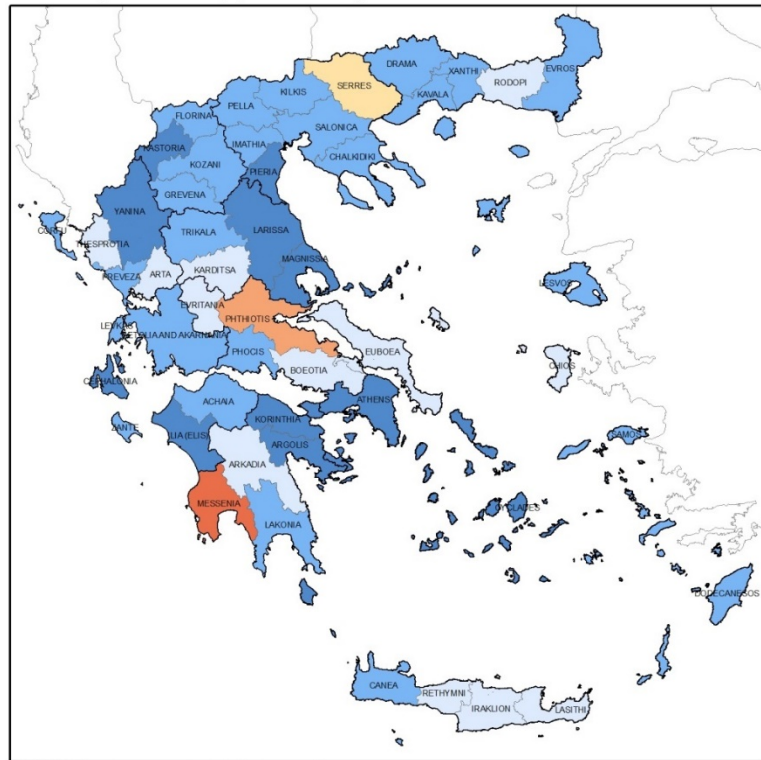
17/1/2015

Economic crisis, regional inequalities and development

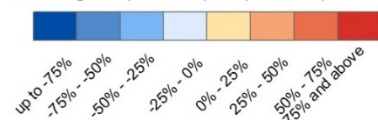
Περίοδος	1974-1980	1981-1990	1991-2000	2001-2010	2011-2012	1974-2012
Μέσος όρος	187,86	261,84	308,03	344,91	198,68	272,27
Μέσος όρος 10 υψηλότερων τιμών	346,74	435,86	510,15	682,56	380,81	469,96
Μέσος όρος 10 χαμηλότερων τιμών	94,41	147,59	163,49	179,42	89,63	160,36
Τυπική απόκλιση	98,56	112,61	130,07	267,73	115,20	128,43
Συντ. διακύμανσης	0,52	0,43	0,42	0,78	0,58	0,47
Στ. συντ. διακύμανσης	0,47	0,41	0,38	0,62	0,61	0,39
Λόγος μέγιστης/ελάχιστης τιμής	7,07	5,59	5,57	15,39	9,06	7,25
Λόγος υψηλότερων10/χαμηλότερων10 τιμών	3,67	2,95	3,12	3,80	4,25	2,93

Public investment –NUTS3

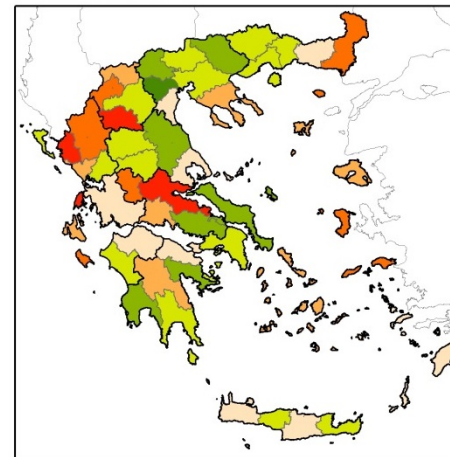
Public Investment per capita, change (%)
Periods (2000-2008)/(2009-2012)



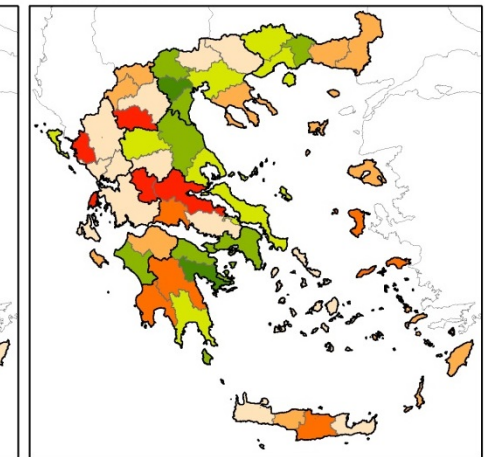
Public Investment total spending pc
% change Av(2000-08)/ Av(2009-12)



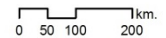
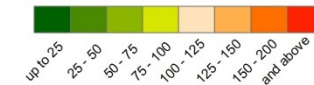
(Average 2000-2008)



(Average 2009-2012)



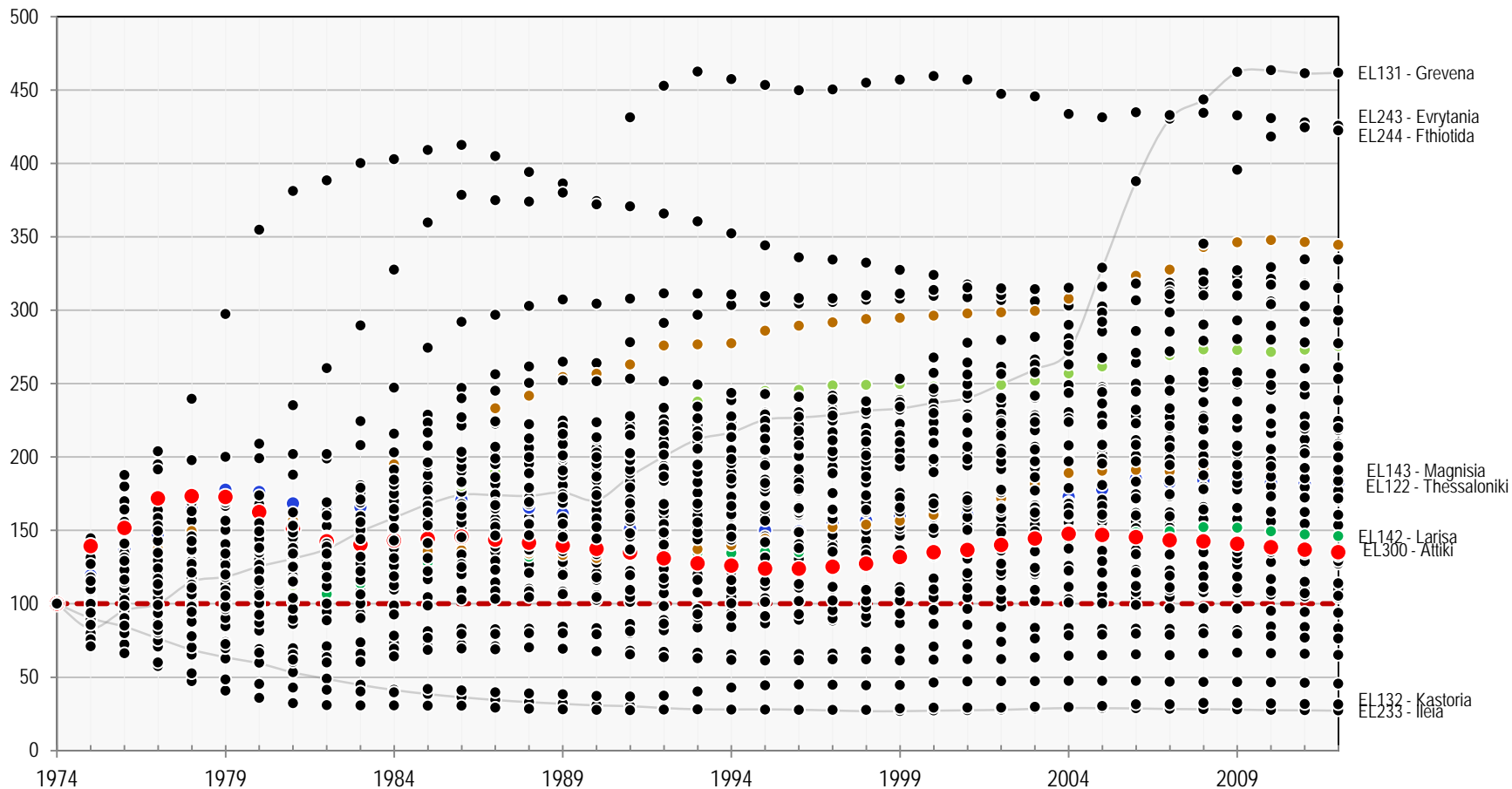
Public Investment total spending pc
as % of national rate



Cumulative (yearly) public investment per capita 1974-2012 –NUTS3

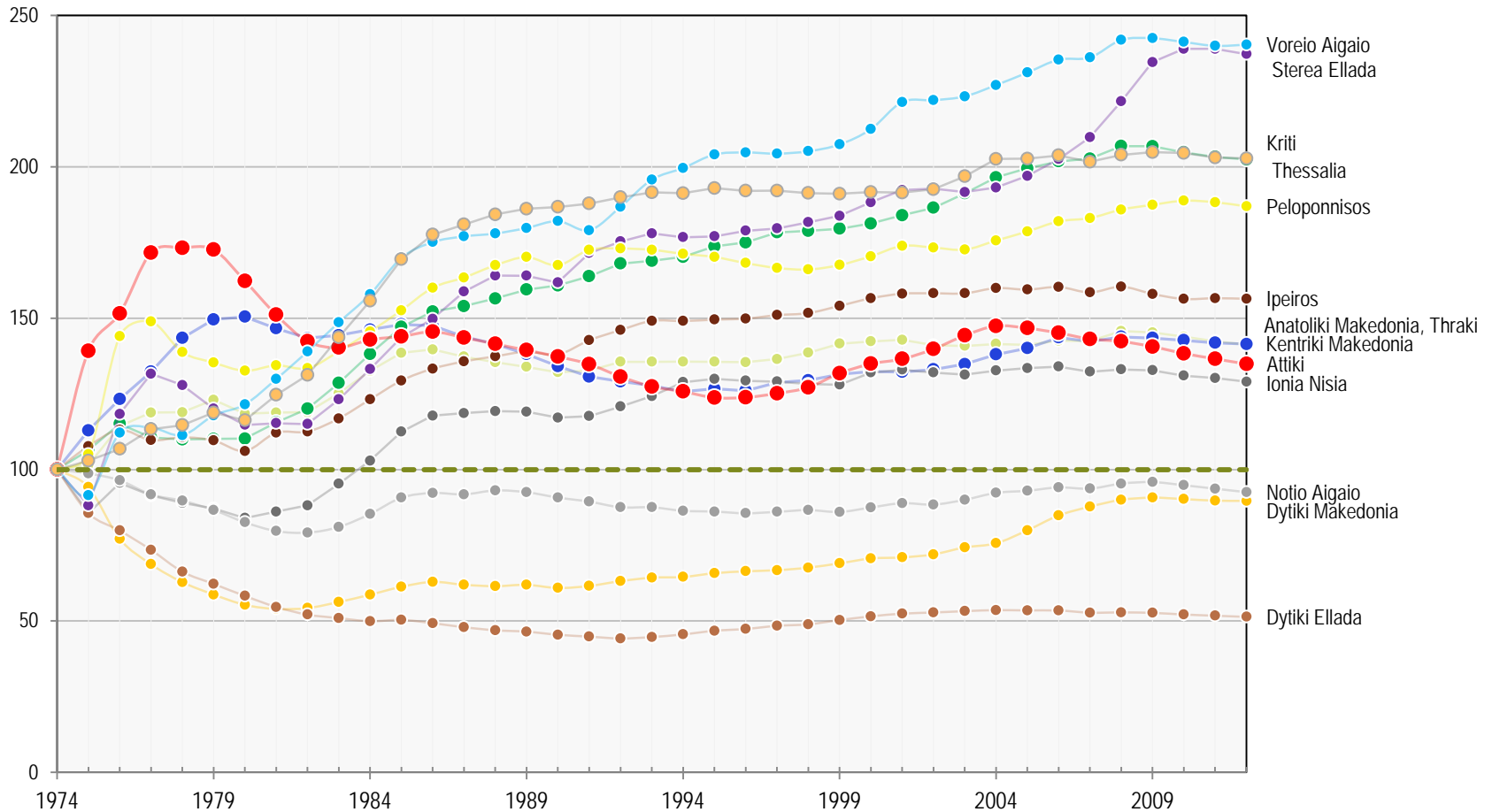
1974=100

PI pc, 1974=100



Cumulative (yearly) public Investment per capita 1974-2012 –NUTS2 1974=100

PI pc, 1974=100



Data

Spatial scale

- 51 prefectures of Greece(NUTS3 level)

Variables

- **gdp/capita**
- Population density [popden]
- Gross Value Added - agriculture [GVA_I]
- Gross Value Added - secondary sector [GVA_II]
- Tourist Overnight stays [tourism]
- Declared income [income_c]
- Employment rate [emplrate]

Spatial model

Period: 2005-2008

(Dependent): gdp/capita

	ALL REGIONS			PATHE REGIONS	NON-PATHE REGIONS	NORTH GREECE	SOUTH GREECE
	FE	SAR FE	SEM FE	FE			
Variables							
Urbanization	111.8*** (24.47)	121.9*** (16.81)	122.1*** (15.81)	58.72** (19.94)	160.7*** (29.13)	124.4*** (28.81)	108.6*** (30.80)
Agriculture	173.0*** (32.27)	172.5*** (20.94)	179.9*** (20.55)	266.7*** (53.47)	170.0*** (38.26)	134.3* (65.82)	180.6*** (35.38)
Secondary Sector	187.2*** (27.74)	190.2*** (15.33)	200.4*** (15.00)	306.9*** (54.80)	165.2*** (31.37)	176.8*** (51.39)	180.9*** (35.16)
Tourism	-0.0000544 (0.000184)	-0.000302** (0.000140)	-0.0000796 (0.000140)	0.000458* (0.000216)	-0.0000534 (0.000211)	-0.00056*** (0.000186)	0.000106 (0.000213)
Employment	5.024 (16.79)	8.687 (12.30)	3.156 (11.21)	18.62 (46.34)	8.779 (17.22)	-13.43 (26.32)	7.167 (21.15)
Income	2.140*** (0.125)	1.787*** (0.0932)	2.085*** (0.0881)	2.339*** (0.188)	2.146*** (0.145)	2.274*** (0.193)	2.077*** (0.156)
Constant	-11928.5*** (2267.9)			-20140.0*** (3337.3)	-10911.5*** (2368.7)	-12164.0*** (2286.9)	-11407.6*** (3081.0)
Spatial							
rho		0.0923*** (0.0153)					
lambda			0.187*** (0.0229)				
Variance							
sigma2_e		104860.9*** (10391.7)	93686.4*** (9411.5)				
adj. R ²	0.885	0.253	0.185	0.922	0.874	0.899	0.876
N	204	204	204	48	156	64	140

Standard errors in parentheses

* p < 0.10, ** p < 0.05, *** p < 0.01

Spatial model

Period: 2009-2011

(Dependent): gdp/capita

	ALL REGIONS			PATHE REGIONS	NON-PATHE REGIONS	NORTH GREECE	SOUTH GREECE
	FE	SAR FE	SEM FE	FE			
Variables							
Urbanization	-451.9*** (137.8)	-340.6*** (98.80)	-353.9*** (104.1)	-652.9** (288.8)	-594.5* (309.0)	-534.0** (193.9)	-418.6*** (151.1)
Agriculture	-229.7 (141.7)	-214.2*** (78.19)	-295.0*** (86.79)	218.3 (174.0)	-468.5*** (171.3)	-53.52 (118.4)	-420.3** (178.5)
Secondary Sector	170.3*** (45.56)	140.7*** (24.43)	114.6*** (26.56)	197.3*** (63.49)	150.7** (59.53)	151.6*** (30.23)	180.3*** (64.11)
Tourism	-0.00052*** (0.000159)	0.000640*** (0.000229)	0.000759*** (0.000291)	-0.00408 (0.00432)	-0.000473** (0.000190)	0.00254 (0.00163)	-0.00054*** (0.000196)
Employment	76.90** (35.37)	64.72*** (17.14)	78.67*** (18.80)	-19.59 (105.7)	68.48* (36.60)	64.83 (63.00)	76.50* (38.65)
Income	-0.669* (0.370)	-0.263** (0.108)	-0.149 (0.111)	-1.775*** (0.565)	-0.624 (0.376)	-0.911** (0.354)	-0.626 (0.400)
Constant	52801.5*** (12791.4)			141609.4** (56566.7)	48981.2*** (17506.2)	48337.1*** (16355.0)	54869.8*** (15444.2)
Spatial							
rho		0.171*** (0.0209)					
lambda			0.223*** (0.0233)				
Variance							
sigma2_e		145814.6*** (16780.0)	166497.4*** (19504.6)				
adj. R ²	0.677	0.229	0.143	0.846	0.638	0.752	0.651
N	153	153	153	36	117	48	105

Standard errors in parentheses

* p < 0.10, ** p < 0.05, *** p < 0.01

Συμπεράσματα

- Η οικονομική κρίση οδήγησε την Ελλάδα σε απόκλιση από την Ευρωπαϊκή Ένωση
- Οι περιφερειακές ανισότητες αυξήθηκαν
- Μεγάλη χωρική διασπορά και σύγκλιση στο επίπεδο ανεργίας
- Μείωση του δηλωθέντος εισοδήματος με παράλληλη έντονη χωρική διασπορά της φορολογίας
- Η πολιτική έχει κυκλικό χαρακτήρα και βαθαίνει την ύφεση
- Συμπλήρωση της νομισματικής πολιτικής και οικονομικά εργαλεία και μέσα άσκησης οικονομικής και αναδιανεμητικής πολιτικής που θα διαπερνά όλα τα χωρικά επίπεδα