

Does the Greek labour market work?

Crisis and adjustment
across the Greek regions

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Introduction

□ General

- Not one research paper – but drawing on a range of research
 - ✓ Christopoulou and Monastiriotis (2013/BJIR and 2014/EALE)
 - ✓ Monastiriotis (2014/Reg&Dev; various in progress)
 - ✓ Monastiriotis and Martelli (2014/GreeSE; in progress)
 - ✓ Lopez-Bazo, Monastiriotis and Montellon (2014)

□ Structure of presentation

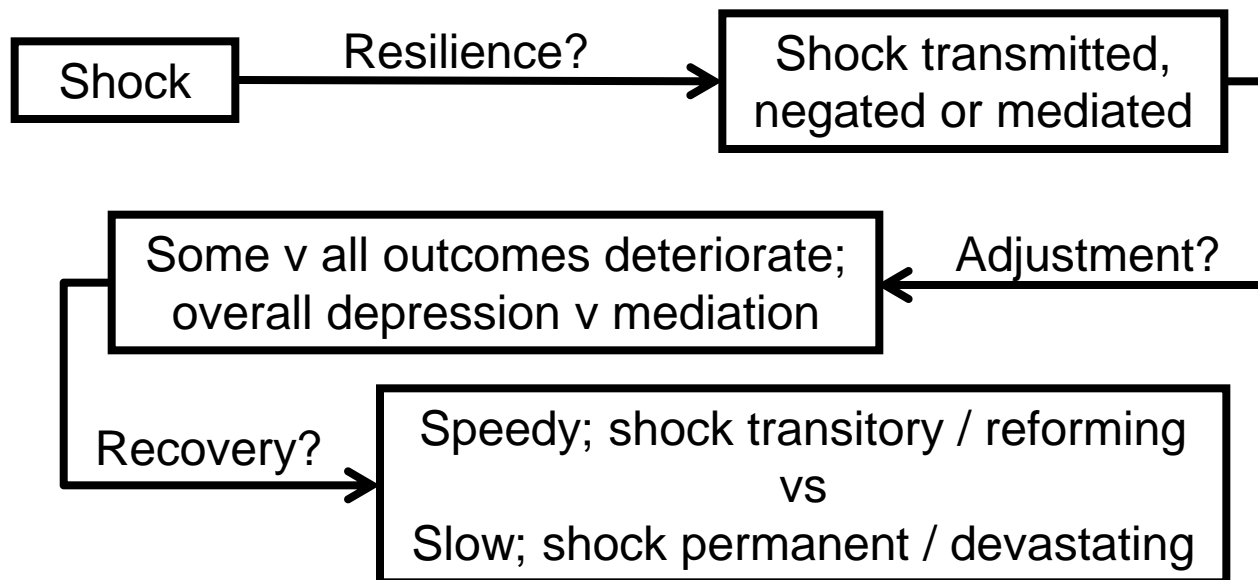
- When does a labour market “work”? Types of adjustment
- The ‘shock’ to the Greek labour market: source and aggregate picture
- Shock and adjustment – evidence from micro-data
- Policy lessons and reflections ...?

Preliminaries / 'theory'

□ When does a labour market work?

- Resilience
- Adjustment
- Recovery

'Good' outcomes versus
transitory(ness) of 'bad' outcomes



Preliminaries / 'theory'

□ Types of adjustment

Mechanism	Adjustment	Recovery
Unemployment	<ul style="list-style-type: none">- Until shock disappears / demand recovers- Triggering wage adjustments and labour reallocation	<ul style="list-style-type: none">- Reinforcing effect on demand (-)- Deskilling / LM detachment (-)
Wages	<ul style="list-style-type: none">- Falling L-costs to maintain employment levels- Changing relative prices to facilitate reallocation	<ul style="list-style-type: none">- Reallocation of labour to higher-productivity jobs (+)- Reinforcing demand effect (-)
Hours	<ul style="list-style-type: none">- Shifts to PT & shorter hours or work-weeks (e.g., 3-day)- Shifts to flexi-work to reduce non-wage labour costs	<ul style="list-style-type: none">- Diffusing income / demand effect (+)- Allowing fast(er) re-employment in recovery (+)
Mobility	<ul style="list-style-type: none">- Across more resilient / less affected sectors / regions- Outmigration (speedy? temporary?)	<ul style="list-style-type: none">- Increasing efficiency / matching (+)- Possible brain-drain and deskilling (-)

Shock & adjustment – what we know

□ The shock to the Greek labour market

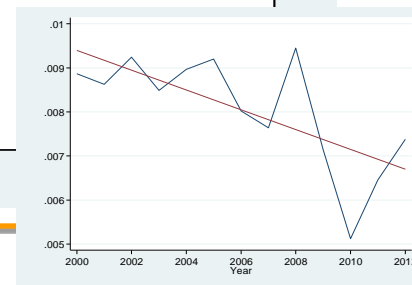
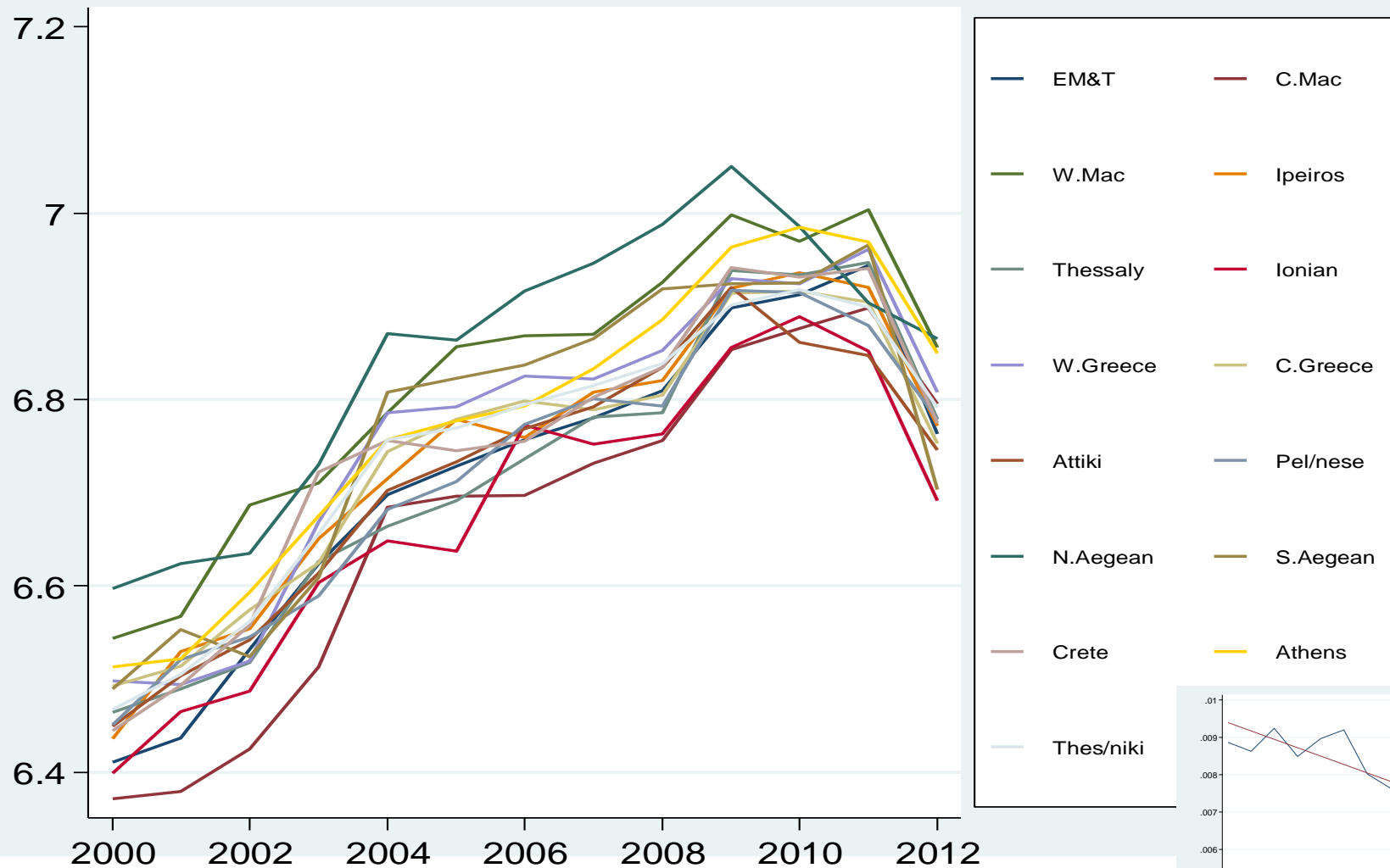
- Public sector cuts
 - ✓ Demand effect – falling incomes and less hiring
 - ✓ Reallocation effect? – change in relative prices
- Private sector demand
 - ✓ Supply side – liquidity (banks) and investment
 - ✓ Demand-side – confidence and consumption
- Private sector deregulation
 - ✓ Occupational liberalisation, employment deregulation, wage decentralisation
 - ✓ Change in relative prices, total costs and entry barriers to facilitate adjustment

→ Good reviews in Tzanatos & Monogios (2013), Ioannou (2013), Daouli et al (2013), Voskeritsian and Kornelakis (2011) – also, C & M (2013 and 2014)

□ How have labour market aggregates adjusted??

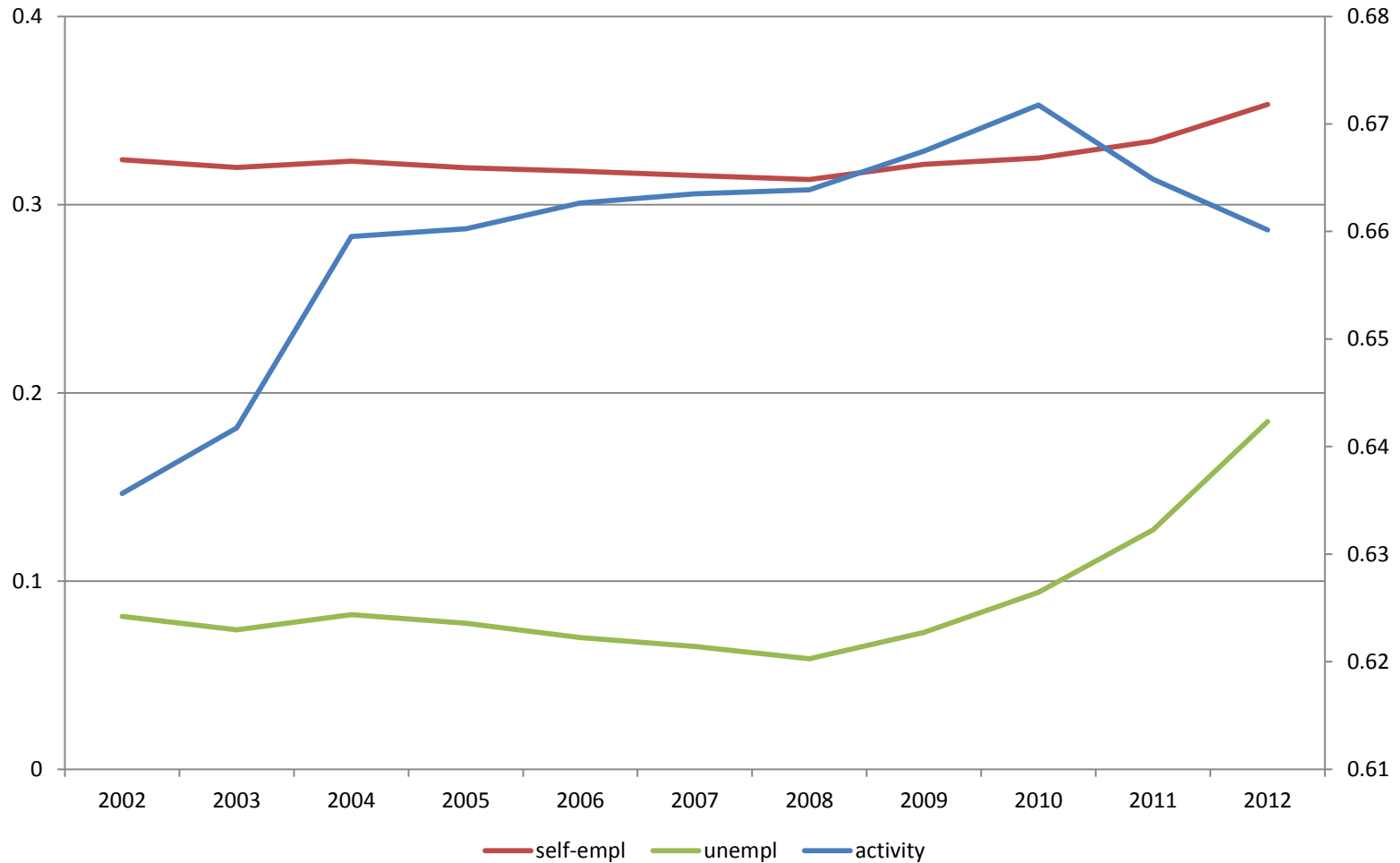
Shock & adjustment – what we know

Evolution of average nominal wages, 2000-2012



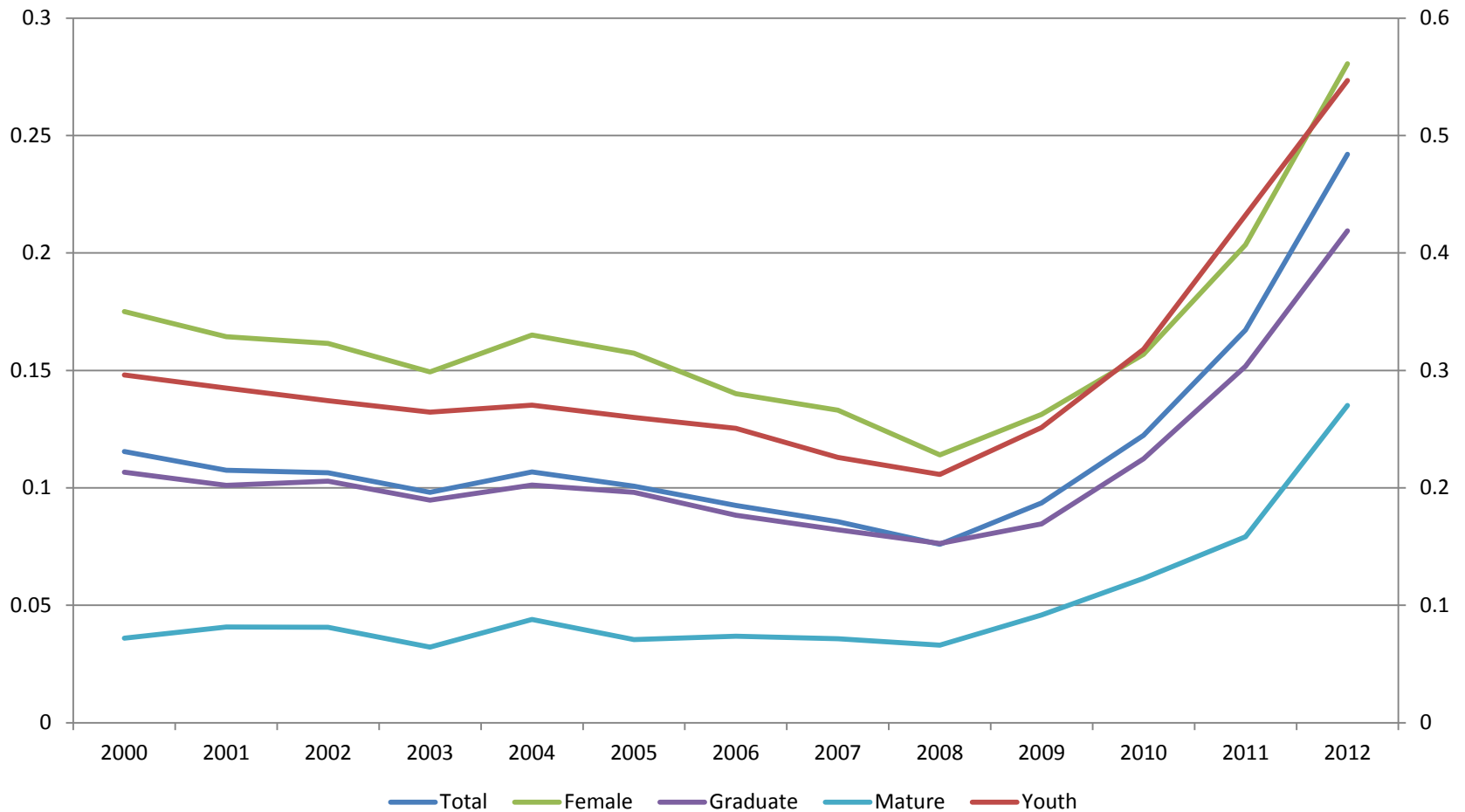
Shock & adjustment – what we know

Evolution of key labour market status indicators, 2000-2012



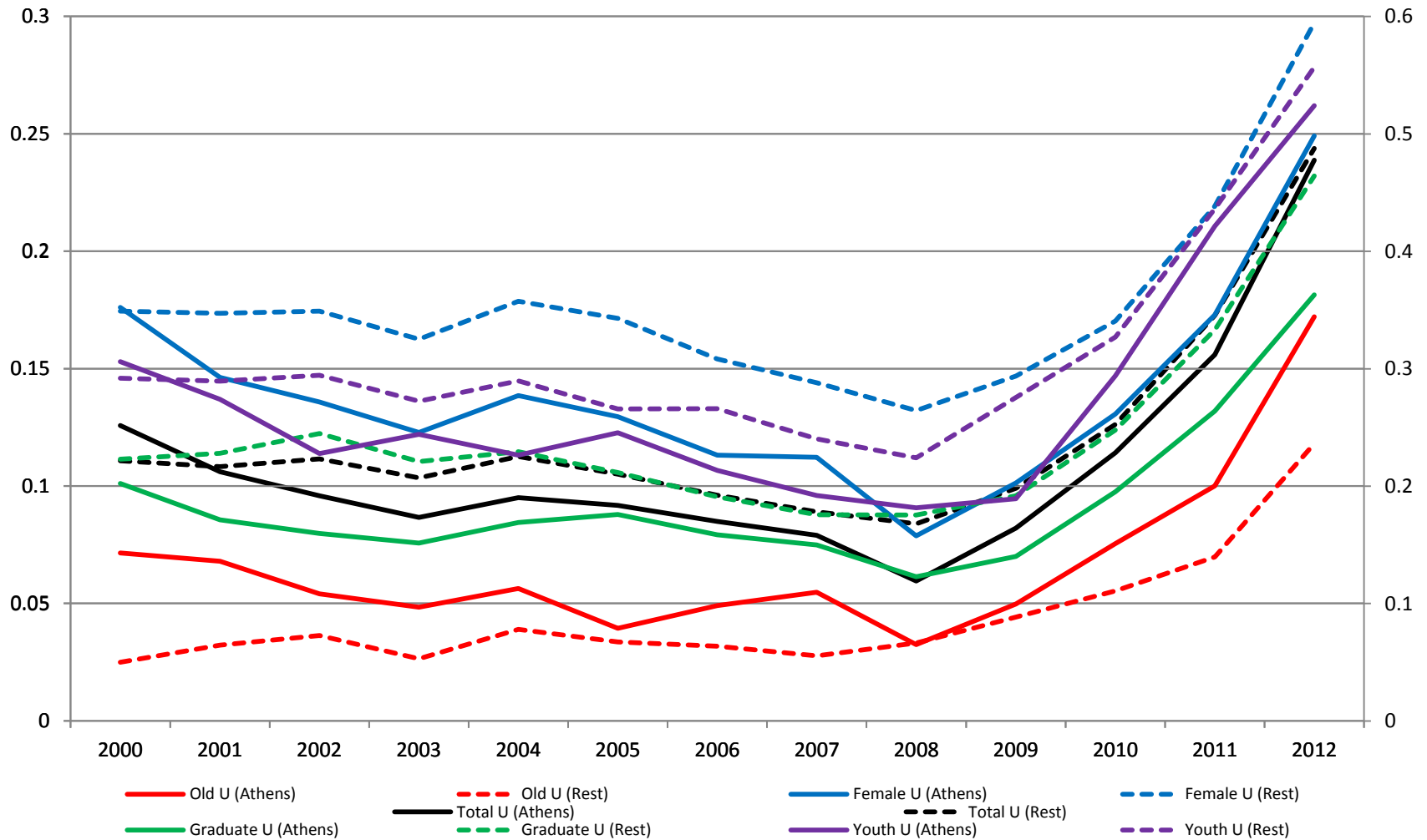
Shock & adjustment – what we know

Evolution of key unemployment indicators, 2000-2012

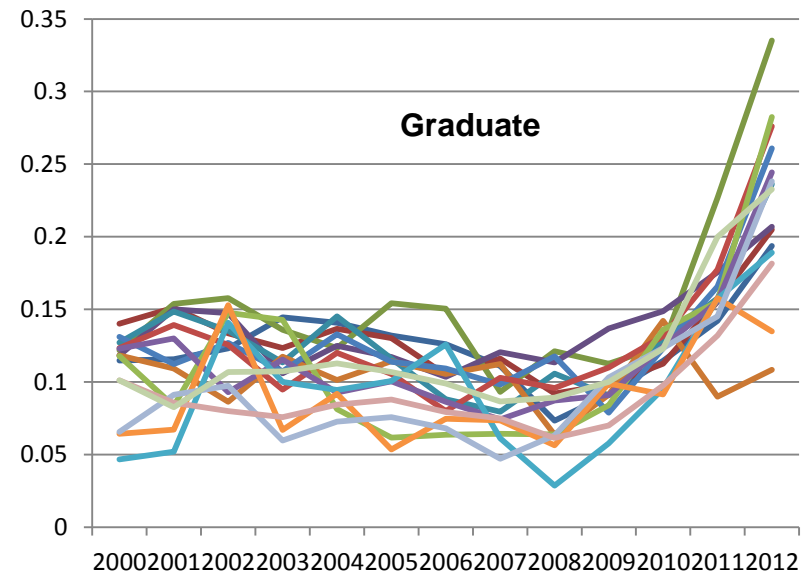
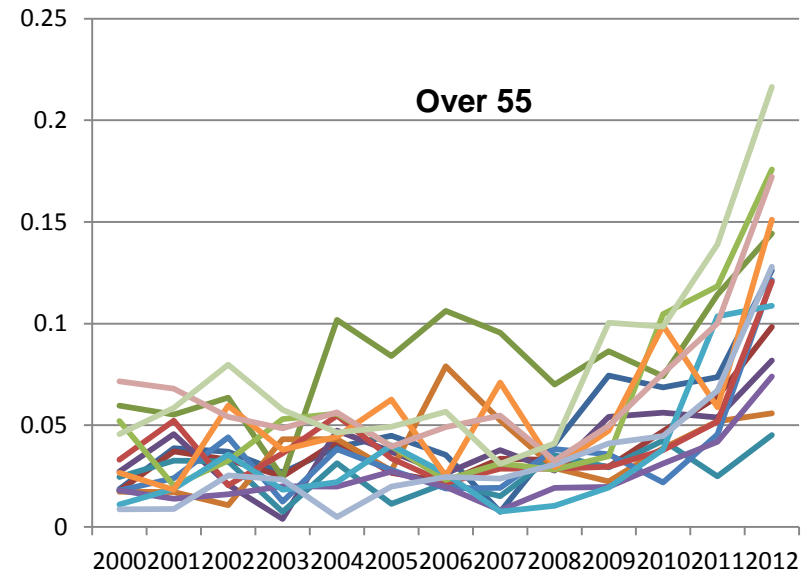
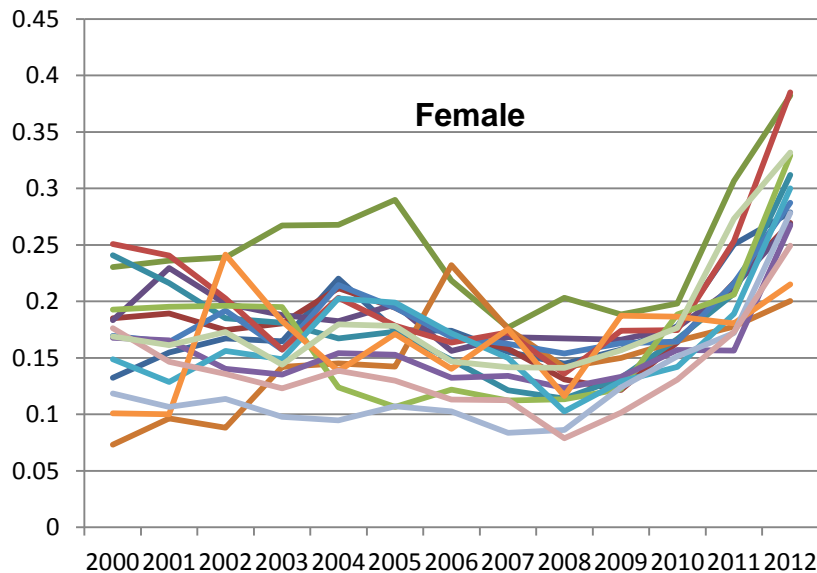
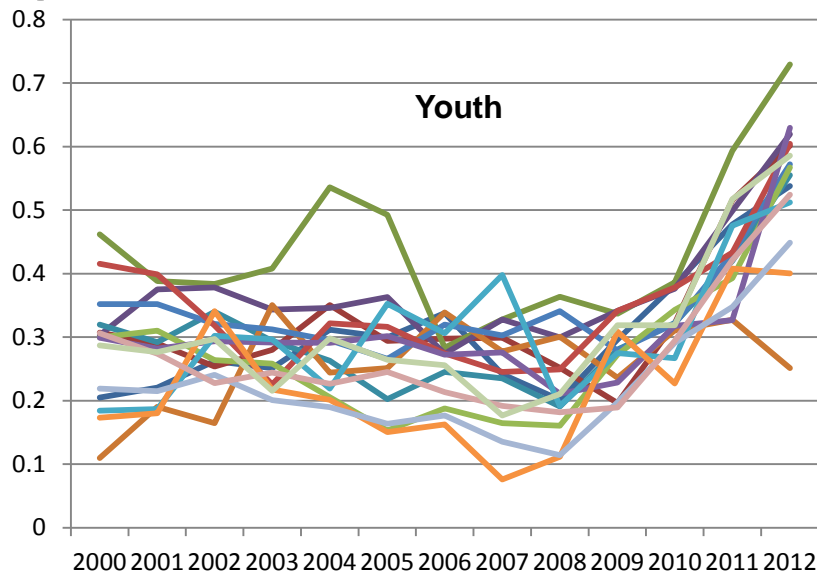


Shock & adjustment – what we know

Evolution of unemployment: Athens versus the rest, 2000-2012

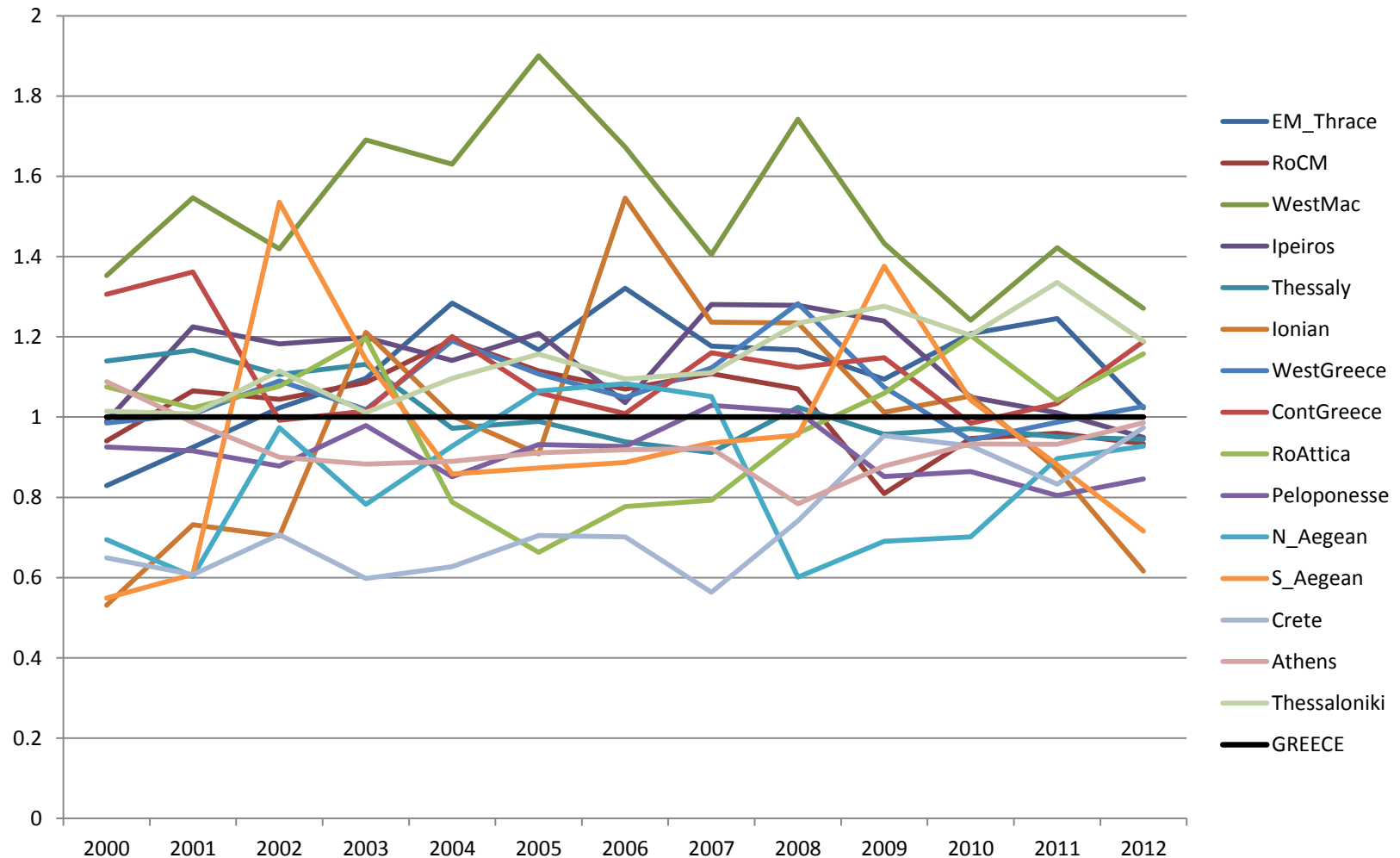


Shock & adjustment – what we know



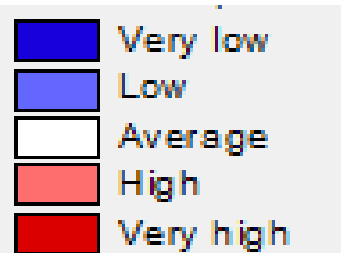
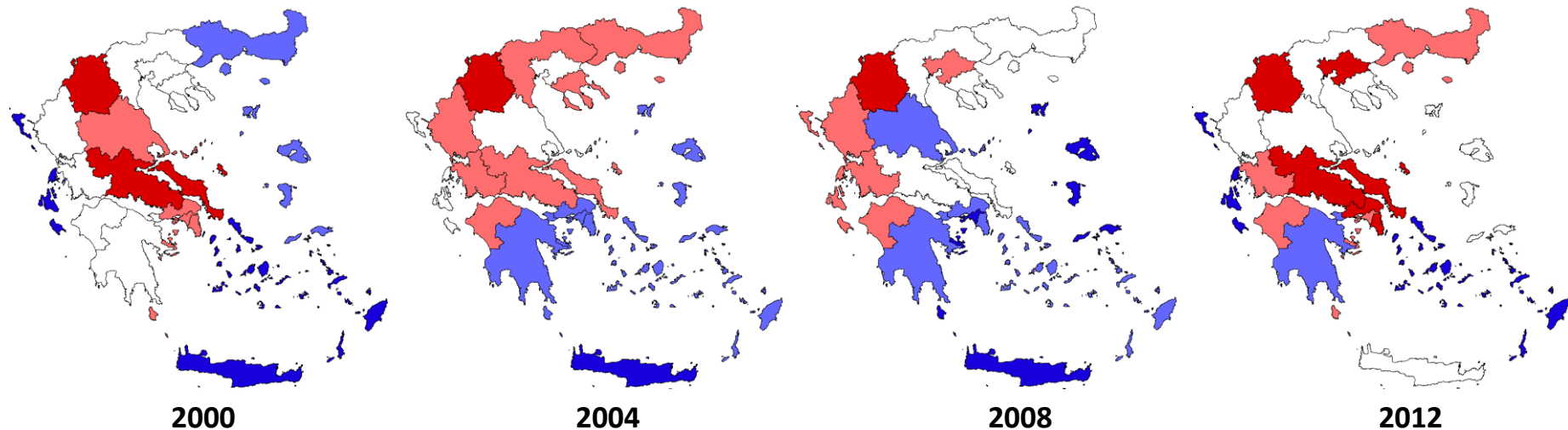
Shock & adjustment – what we know

Evolution of regional unemployment, 2000-2012 – Relative to Greece



Shock & adjustment – what we know

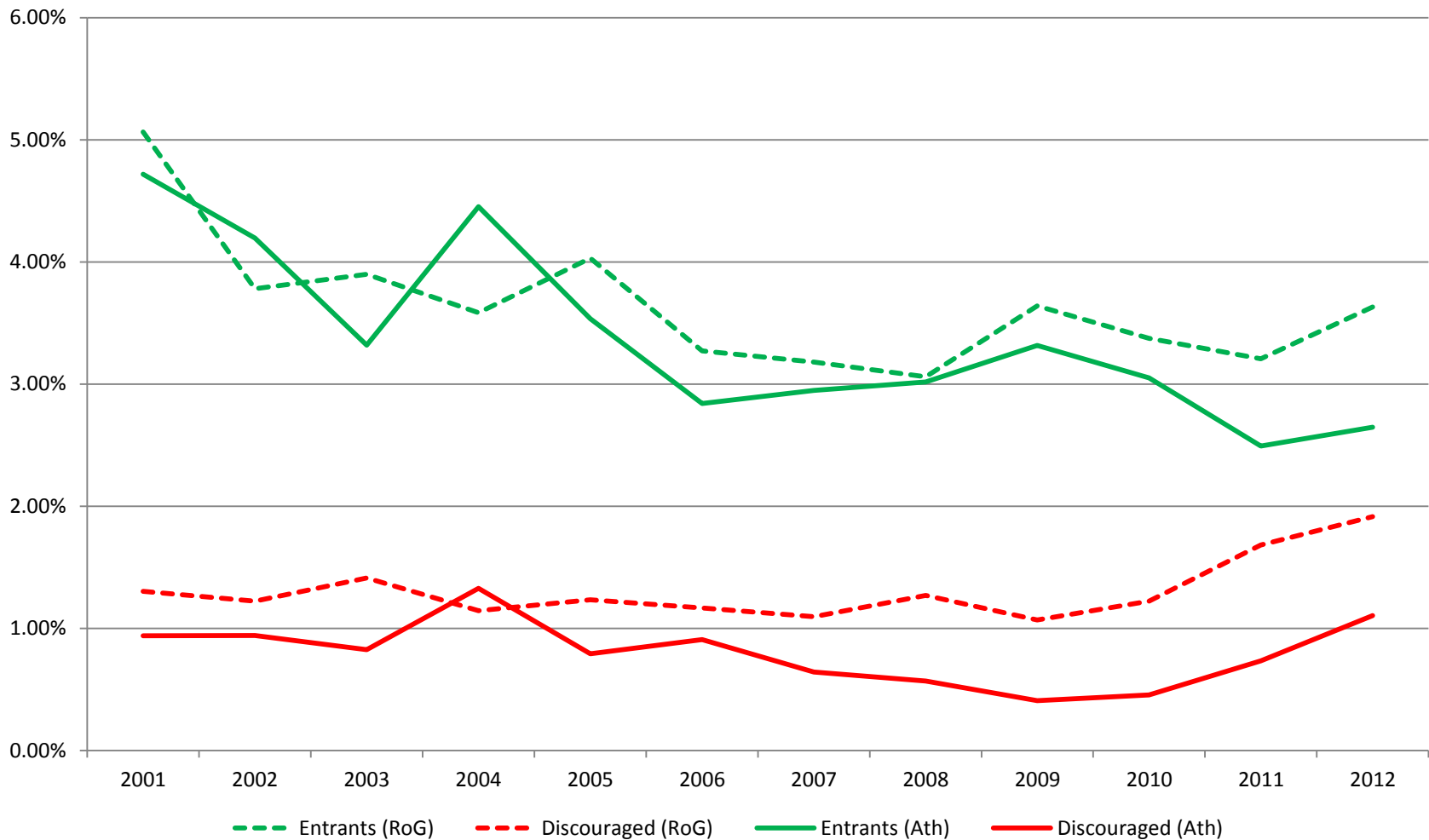
Geography of unemployment, by period – Natural breaks, period-specific



- The 'golden age' of 2004-2008 mainly a phenomenon of the 'south' and/or 'core'
- The crisis has affected mainly the 'core' (around Athens) and parts of the 'north'

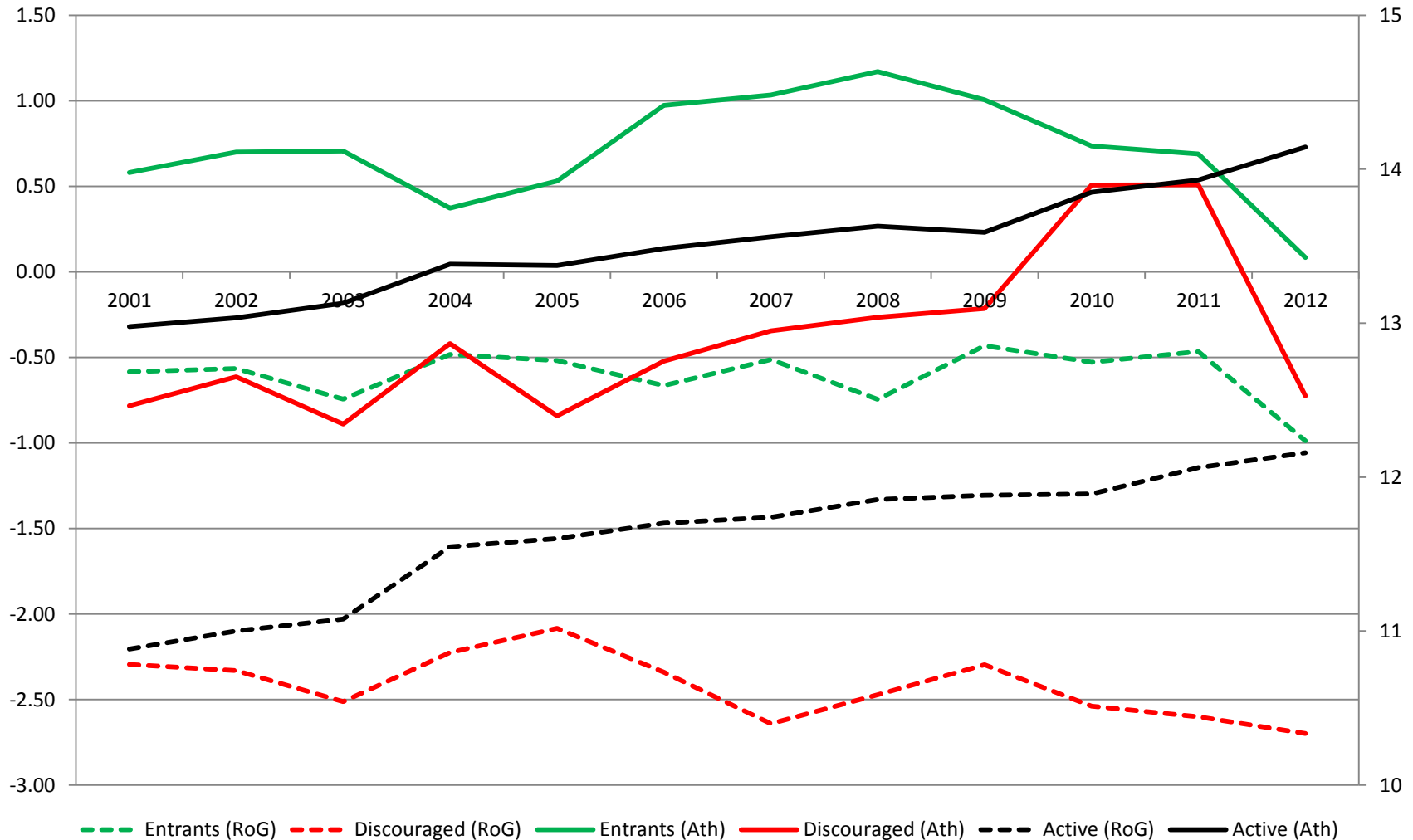
Shock & adjustment – what we know

Flows into/out of inactivity – share to local workforce



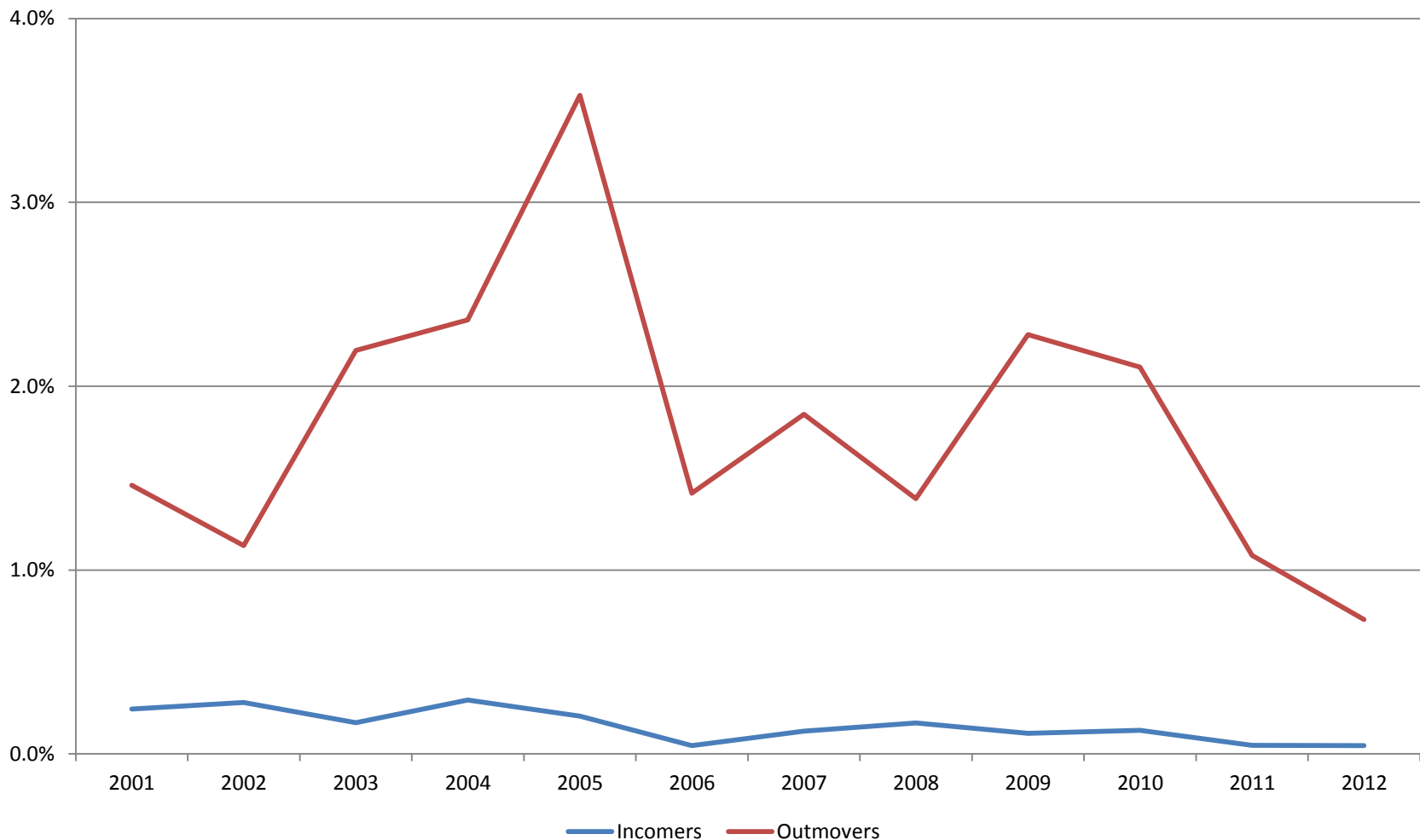
Shock & adjustment – what we know

Flows into/out of inactivity – Education levels



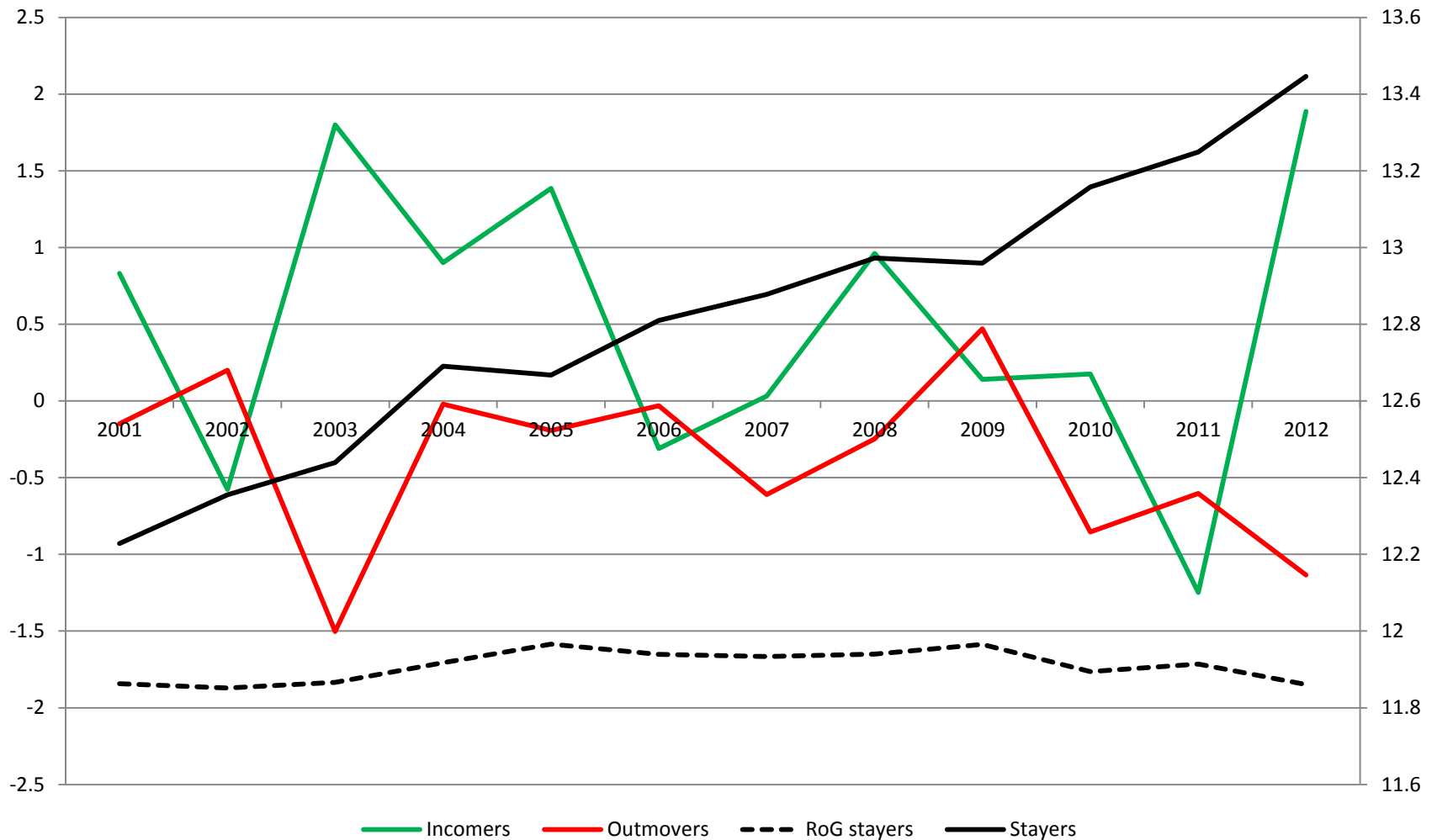
Shock & adjustment – what we know

Flows into/out of Athens – share to local workforce



Shock & adjustment – what we know

Flows into/out of Athens – Education levels



Shock & adjustment – what we know

Education levels	2002	2006	2010	2012	2002	2006	2010	2012
	Active				Wage-earners			
Greece	11.8	12.45	12.72	13.03	11.95	12.37	12.63	13.16
Spain	10.88	11.39	11.47	11.6	10.67	10.77	11.46	n/a

Males	Public Sector						Private Sector				
	2009	2010	2011	2012	2013		2009	2010	2011	2012	2013
Nominal wage in euros	1377	1434	1442	1192	1156		1074	1090	1073	978.8	906.9
Weekly hour of work	37.61	37.52	37.69	38.54	38.56		42.84	42.34	41.70	41.34	41.28
Education in years	14.33	14.64	14.79	14.93	15.09		11.90	12.15	12.35	12.77	12.85
Experience in years	22.71	22.70	23.10	22.94	22.55		19.49	19.78	19.91	19.90	20.38
Married/Cohabiting	0.690	0.700	0.713	0.683	0.705		0.555	0.574	0.577	0.592	0.608
Has child/ren	0.423	0.427	0.461	0.425	0.442		0.342	0.366	0.366	0.375	0.391
Foreign born	0.007	0.007	0.009	0.006	0.005		0.218	0.204	0.207	0.184	0.174
Part-time worker	0.012	0.013	0.013	0.008	0.013		0.032	0.041	0.052	0.071	0.093
Temporary worker	0.071	0.073	0.054	0.052	0.069		0.123	0.131	0.137	0.104	0.111
Small firm	0.179	0.171	0.176	0.148	0.118		0.545	0.547	0.547	0.501	0.487
Industry	0.106	0.099	0.079	0.080	0.086		0.466	0.432	0.389	0.349	0.327
Services	0.875	0.887	0.906	0.908	0.901		0.500	0.525	0.568	0.602	0.621
White collar	0.683	0.686	0.718	0.717	0.695		0.409	0.441	0.489	0.529	0.533
Blue collar	0.221	0.211	0.176	0.179	0.195		0.591	0.559	0.511	0.471	0.467

Notes: Reference production sector is primary, and reference occupation category is armed forces.

Shock & adjustment – what we know

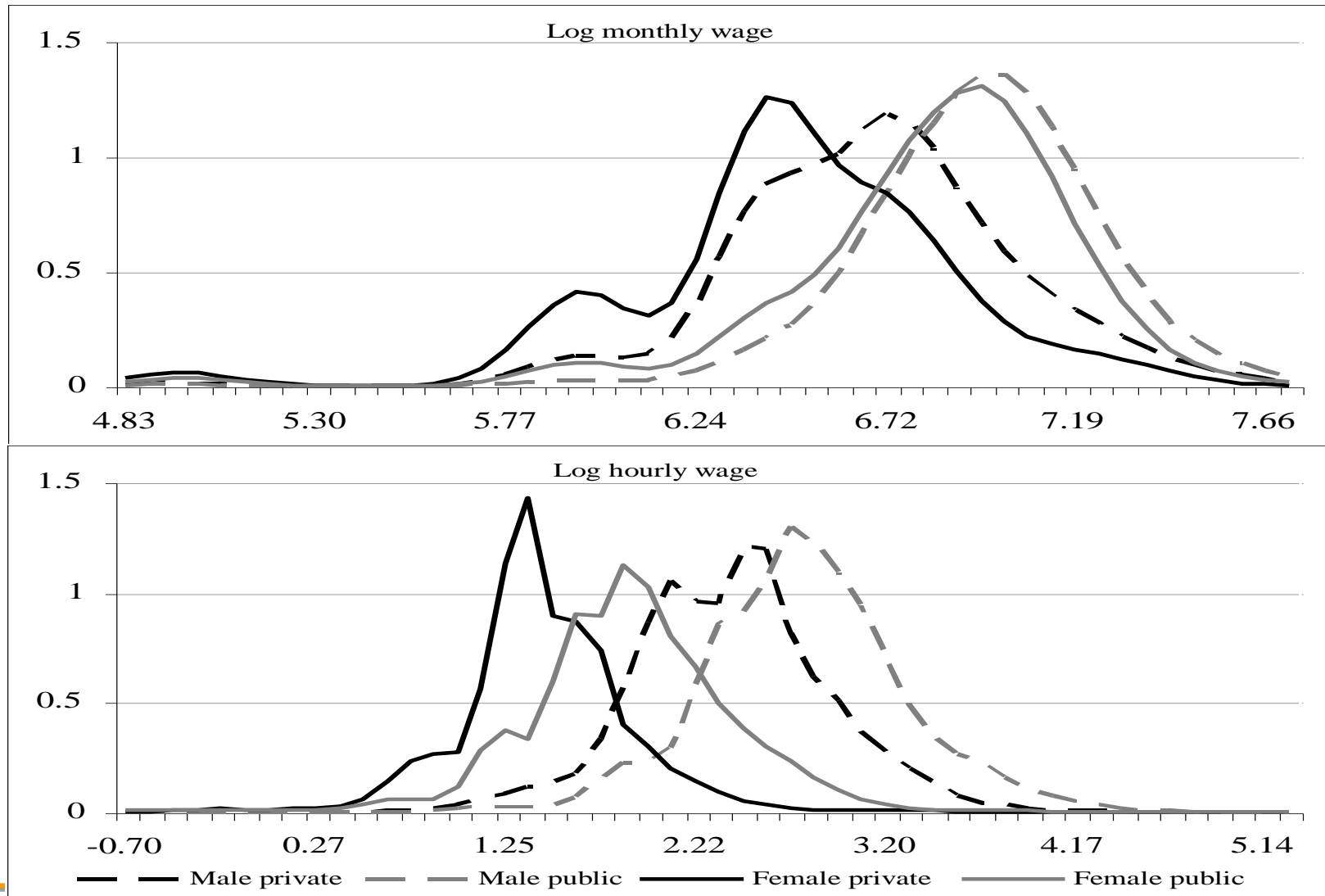
Evolution of key employee and job characteristics, 2009-2013 - females

Females	Public Sector						Private Sector				
	2009	2010	2011	2012	2013		2009	2010	2011	2012	2013
Nominal wage in euros	1258	1305	1326	1101	1049		886.7	876.3	860.7	799.5	722.7
Weekly hour of work	34.37	34.48	34.52	35.11	35.57		39.37	39.34	39.22	38.24	37.41
Education in years	15.30	15.33	15.53	15.61	15.88		13.16	13.13	13.29	13.66	13.52
Experience in years	20.09	20.39	20.97	21.43	21.08		17.55	18.12	18.40	18.20	18.89
Married/Cohabiting	0.665	0.675	0.689	0.707	0.701		0.555	0.568	0.560	0.552	0.581
Has child/ren	0.453	0.442	0.469	0.455	0.456		0.353	0.367	0.354	0.354	0.393
Foreign born	0.013	0.011	0.011	0.009	0.006		0.172	0.176	0.189	0.154	0.156
Part-time worker	0.049	0.041	0.037	0.037	0.029		0.115	0.120	0.121	0.161	0.202
Temporary worker	0.128	0.117	0.088	0.085	0.093		0.149	0.165	0.165	0.136	0.126
Small firm	0.250	0.239	0.246	0.194	0.195		0.587	0.588	0.582	0.544	0.538
Industry	0.027	0.024	0.024	0.029	0.023		0.134	0.132	0.119	0.114	0.116
Services	0.971	0.974	0.975	0.970	0.976		0.851	0.850	0.867	0.871	0.866
White collar	0.910	0.909	0.923	0.915	0.910		0.756	0.746	0.742	0.776	0.772
Blue collar	0.073	0.075	0.066	0.072	0.066		0.244	0.254	0.258	0.224	0.228

Notes: Reference production sector is primary, and reference occupation category is armed forces.

Shock & adjustment – what we know

Wage distributions before the crisis (2006)



Shock & adjustment – what we know

□ Stock-taking

- The '[Rumsfeld axiom](#)': do we know what we know?
- What we (should) know
 - ✓ **Wages** declined – slowly in the public, faster/earlier for private; and for females
 - ✓ **Unemployment** rose – dramatically but also rather uniformly
 - ✓ **Hours/L-intensity**: huge rise in PT; less so in hours; little in **temp/flexi-work**
 - ✓ **Mobility: inactivity** rose (new entrants / discouraged); **regional mobility** didn't!
no exodus of the skilled; but strong **sectoral shift** (industry, small-firms)
 - ✓ **Regional evolutions** broadly similar, but with polarity – convergence in crisis?
 - ✓ **Education** not a problem for the Greek labour market – but skills??
- But what happened 'underneath' these developments?
 - ✓ Was the **shock** similar everywhere?
 - ✓ Was **adjustment** the same? (in direction and magnitude)
 - ✓ Have **structures** become more similar?
 - ✓ Has the labour **market** become more 'marketised'?

Crisis & adjustment – evidence from micro-econometrics

□ Method: hedonic equations and decomposition techniques

- Identify 'shadow prices' of characteristics

$$U_{ir}^* = \beta^r Educ_{ir} + X_{ir} \delta^r + \mu_{ir}$$

$$[U_{ir} = 1 \text{ if } U_{ir}^* > 0, U_{ir} = 0 \text{ otherwise}]$$

$$\ln(w_{ir}) = \alpha^r + \tau^r Educ_{ir} + Y_{ir} \varphi^r + \varepsilon_{ir}$$

- ✓ Implies labour hired and rewarded for its intrinsic characteristics

- Attribute changes in outcomes to different 'components'

$$\hat{Y}_A - \hat{Y}_B = (\bar{X}_A - \bar{X}_B) \hat{\beta}_A + (\hat{\beta}_A - \hat{\beta}_B) \bar{X}_B$$

- ✓ Characteristics / endowments

→ proxy for **labour quality / skill-mix deficiencies**

- ✓ Prices / returns to characteristics

→ proxy for **matching efficiency / demand for available skills**

- ✓ Horizontal component (demand/frictions)

→ proxy for **effective demand / size of shock?**

Crisis & adjustment – evidence from micro-econometrics

❑ To start with: did the LM work pre-crisis?

- Did education raise employability?
- Did education provide good returns once employed?
- Were skills valued equally everywhere / for all?
- Was the valuation of characteristics ‘fair’?

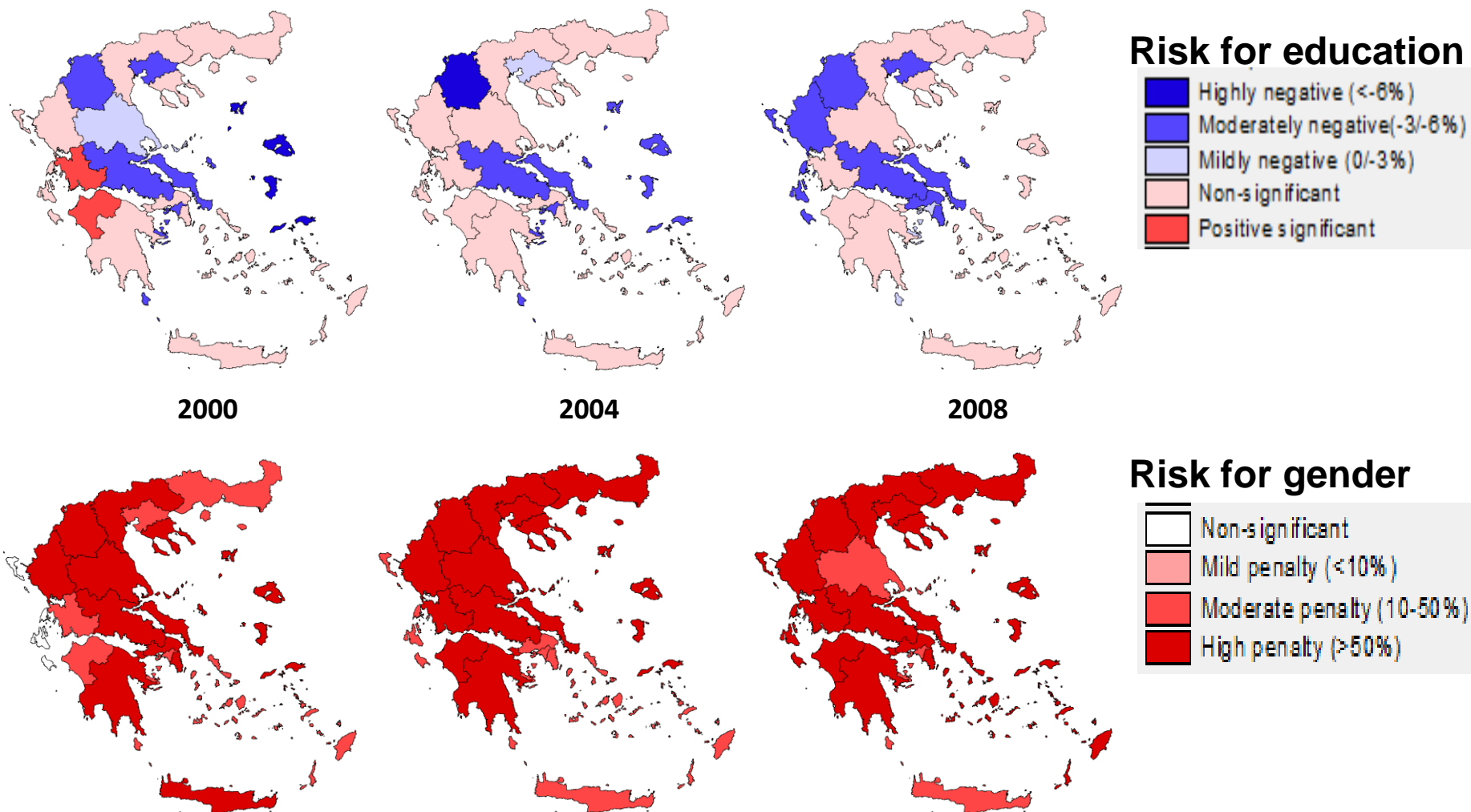
Crisis & adjustment – evidence from micro-econometrics

The pay-offs to education pre-crisis

	Employability		Wage returns	
	2002	2006	2002	2006
Anatoliki Mak.	0.0030**	0.0014	0.0258***	0.0325***
Kentriki Mak.	-0.0007	-0.0047***	0.0366***	0.0365***
Dytiki Mak.	-0.0039	-0.0134***	0.0368***	0.0477***
Ipeiros	-0.0005	-0.0022	0.0358***	0.0361***
Thessalia	0.0023	-0.0025	0.0528***	0.0238***
Ionia Nisia	-0.0015	-0.0114***	0.0170	0.00435
Dytiki Ellada	0.0001	0.0007	0.0360***	0.0351***
Stereia Ellada	0.0001	-0.0039**	0.0274***	0.0488***
Attiki	-0.0017	-0.0050***	0.0416***	0.0380***
Peloponnisos	-0.0008	-0.0013	0.0469***	0.0337***
Voreio Aigaio	0.0004	0.0042	0.0521***	0.0108
Notio Aigaio	-0.0042	-0.0021	0.0266***	0.0211***
Kriti	0.0022*	0.0017	0.0293***	0.0241***
Greece	-0.0019***	-0.0022***	0.0382***	0.0347***
Spain	-0.0066***	-0.0058***	0.0608***	0.0485***

Crisis & adjustment – evidence from micro-econometrics

Region-specific risk coefficients, by period



Crisis & adjustment – evidence from micro-econometrics

Valuation of characteristics by groups, pre-crisis

	Wage returns		Both genders				Unemployment 2005-08
	Males	Females	Selection	Public	Private		
Public sector	0.0818*** [0.0135]	0.0948*** [0.0149]				Fixed effect	-1.359*** (0.0315)
Female			-0.2126*** [0.0428]	-0.0666*** [0.0081]	-0.1355*** [0.0075]	Schooling	-0.0267*** (0.00169)
Education	0.0159*** [0.0013]	0.0199*** [0.0019]	0.0603*** [0.0079]	0.0192*** [0.0016]	0.0153*** [0.0012]	Female	0.541*** (0.0118)
Experience	0.0151*** [0.0013]	0.0192*** [0.0016]	0.0484*** [0.0062]	0.0167*** [0.0017]	0.0148*** [0.0011]	Foreign	-0.0971*** (0.0248)
Exp. squared	-0.0002*** [0.0000]	-0.0003*** [0.0000]	-0.0003*** [0.0001]	-0.0002*** [0.0000]	-0.0002*** [0.0000]	Hhold size	0.0574*** (0.00472)
Married	0.0702*** [0.0095]	0.0251** [0.0105]	-0.055 [0.0504]	0.0381*** [0.0104]	0.0514*** [0.0085]	Married	-0.357*** (0.0142)
Child/ren	0.0234*** [0.0082]	-0.0007 [0.0104]	0.057 [0.0455]	0.0023 [0.0090]	0.0267*** [0.0080]	Age 16-24	0.531*** (0.0213)
Foreign born	-0.1365*** [0.0114]	-0.0870*** [0.0180]	-0.7423*** [0.1208]	-0.1057** [0.0451]	-0.1194*** [0.0094]	Age 25-34	0.106*** (0.00796)
Part-time	-0.4100*** [0.0406]	-0.4789*** [0.0315]	-1.2806*** [0.1075]	-0.6128*** [0.0490]	-0.4314*** [0.0245]	Age 45-54	-0.0373*** (0.00444)
Temporary	-0.1157*** [0.0138]	-0.1712*** [0.0171]	0.1648*** [0.0623]	-0.2902*** [0.0209]	-0.0744*** [0.0110]	Age 55-64	-0.0561*** (0.00515)
Small firm	-0.0357*** [0.0079]	-0.0567*** [0.0095]	-0.5090*** [0.0401]	-0.0294*** [0.0095]	-0.0460*** [0.0069]	Observations	244,976
Weekly hours	0.0051*** [0.0006]	0.0074*** [0.0009]	-0.0489*** [0.0034]	0.0027*** [0.0008]	0.0075*** [0.0006]		
Constant	6.1968*** [0.0500]	6.0432*** [0.0929]	-0.1933 [0.2832]	6.5033*** [0.0661]	6.2000*** [0.0521]		
Public sector history			0.4306*** [0.0473]	-0.0793 [0.0554]	-0.0997** [0.0483]		

Crisis & adjustment – evidence from micro-econometrics

Drivers of employability: Athens versus the rest, pre-crisis

	2000		2004		2008	
	Athens	Rest of GR	Athens	Rest of GR	Athens	Rest of GR
Fixed effect	-0.896*** (0.102)	-0.898*** (0.120)	-1.116*** (0.132)	-0.828*** (0.146)	-1.480*** (0.154)	-0.8652 (0.170)
Schooling	-0.0476*** (0.00554)	-0.0072*** (0.00648)	-0.0353*** (0.00742)	-0.0220*** (0.00810)	-0.0265*** (0.00886)	-0.00282 (0.00966)
Female	0.428*** (0.0364)	0.583*** (0.0434)	0.459*** (0.0474)	0.657*** (0.0524)	0.309*** (0.0557)	0.263*** (0.0618)
Foreign	-0.0348 (0.0766)	0.0066 (0.111)	-0.130 (0.0824)	-0.0829 (0.0989)	-0.180* (0.0961)	0.000 (0.111)
Hhold size	0.0571*** (0.0155)	-0.0386 (0.0180)	0.0518*** (0.0194)	0.00262 (0.0213)	0.0679*** (0.0242)	-0.0208 (0.0264)
Married	-0.443*** (0.0433)	-0.0098 (0.0525)	-0.238*** (0.0551)	-0.0120** (0.0615)	-0.459*** (0.0724)	-0.348* (0.0792)
Age 16-24	0.599*** (0.0645)	0.6334 (0.0766)	0.436*** (0.0819)	0.0157 (0.0910)	0.593*** (0.103)	-0.6593 (0.114)
Age 25-34	0.159*** (0.0253)	-0.0453 (0.0304)	0.0322 (0.0312)	0.0255*** (0.0348)	0.141*** (0.0395)	-0.0305 (0.0434)
Age 45-54	-0.0173 (0.0149)	-0.0378 (0.0179)	-0.0586*** (0.0181)	-0.0437 (0.0201)	-0.0186 (0.0221)	-0.0338 (0.0242)
Age 55-64	-0.00698 (0.0165)	-0.008708*** (0.0202)	-0.0352* (0.0204)	-0.0285 (0.0229)	0.00293 (0.0233)	-0.006570** (0.0258)
Observations	33,861		34,367		30,563	

Crisis & adjustment – evidence from micro-econometrics

□ After the crisis: crisis and adjustment

- Was the shock similar everywhere?
- Did returns adjust to mediate / absorb the shock?
- Is the valuation of characteristics more 'rational'?
- Are skills valued more equally today?

Crisis & adjustment – evidence from micro-econometrics

Structure of key micro-determinants of unemployment

	<i>Greece</i>		<i>Athens</i>		<i>Rest of Greece</i>	
	2005-08	2009-12	2005-08	2009-12	2005-08	2009-12
Fixed effect	-1.359*** (0.0315)	0.505*** (0.0431)	-1.340*** (0.0736)	0.923*** (0.100)	-1.362*** (0.0338)	0.371*** (0.0458)
Schooling	-0.0267*** (0.00169)	-0.00567** (0.00234)	-0.0304*** (0.00404)	-0.0247*** (0.00553)	-0.0235*** (0.00182)	-0.00198 (0.00254)
Female	0.541*** (0.0118)	-0.230*** (0.0162)	0.374*** (0.0255)	-0.214*** (0.0349)	0.620*** (0.0128)	-0.232*** (0.0172)
Foreign	-0.0971*** (0.0248)	0.186*** (0.0322)	-0.118*** (0.0452)	0.0554 (0.0602)	-0.0659** (0.0282)	0.232*** (0.0354)
Hhold size	0.0574*** (0.00472)	0.0211*** (0.00661)	0.0789*** (0.0107)	-0.00986 (0.0155)	0.0452*** (0.00505)	0.0374*** (0.00692)
Married	-0.357*** (0.0142)	-0.0336* (0.0194)	-0.387*** (0.0307)	-0.0152 (0.0420)	-0.360*** (0.0153)	-0.0310 (0.0209)
Age 16-24	0.531*** (0.0213)	0.0163 (0.0299)	0.498*** (0.0471)	-0.00953 (0.0668)	0.532*** (0.0229)	0.0305 (0.0319)
Age 25-34	0.106*** (0.00796)	-0.0102 (0.0109)	0.105*** (0.0175)	-0.0389 (0.0238)	0.104*** (0.00856)	0.00504 (0.0118)
Age 45-54	-0.0373*** (0.00444)	0.0186*** (0.00594)	-0.0235** (0.00970)	0.0198 (0.0128)	-0.0430*** (0.00474)	0.0173*** (0.00630)
Age 55-64	-0.0561*** (0.00515)	0.00894 (0.00673)	-0.0147 (0.0104)	-0.00748 (0.0137)	-0.0756*** (0.00557)	0.0171** (0.00712)
Observations	244,976		46,532		198,444	

Crisis & adjustment – evidence from micro-econometrics

Decomposition of unemployment risk

		<i>Greece</i>	<i>Athens</i>	<i>Rest of Greece</i>
Differential	Abs change	6.78%	6.97%	6.69%
	% change	76.23%	88.43%	71.31%
Decomposition	Component			
B-O	Explained	-8%	-13%	-6%
	Unexplained	108%	113%	106%
Pooled	Explained	-5%	-8%	-4%
	Unexplained	105%	108%	104%
Neumark	Explained	-6%	-9%	-4%
	Advantage	54%	55%	53%
	Disadvantage	52%	54%	51%
D-A	Endowments	-8%	-13%	-6%
	Coefficients	105%	107%	104%
	Interaction	3%	6%	2%

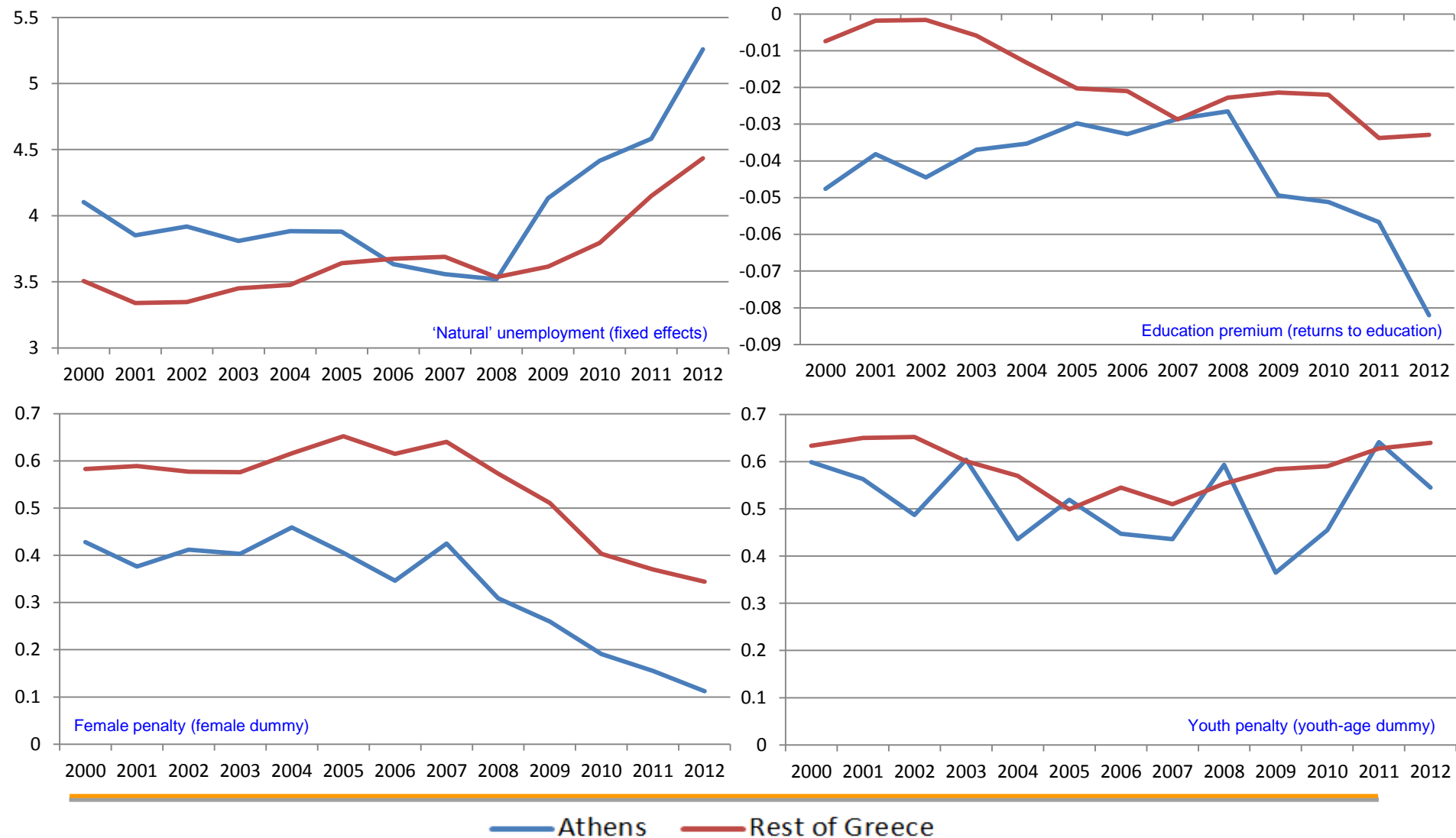
Crisis & adjustment – evidence from micro-econometrics

Decomposition of unemployment risk – factor-specific

<i>Method / factor</i>	<i>Greece</i>		<i>Athens</i>		<i>Rest of Greece</i>	
Pooled	Coeff	Price	Coeff	Price	Coeff	Price
Education	-3%	-18%	-4%	-82%	-2%	-6%
Female	1%	-24%	1%	-23%	2%	-24%
Foreign	0%	4%	-1%	1%	0%	4%
Hhold size	-1%	17%	-1%	-7%	-1%	32%
Married	1%	-5%	0%	-2%	1%	-5%
Age (groups)	-3%	5%	-3%	-2%	-4%	8%
Fixed effect	127%		222%		96%	
3-way	Coeff.	Price	Interact.	Coeff	Price	Interact.
Education	-4%	-18%	101%	-7%	-83%	9%
Female	1%	-24%	133%	1%	-23%	3%
Foreign	1%	4%	-220%	-1%	2%	-2%
Hhold size	-2%	17%	72%	-2%	-7%	-1%
Married	1%	-5%	-11%	0%	-2%	0%
Age (groups)	-5%	5%	-72%	-4%	-2%	-3%
Fixed effect	127%		223%		96%	

Crisis & adjustment – evidence from micro-econometrics

Drivers to employability: Athens versus the rest, 2000-2012



Crisis & adjustment – evidence from micro-econometrics

Marginal effect of schooling on the probability of unemployment, 2002-2012

	2002	2006	2010	2012
Anatoliki Mak.	0.0030**	0.0014	-0.0031	-0.0075***
Kentriki Mak.	-0.0007	-0.0047***	-0.0052***	-0.0092***
Dytiki Mak.	-0.0039	-0.0134***	-0.0109***	-0.0189***
Ipeiros	-0.0005	-0.0022	-0.0033*	-0.0118***
Thessalia	0.0023	-0.0025	-0.0023	-0.0104***
Ionia Nisia	-0.0015	-0.0114***	0.0021	-0.0043
Dytiki Ellada	0.0001	0.0007	-0.0008	-0.0045
Stereia Ellada	0.0001	-0.0039**	-0.0027	-0.0072**
Attiki	-0.0017	-0.0050***	-0.0075***	-0.0105***
Peloponnisos	-0.0008	-0.0013	-0.0017	-0.0035
Voreio Aigaio	0.0004	0.0042	-0.0054*	-0.0100*
Notio Aigaio	-0.0042	-0.0021	-0.0052	-0.0032
Kriti	0.0022*	0.0017	0.0005	-0.0072***
Greece	-0.0019***	-0.0022***	-0.0045***	-0.0107***
Spain	-0.0066***	-0.0058***	-0.0181***	-0.0196***

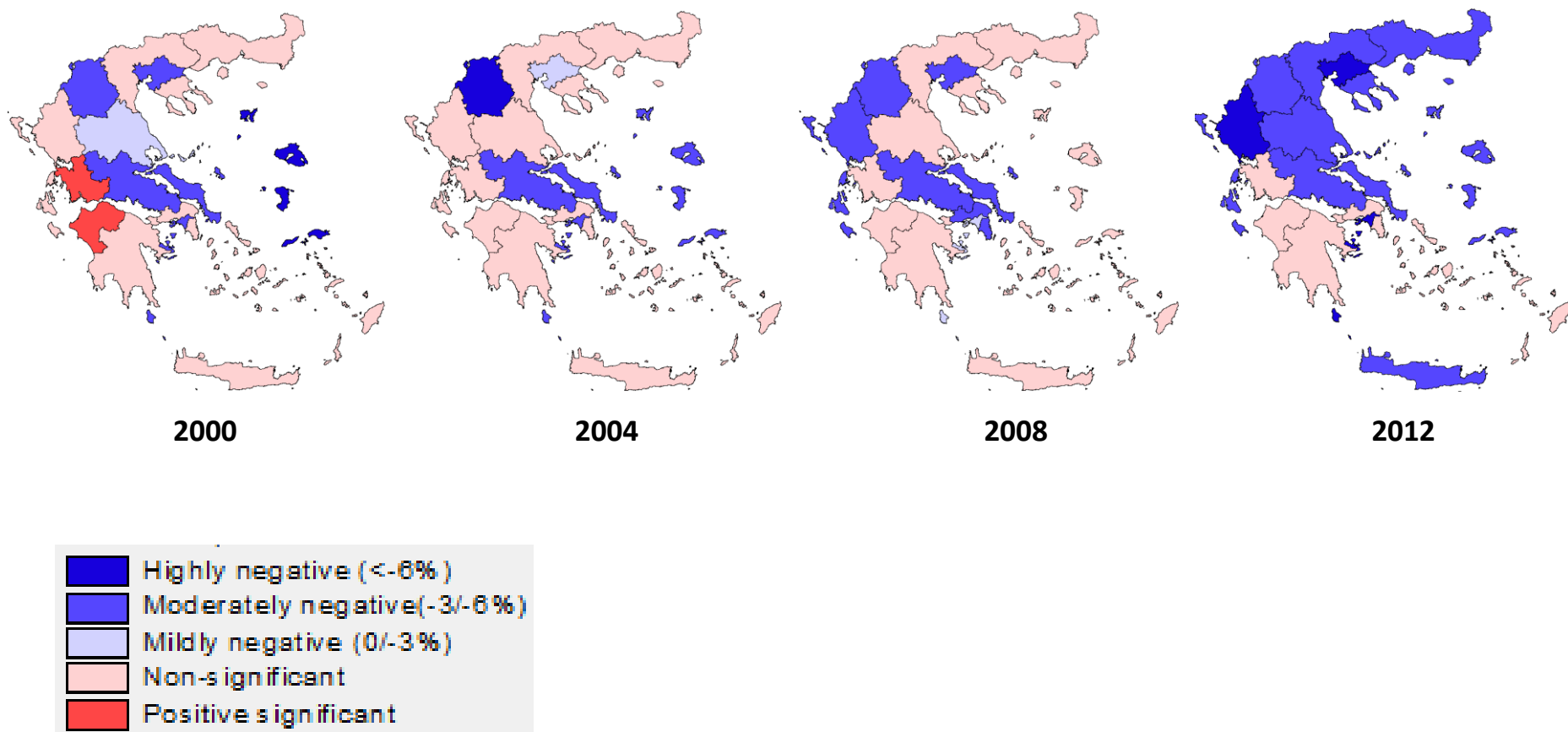
Crisis & adjustment – evidence from micro-econometrics

Drivers of employability: Athens versus the rest, 2000-2012

	2000		2004		2008		2012	
	Athens	Rest of GR	Athens	Rest of GR	Athens	Rest of GR	Athens	Rest of GR
Fixed effect	-0.896*** (0.102)	-0.898*** (0.120)	-1.116*** (0.132)	-0.828*** (0.146)	-1.480*** (0.154)	-0.8652 (0.170)	0.258* (0.138)	-0.825*** (0.150)
Schooling	-0.0476*** (0.00554)	-0.0072*** (0.00648)	-0.0353*** (0.00742)	-0.0220*** (0.00810)	-0.0265*** (0.00886)	-0.00268 (0.00966)	-0.0820*** (0.00779)	-0.0329*** (0.00842)
Female	0.428*** (0.0364)	0.583*** (0.0434)	0.459*** (0.0474)	0.657*** (0.0524)	0.309*** (0.0557)	0.263*** (0.0618)	0.112** (0.0478)	0.232*** (0.0526)
Foreign	-0.0348 (0.0766)	0.0066 (0.111)	-0.130 (0.0824)	-0.0829 (0.0989)	-0.180* (0.0961)	0.0100 (0.111)	0.0422 (0.0814)	0.0262*** (0.0927)
Hhold size	0.0571*** (0.0155)	-0.0386 (0.0180)	0.0518*** (0.0194)	0.00262 (0.0213)	0.0679*** (0.0242)	-0.0208 (0.0264)	0.0891*** (0.0224)	-0.08763 (0.0242)
Married	-0.443*** (0.0433)	-0.0098 (0.0525)	-0.238*** (0.0551)	-0.0120** (0.0615)	-0.459*** (0.0724)	-0.348* (0.0792)	-0.429*** (0.0567)	-0.00612 (0.0628)
Age 16-24	0.599*** (0.0645)	0.6334 (0.0766)	0.436*** (0.0819)	0.0137 (0.0910)	0.593*** (0.103)	-0.6593 (0.114)	0.545*** (0.0992)	0.6907 (0.109)
Age 25-34	0.159*** (0.0253)	-0.0453 (0.0304)	0.0322 (0.0312)	0.0255*** (0.0348)	0.141*** (0.0395)	-0.0305 (0.0434)	0.0957*** (0.0327)	0.0213 (0.0361)
Age 45-54	-0.0173 (0.0149)	-0.0378 (0.0179)	-0.0586*** (0.0181)	-0.0439 (0.0201)	-0.0186 (0.0221)	-0.0338 (0.0242)	-0.000185 (0.0162)	-0.03086* (0.0179)
Age 55-64	-0.00698 (0.0165)	-0.008708*** (0.0202)	-0.0352* (0.0204)	-0.0285 (0.0229)	0.00293 (0.0233)	-0.006470** (0.0258)	-0.0255 (0.0174)	-0.0886** (0.0193)
Observations	33,861		34,367		30,563		25,057	

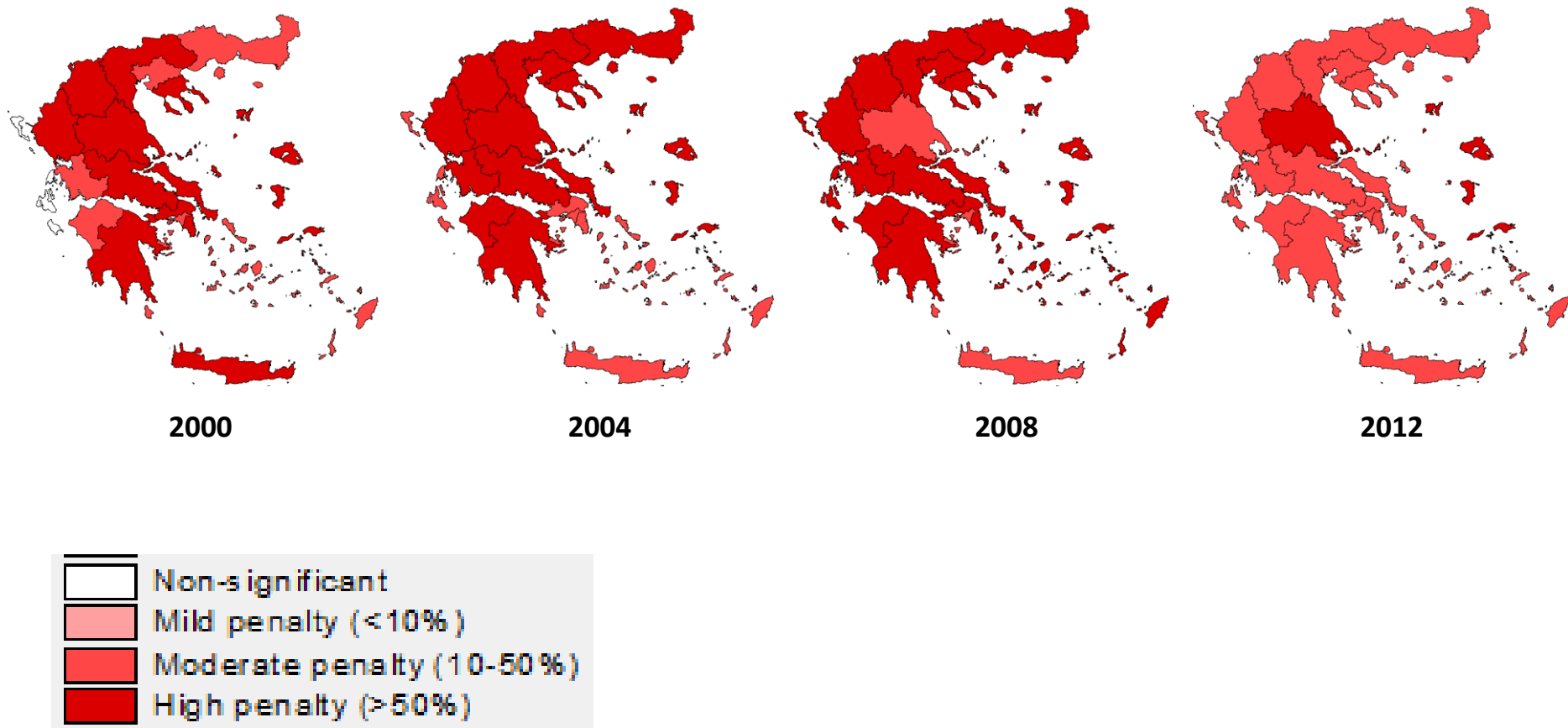
Crisis & adjustment – evidence from micro-econometrics

Region-specific risk coefficients, by period – education



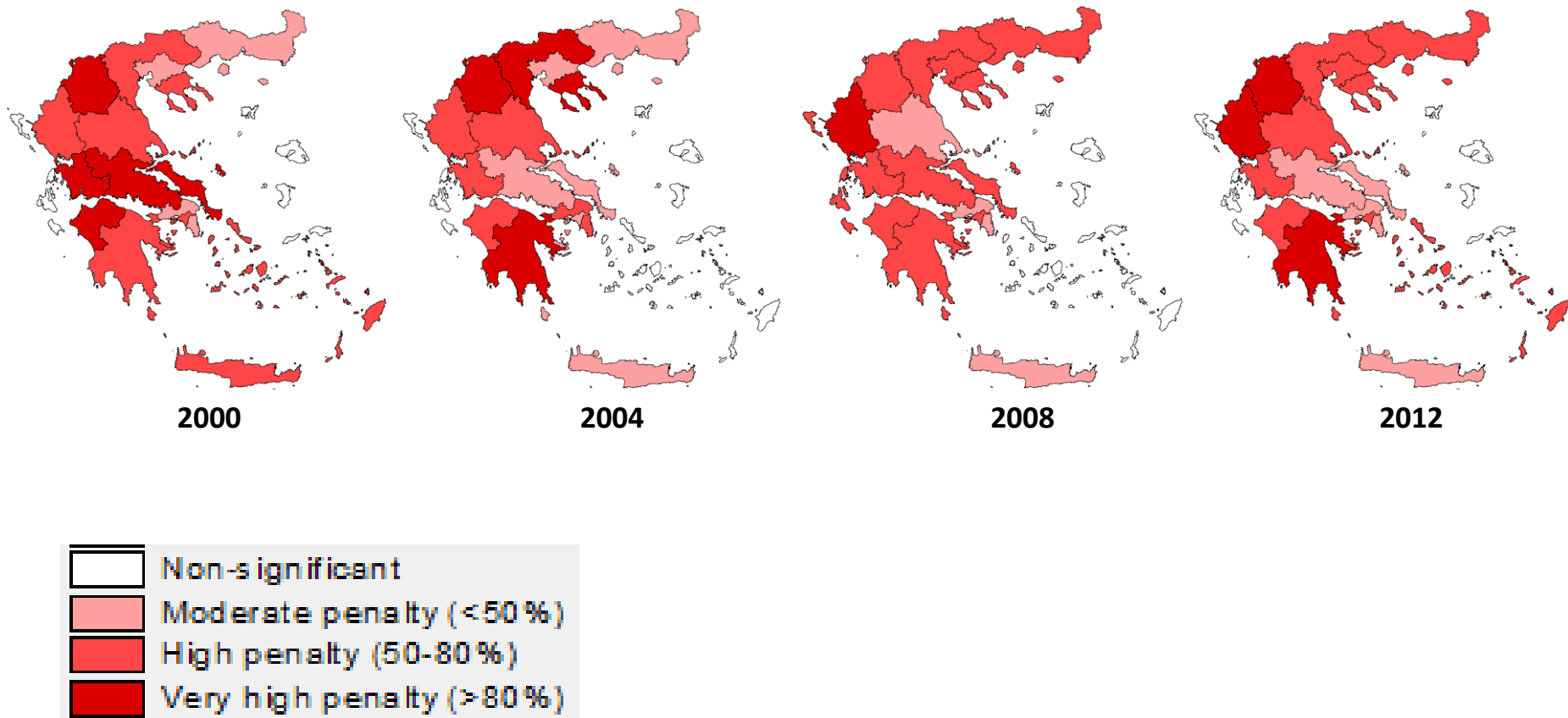
Crisis & adjustment – evidence from micro-econometrics

Region-specific risk coefficients, by period – Female penalty



Crisis & adjustment – evidence from micro-econometrics

Region-specific risk coefficients, by period – Youth penalty



Crisis & adjustment – evidence from micro-econometrics

Decomposition of unemployment differentials prior and during the crisis

<i>Decomposition</i>	<i>Year</i>	<i>Raw differential</i>	<i>Labour quality (endowments)</i>	<i>Valuation of endowments</i>	<i>Effective demand</i>
Agriculture - non-agriculture	2008	-1.362	-0.175	-4.675	3.488
	2012	0.472	-1.641	-7.610	9.723
Island - mainland	2008	1.194	-0.083	2.451	-1.174
	2012	4.211	-0.608	-3.404	8.223
North-south	2008	-1.944	0.113	1.173	-3.229
	2012	-1.231	-0.154	7.320	-8.396
Rest of Greece – Athens	2008	-2.460	-0.169	0.715	-3.006
	2012	-0.553	-1.917	-13.699	15.064
Above - below average (year-specific)	2008	-2.888	-0.106	-0.220	-2.563
	2012	-4.652	-0.823	-3.912	0.083
Above - below average in 2000	2008	0.812	0.207	0.996	-0.391
	2012	-3.029	1.559	10.890	-15.478

Notes: authors' calculations using the variable-specific Neumark decomposition for non-linear models proposed by Yun (2004) and the normalisation correction of Yun (2005). The reference groups of regions are those listed first in each decomposition. Negative values denote higher unemployment for the reference group. All data are expressed in percentage points.

Crisis & adjustment

'Baseline'
unemployment risk



(a) 2000



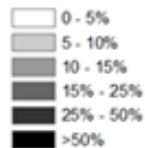
(b) 2004



(c) 2008



(d) 2012



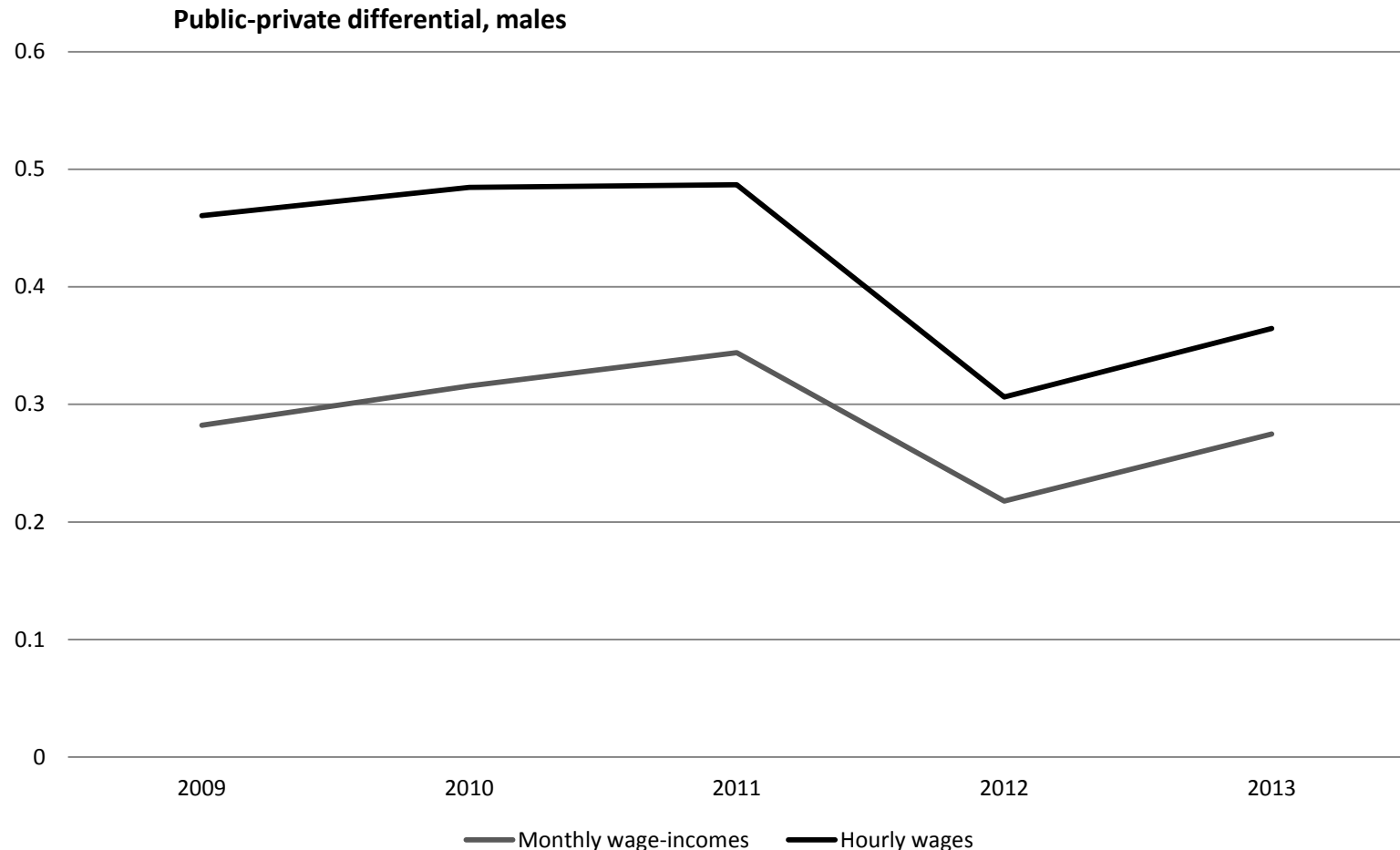
Crisis & adjustment – evidence from micro-econometrics

Returns to schooling, 2002-2012

	2002	2006	2010	2012
Anatoliki Mak.	0.0258***	0.0325***	0.0377***	0.0367***
Kentriki Mak.	0.0366***	0.0365***	0.0405***	0.0359***
Dytiki Mak.	0.0368***	0.0477***	0.0309***	0.0339**
Ipeiros	0.0358***	0.0361***	0.0296***	0.0274***
Thessalia	0.0528***	0.0238***	0.0455***	0.0358***
Ionia Nisia	0.0170	0.00435	0.0287***	0.0285**
Dytiki Ellada	0.0360***	0.0351***	0.0204***	0.0458***
Stereia Ellada	0.0274***	0.0488***	0.0439***	0.0404***
Attiki	0.0416***	0.0380***	0.0503***	0.0528***
Peloponnisos	0.0469***	0.0337***	0.0425***	0.0344***
Voreio Aigaio	0.0521***	0.0108	0.0445***	0.0364**
Notio Aigaio	0.0266***	0.0211***	0.0247***	0.0269**
Kriti	0.0293***	0.0241***	0.0286***	0.0421***
Greece	0.0382***	0.0347***	0.0417***	0.0427***
Spain	0.0608***	0.0485***	0.0635***	n/a

Shock & adjustment – what we know

Evolution of wages and public-private (raw) differential, 2009-2013



Crisis & adjustment – evidence from micro-econometrics

Table. Blinder-Oaxaca decomposition of real wage changes by period, sector and type of characteristics (selection-adjusted)

	Full period		2009-11		2011-13	
	Public	Private	Public	Private	Public	Private
Raw wage difference	-0.2594	-0.3222	-0.0215	-0.1073	-0.2379	-0.2149
Selection-adjusted difference	-0.2457	-0.3277	-0.0407	-0.1045	-0.2050	-0.2232
Selection effect	0.0137	-0.0056	-0.0192	0.0028	0.0329	-0.0084
Endowment effects						
Total	0.0484	0.0028	0.0367	-0.0071	0.0128	0.0038
Worker	0.0252	0.0377	0.0177	0.0132	0.0053	0.0216
Job	0.0232	-0.0349	0.0190	-0.0203	0.0076	-0.0179
Price effects						
Total	-0.2941	-0.3305	-0.0774	-0.0973	-0.2178	-0.2270
Worker	0.0787	0.1958	0.1626	0.0855	-0.0817	0.1132
Job	-0.0731	0.2143	-0.0878	0.1458	0.0114	0.0717
Constant	-0.2997	-0.7406	-0.1522	-0.3287	-0.1475	-0.4119

Notes: Reported wage gap is in the logged wages. Analytical standard errors (calculated by the Delta method) are in brackets. Worker characteristics are: female, education, experience, marital status, whether has child/ren, foreign-born. Job characteristics are: sector, occupation, region, part-time contract, temporary contract, small firm, hours of work). Coefficients of dummy variables adjusted to reflect deviations from the mean rather than from the reference category (i.e., they sum up to zero over all categories).

Conclusions

❑ Pre-crisis

- Valuation of characteristics 'irrational' and 'unfair'
- Low 'marketisation' (e.g., education not a sorting device)
- High discrimination and exploitation (e.g., female/PT penalties)

❑ Crisis

- A huge shock although rather asymmetric in space
- Significant adjustment in most dynamic areas to absorb the shock
- Sorting intensified: more efficiency but also more vulnerability
- Some convergence in returns across sectors, regions, etc