

**THEODORE PELAGIDIS**

Professor of Economics, University of Piraeus

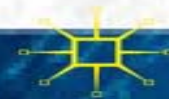
**UNDERSTANDING THE CRISIS IN  
GREECE  
FROM BOOM TO BUST**



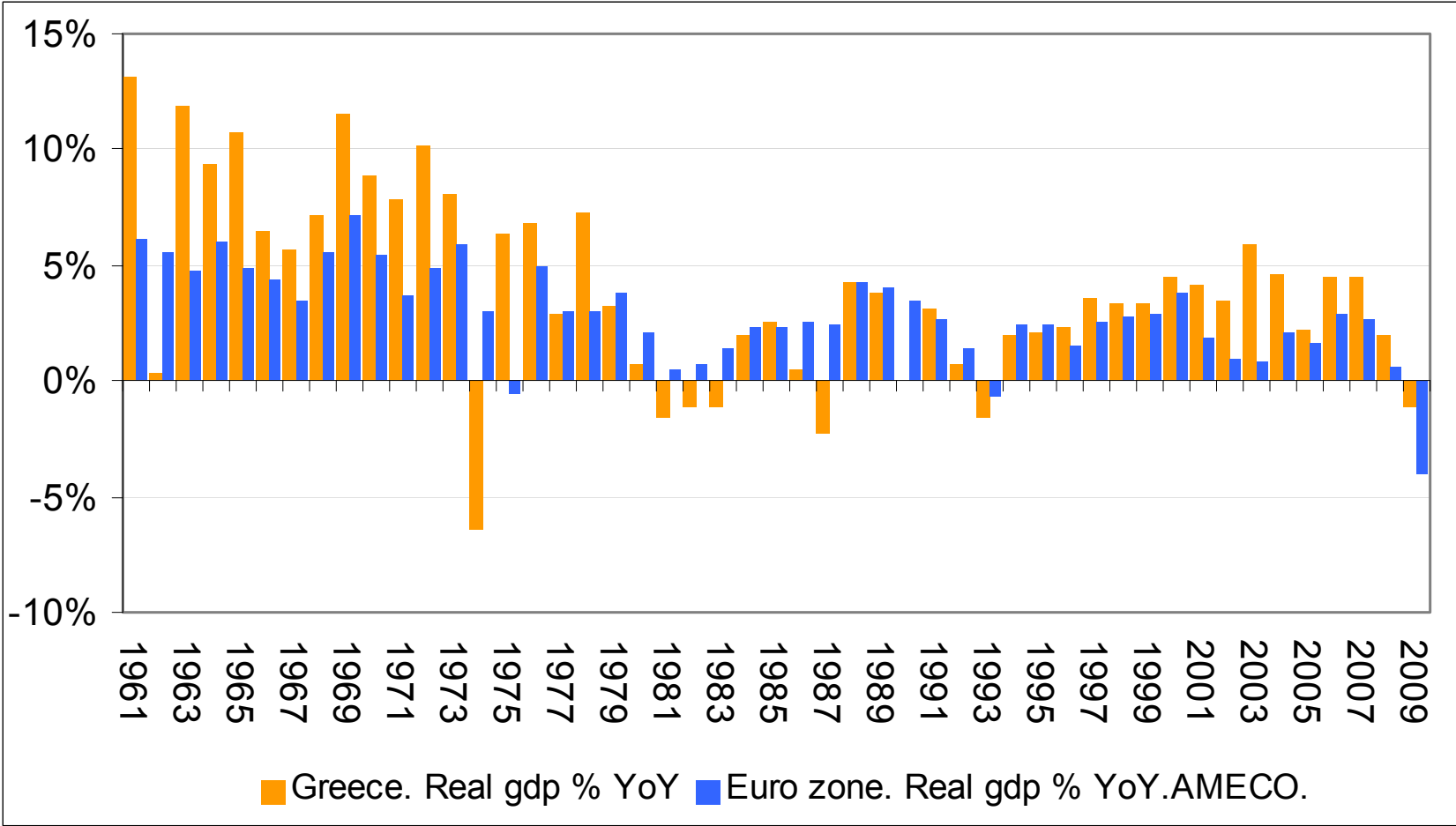
**Michael Mitsopoulos  
Theodore Pelagidis**

# **Understanding the Crisis in Greece**

**From Boom to Bust**



**Figure 1. Strong growth: Greece clearly outperformed since 1995-96 the benchmark euro zone economy.**



# The driving forces behind this were:

- Greece's economy accession to the eurozone together with the creation of competitive credit and capital markets as well as the macroeconomic stability that followed the EMU accession.
- The shipping and tourism industry boom (+ the real estate to a lesser extent)
- the improvement resulting from of productivity enhancing infrastructure especially in the Athens, 'Olympic Games', greater area that were financed largely by the EU structural funds but also by private sector partnerships.
- the satisfactory deregulation of the telecommunications industry and some other infrastructure

Figure 2. The main drivers of the higher performance.

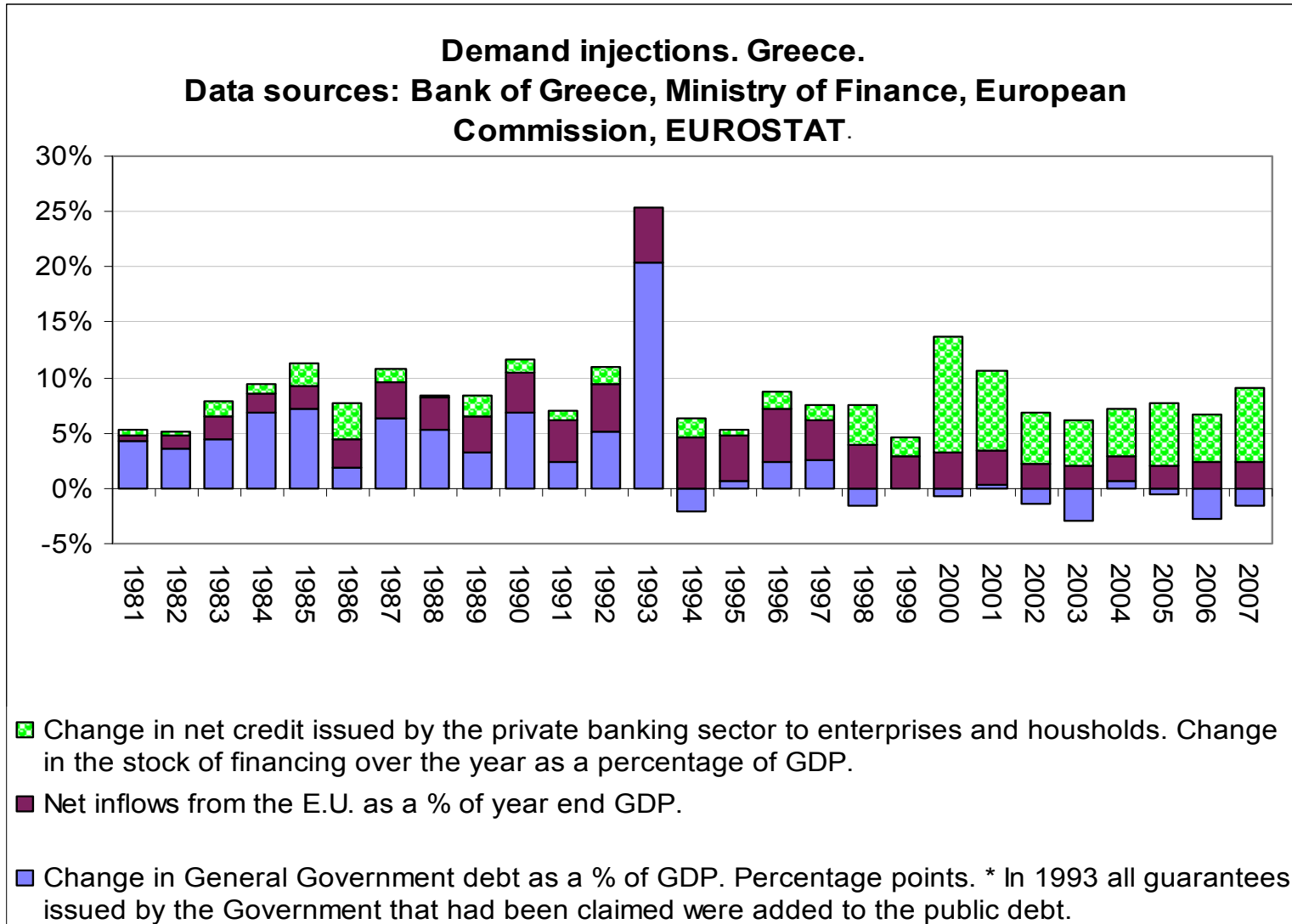


Figure 3 Interbank rates as a reflection of achieving macro stability

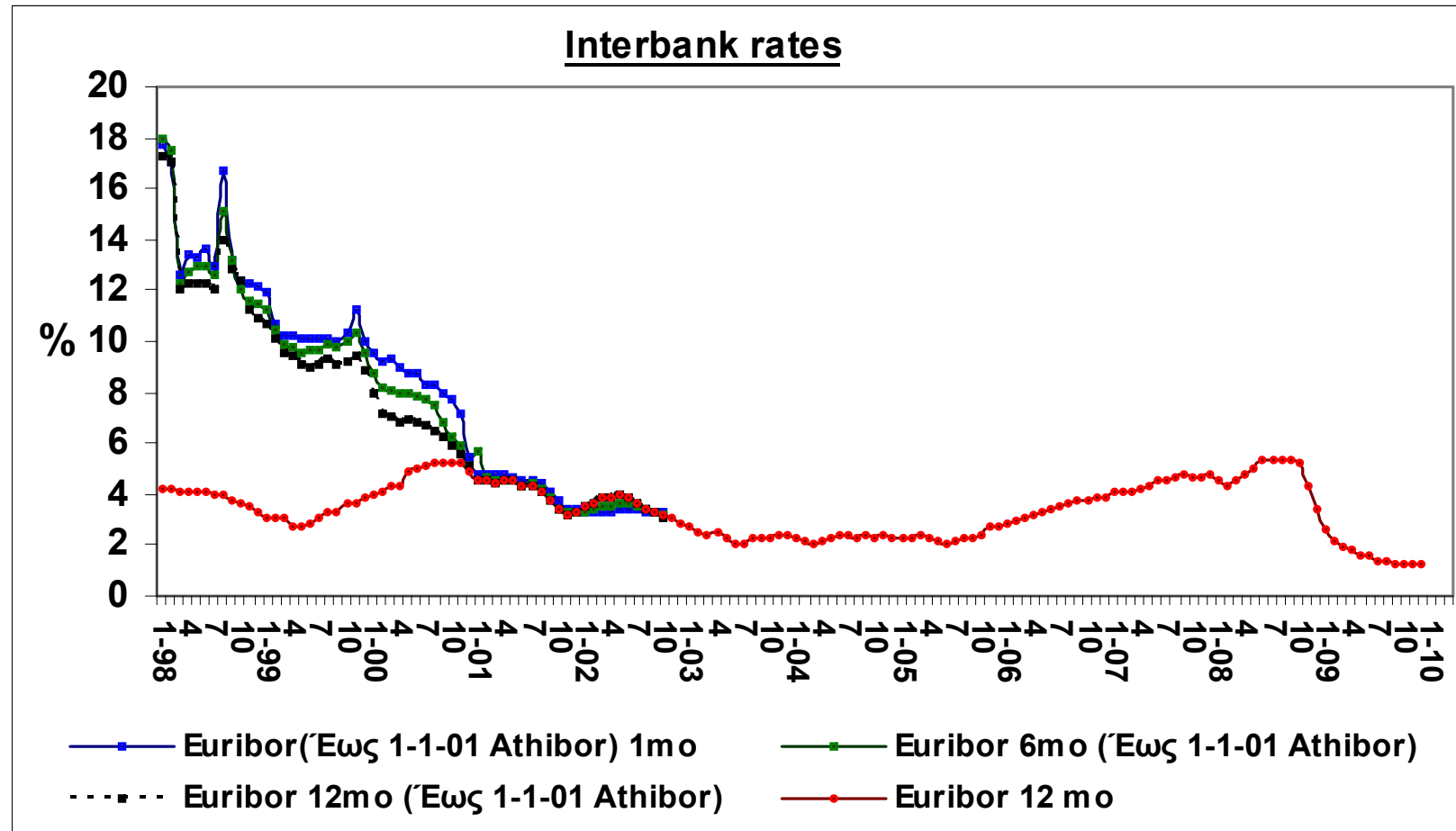


Figure 4 Expansion of household credit and private consumption (GDP component) as a driver of private consumption and the fading of this effect.

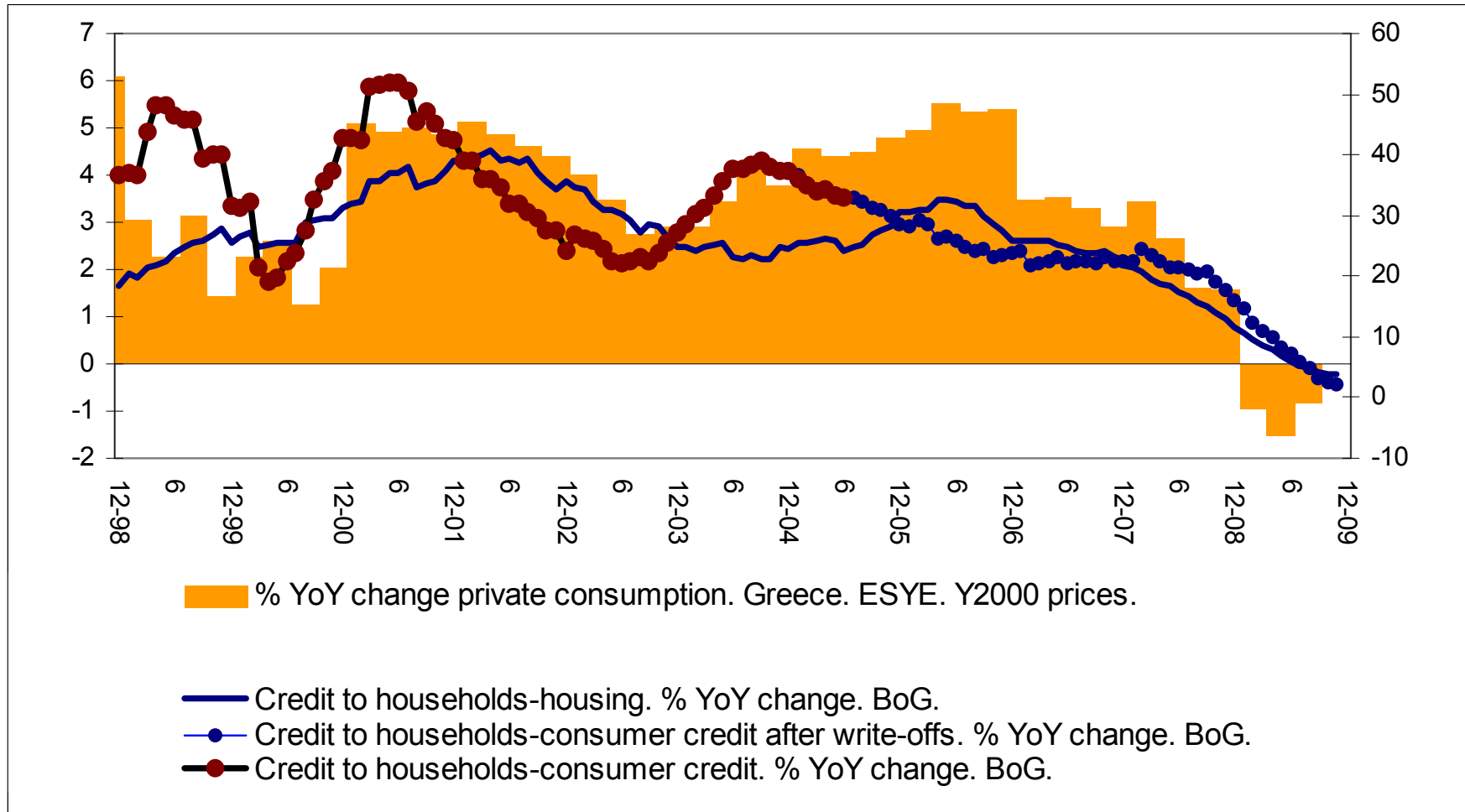


Figure 5. Private consumption and investment change. Investment often complemented consumption growth, especially in the run up to the 2004 Olympic games.

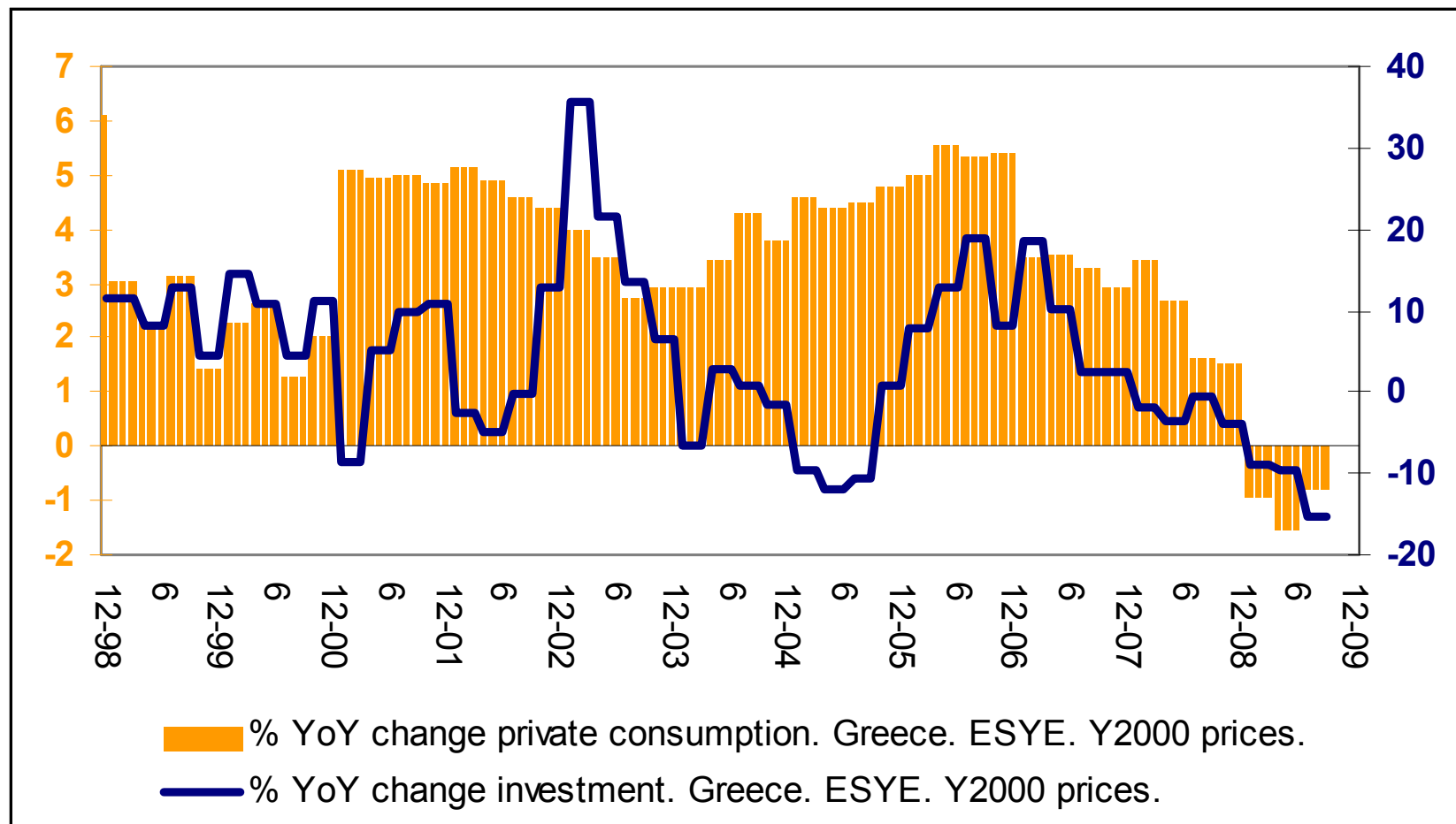
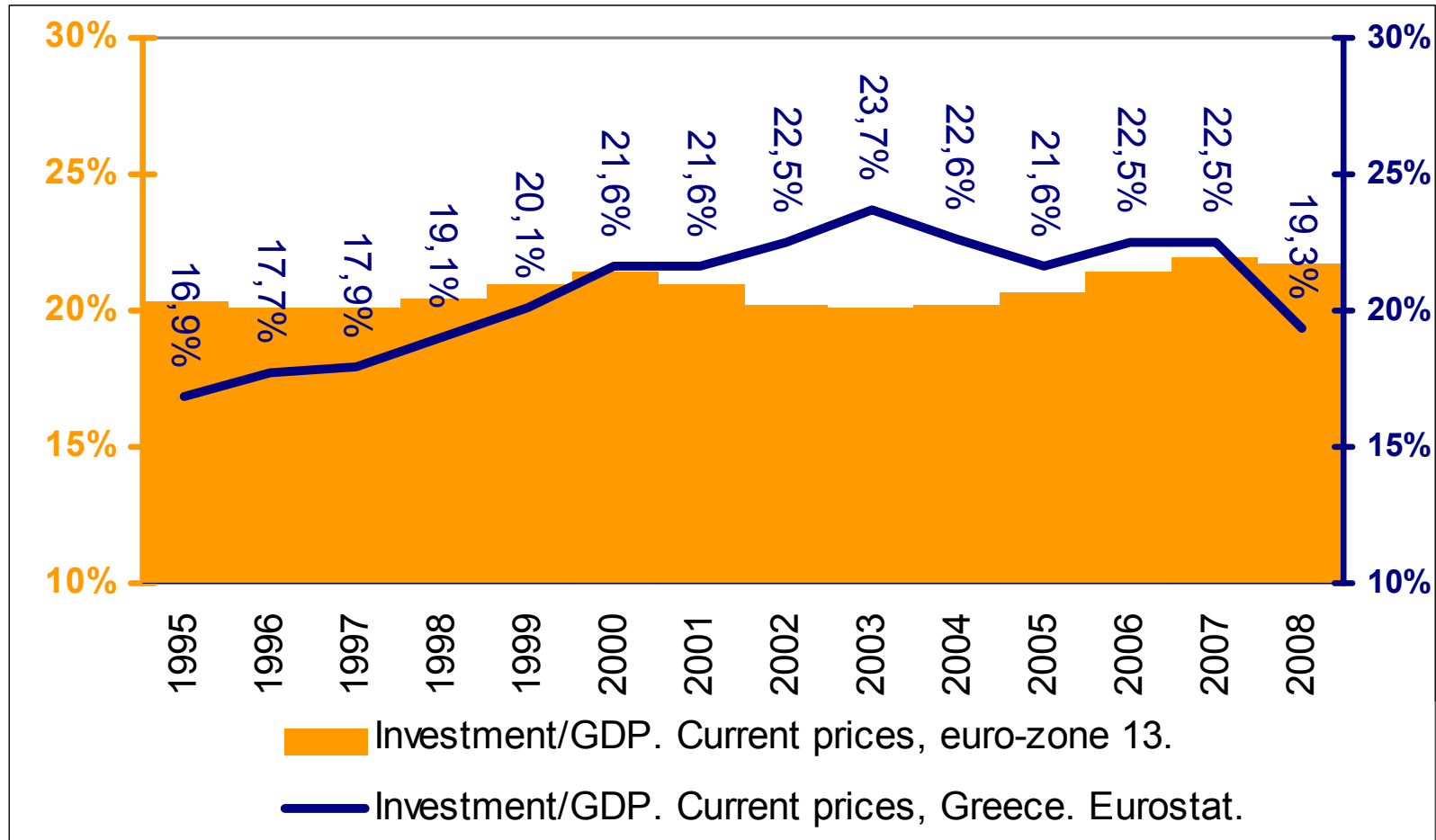


Figure 6. Investment as % of GDP.

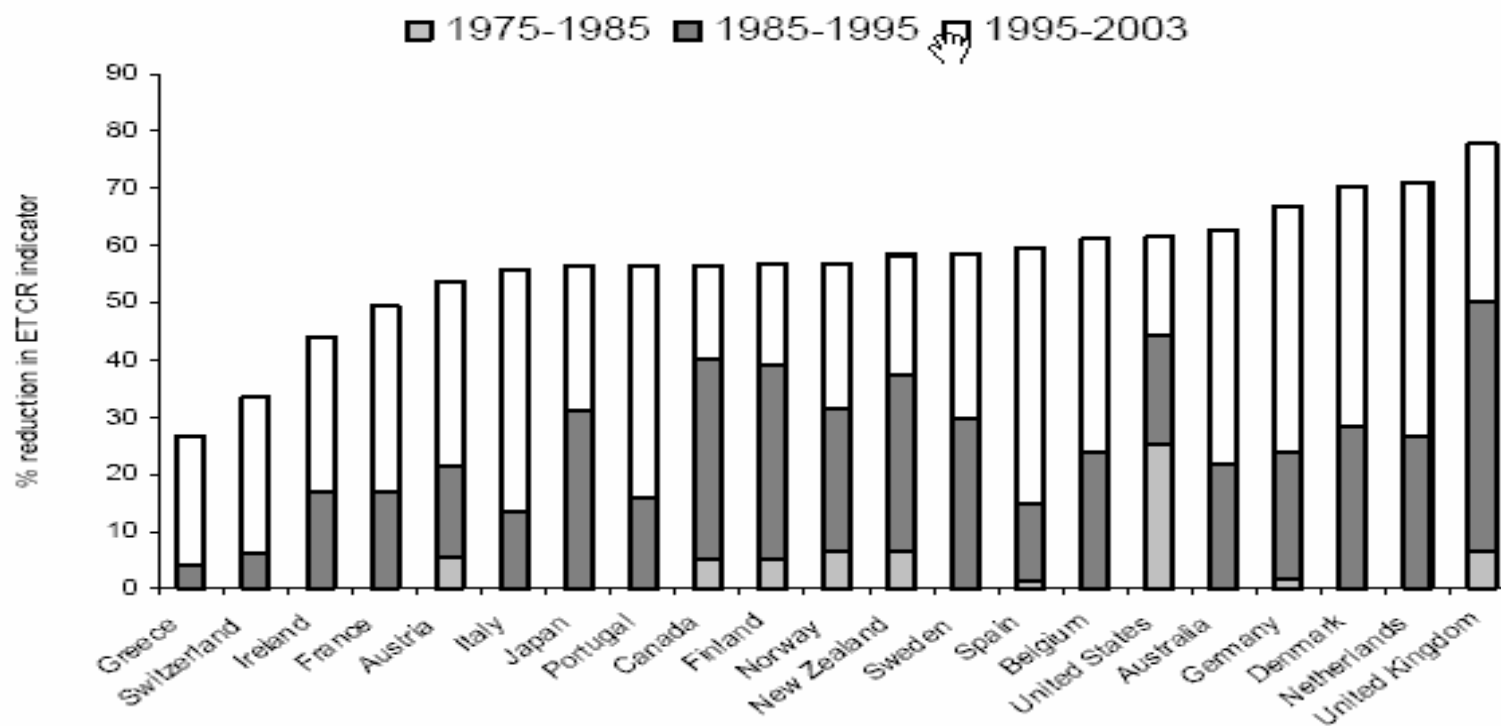
The rapid increase of new investment (figure 6) also demonstrates the impact of the infrastructure investment that was largely financed by the EU structural

funds but also private sector financing.



# Figure 7

**Figure 7. Timing of reforms in energy, transport and communications**  
(increasing in reform effort)



source: OECD International Regulation Database  
Economics Dept. working Paper 530,2006

**The poor performance regarding competitiveness, is documented by:**

- The persistent deficit of the current account in double-digit numbers (12-14% of GDP),
- The persisting inflation differential with the euro zone (around 1.5-2.0% during 2008), which is observed for both goods and services.
- The unattractiveness of Greece to net foreign direct investments that are practically zero
- The consistent ranking of Greece by all competitiveness, business environment, administrative cost and governance surveys at a rank that is disproportionately low when compared to its per capita GDP and the productivity that is measures as GDP per worker.  
Corruption matches well with this.

**Fig. 8.** An expository comparison with Ireland, where the inflation of goods is much lower than the inflation of services and that, thus, emerges as a textbook Balassa-Samuelson case is most revealing

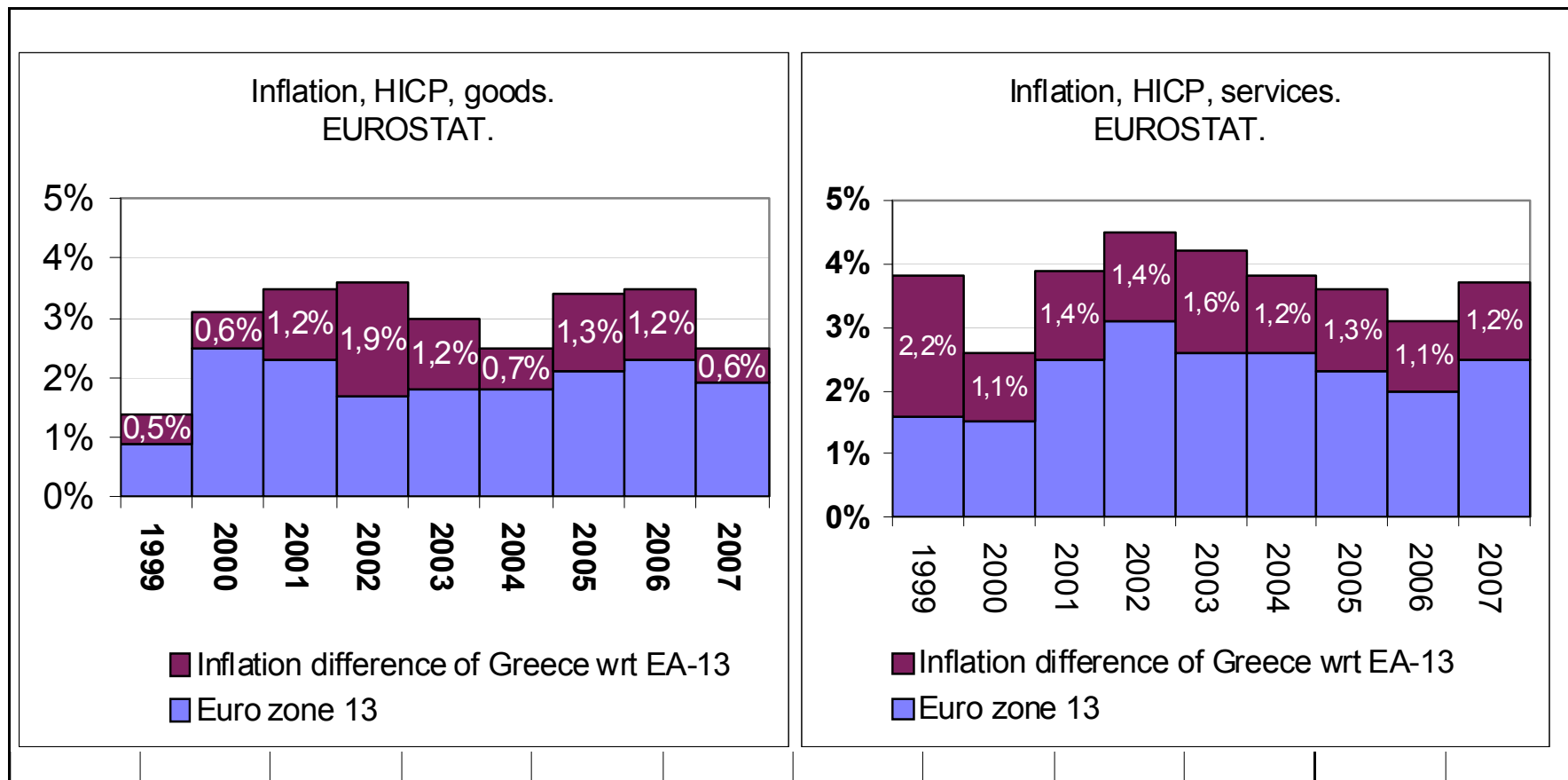
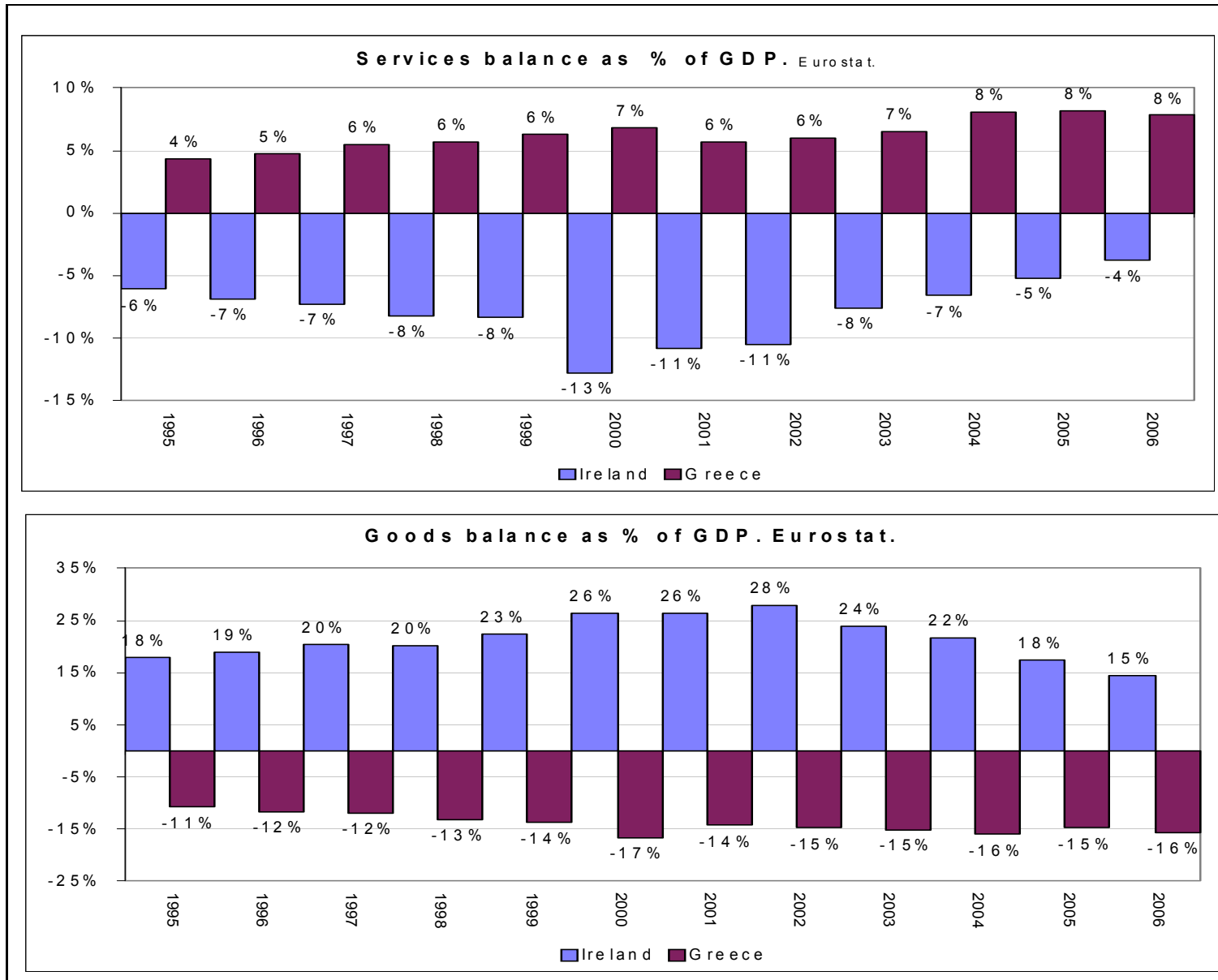
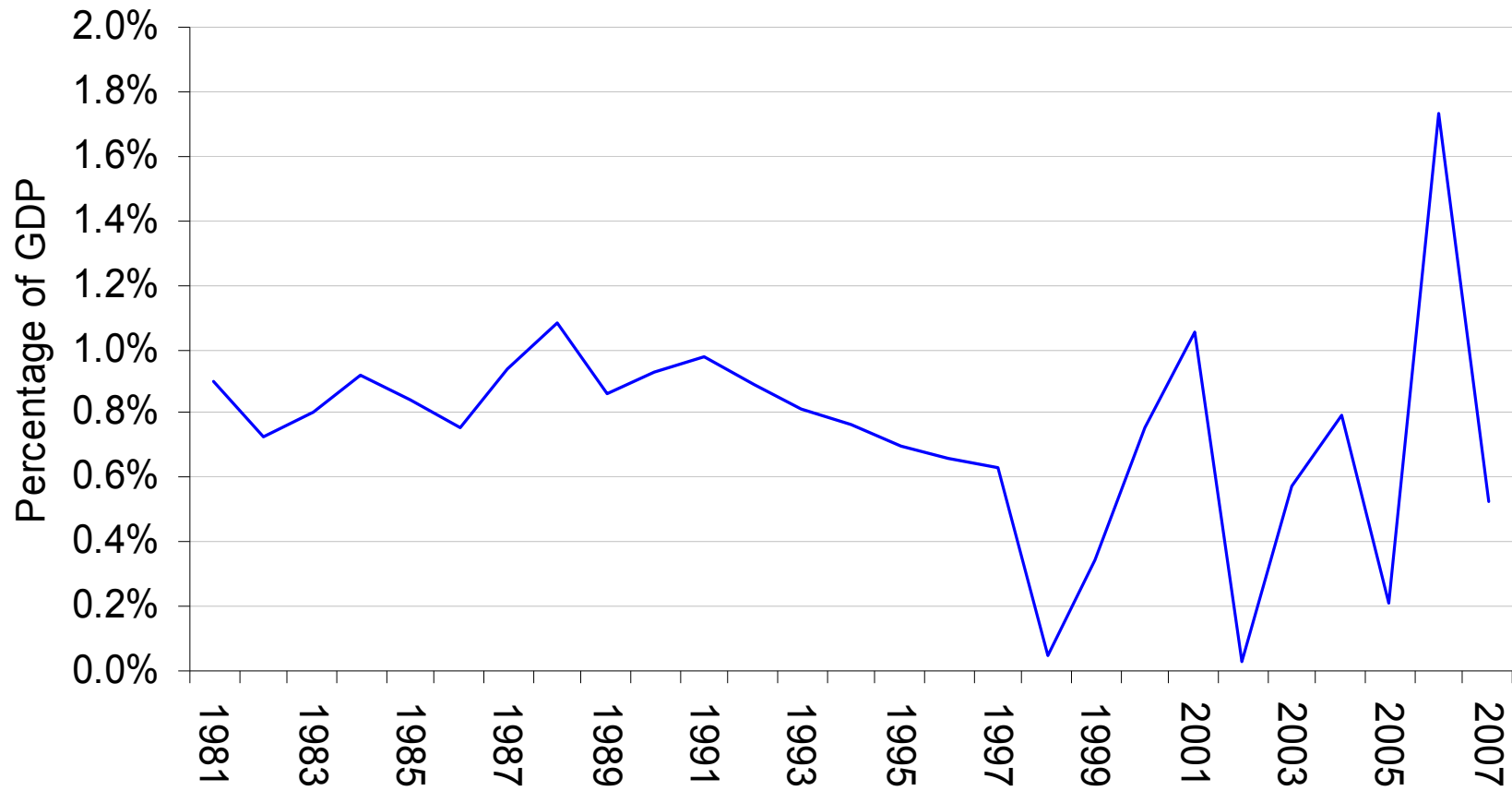


Figure 9. Excessive deficit of the goods trade balance, as a % of GDP



**FIGURE 10**

**Direct Investment (FDI Inward).** FDI inward flows for Greece as a percentage of GDP are very low for almost all years something that is in line with the link between the attractiveness of the business environment and FDI



**Figure 11 Indices of competitiveness**

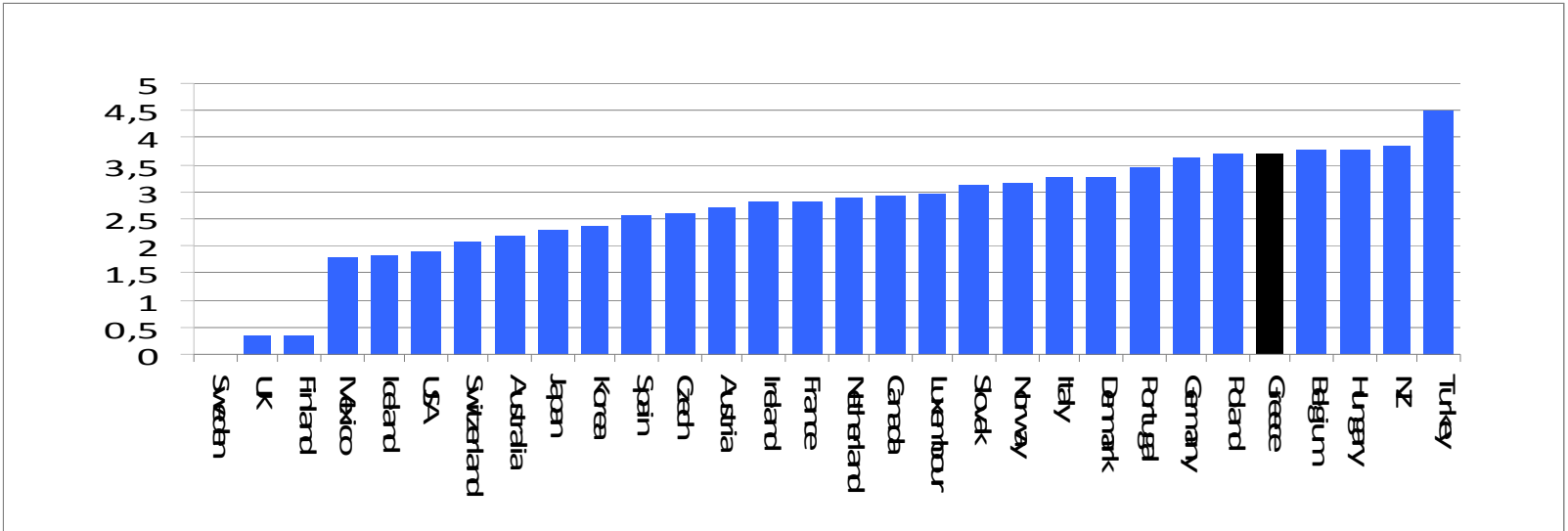
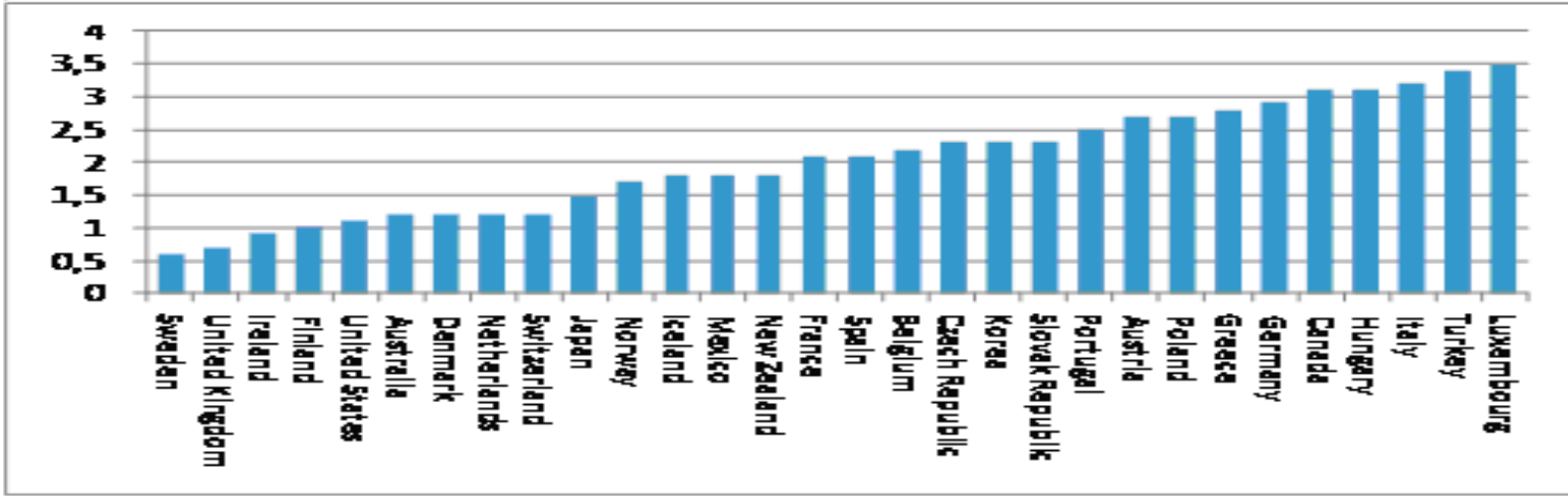
Doing Business in 2010		WEF, Global Competitiveness Index 2009-2010		TI, Corruption Perceptions Index 2008		UN, Κατά κεφαλή ΑΕΠ σε \$, 2007	
Rank		Rank		Rank		Rank	
1	Singapore	1	Switzerland	1	Denmark	1	Liechtenstein
2	New Zealand	2	United States	1	New Zealand	2	Luxembourg
3	Hong Kong, China	3	Singapore	1	Sweden	3	Bermuda
4	United States	4	Sweden	4	Singapore	4	Norway
5	United Kingdom	5	Denmark	5	Finland	5	Qatar
6	Denmark	6	Finland	5	Switzerland	6	Iceland
7	Ireland	7	Germany	7	Iceland	7	Ireland
8	Canada	8	Japan	7	Netherlands	8	Denmark
9	Australia	9	Canada	9	Australia	9	Cayman Islands
10	Norway	10	Netherlands	9	Canada	10	Switzerland
	...		...		...		...
16	Finland	13	United Kingdom	11	Luxembourg		
18	Sweden	14	Norway	12	Austria	13	Sweden
22	Belgium	16	France	14	Germany	14	Netherlands
25	Germany	17	Austria	14	Norway	15	Finland
28	Austria	18	Belgium	16	Ireland	16	Australia
30	Netherlands	21	Luxembourg	16	United Kingdom	17	United Kingdom
31	France	25	Ireland	18	Belgium	18	United States
44	Bulgaria	31	Czech Republic	18	Japan	19	Austria
48	Portugal	33	Spain	18	USA	22	Belgium
55	Romania	34	Cyprus	23	France	23	Canada
62	Spain	43	Portugal	26	Slovenia	24	Germany
64	Luxembourg	46	Poland	28	Spain	26	France
73	Turkey	48	Italy	31	Cyprus	30	Singapore
74	Czech Republic	58	Hungary	32	Portugal	31	Italy
78	Italy	61	Turkey	45	Czech Republic	32	Japan
82	Albania	64	Romania	47	Hungary	34	Spain
	...		...		...		...
107	Ethiopia	69	Colombia	55	Italy	37	Turks and Caicos
108	Lebanon	70	Egypt	55	Seychelles	38	Hong Kong
<b>109</b>	<b>Greece</b>	<b>71</b>	<b>Greece</b>	<b>57</b>	<b>Greece</b>	<b>39</b>	<b>Greece</b>
110	Guatemala	72	Croatia	58	Lithuania	40	Cyprus
111	Seychelles	73	Morocco	58	Poland	41	Bahrain
	...		...		...		...
181	Guinea-Bissau	131	Chad	178	Iraq	211	Zimbabwe
182	Congo, Dem. Rep.	132	Zimbabwe	178	Myanmar	212	Congo
183	Central African Republic	133	Burundi	180	Somalia	213	Burundi

In Greece the administrative burden is exceptionally high (**figure 12**)



Administrative costs by Member State																					
	AT	BL <sup>2</sup>	CZ	DE	DK	ES	FI	FR	UK	GR	HU	IE	IT	NL	PL	PT	RE <sup>2</sup>	SK	SI	SE	EU-25
Administrative cost share in GDP (in %) <sup>1</sup>	4.6	2.8	3.3	3.7	1.9	4.6	1.5	3.7	1.5	6.8	6.8	2.4	4.6	3.7	5.0	4.6	6.8	4.6	4.1	1.5	3.5
<sup>1</sup> Based on Kox (2005): Intra-EU differences in regulation-caused administrative burden for companies. CPB Memorandum 136. CPB, The Hague.																					
<sup>2</sup> BL combines Belgium and Luxembourg; RE combines the Baltic Member States, Malta and Cyprus; EU-25 figures are GDP-weighted averages																					

Figure 13 a Professional markets (Legal services 13b)



# 13c Regulation of road transport

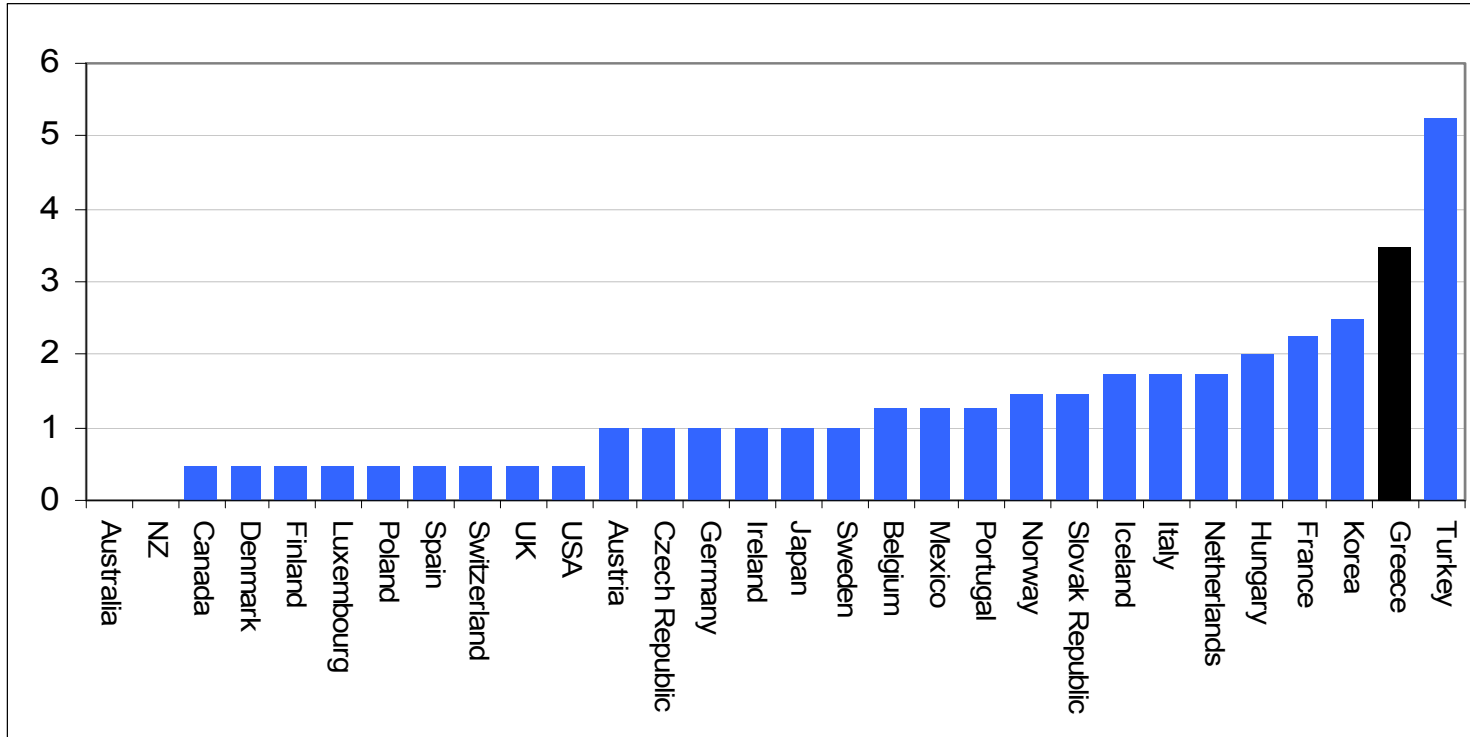
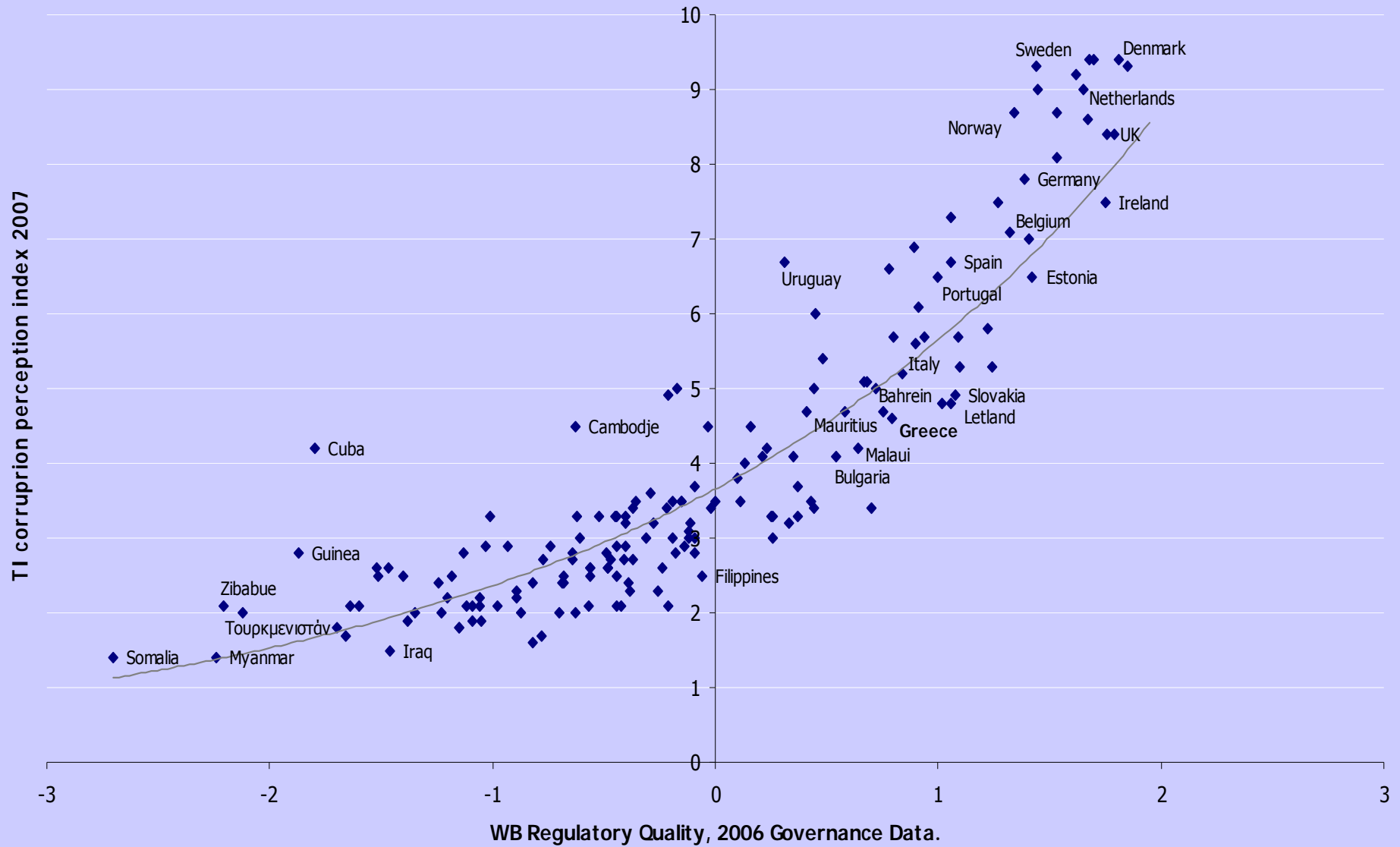


Figure 14

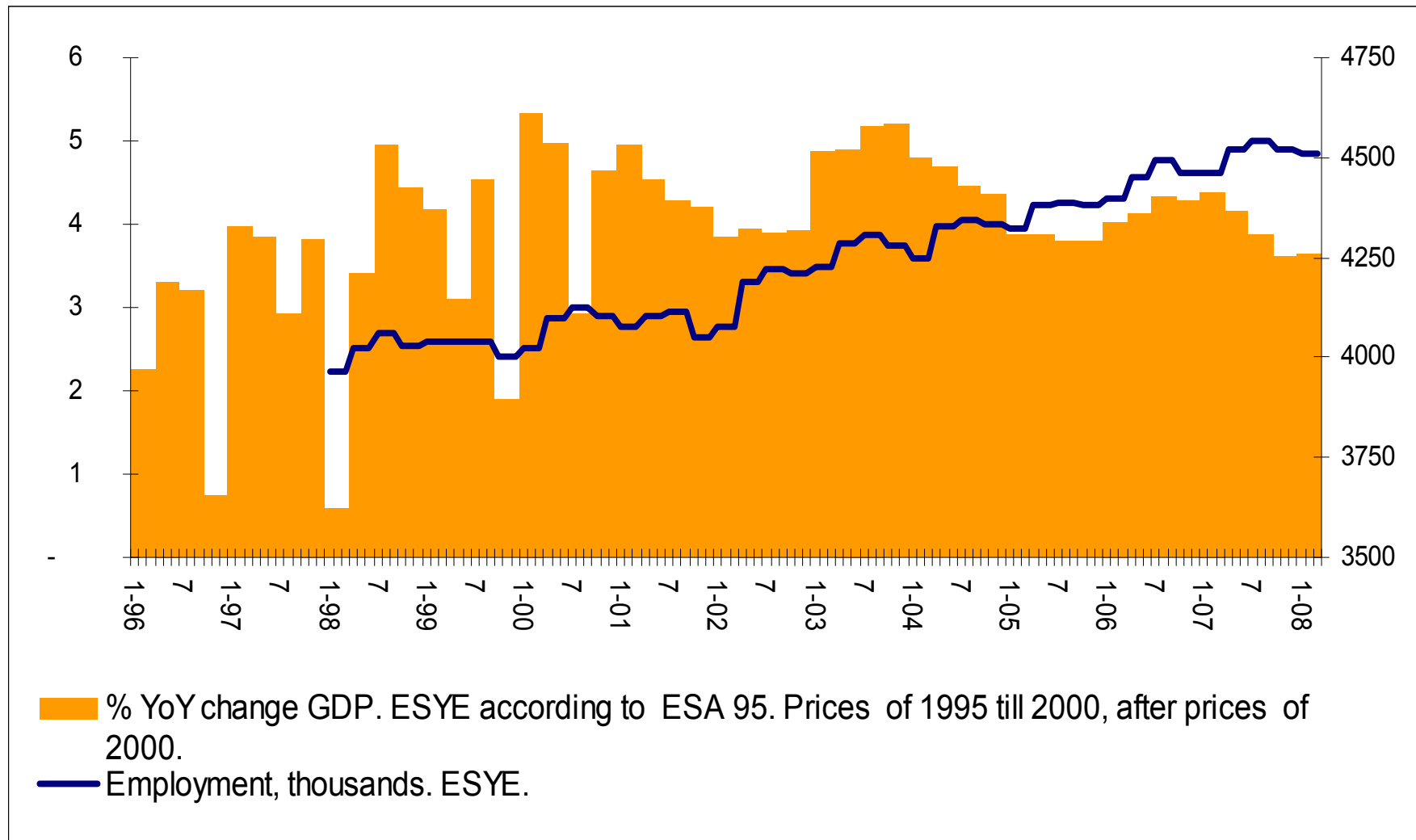
### Corruption and Regulation



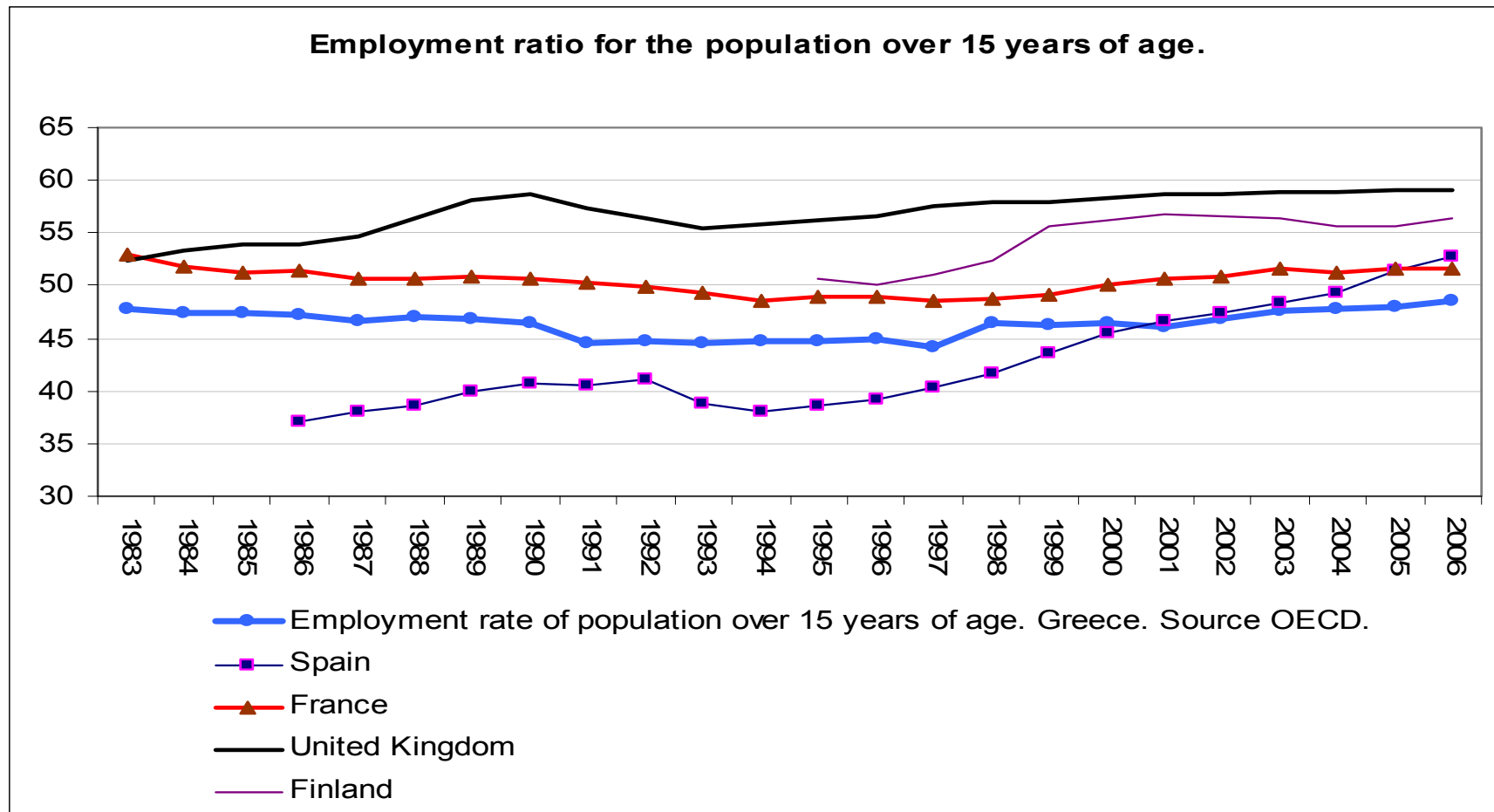
**Jobless growth: In spite of the strong performance,  
the use of labor remained low**

1. Employment did not increase a lot when compared to demand growth and population growth
2. Hours worked by self-employed are the highest in the OECD, increasing the average
3. Price competitiveness remained low
4. Investment to GDP rose well over euro-zone average
5. GDP per worker has increased a lot
6. The capital / labor ratio has increased, and the labor share of income has declined

## Employment grew, but slowly relatively to the rapid growth of demand and the growth of the population



# The employment ratio did not increase a lot

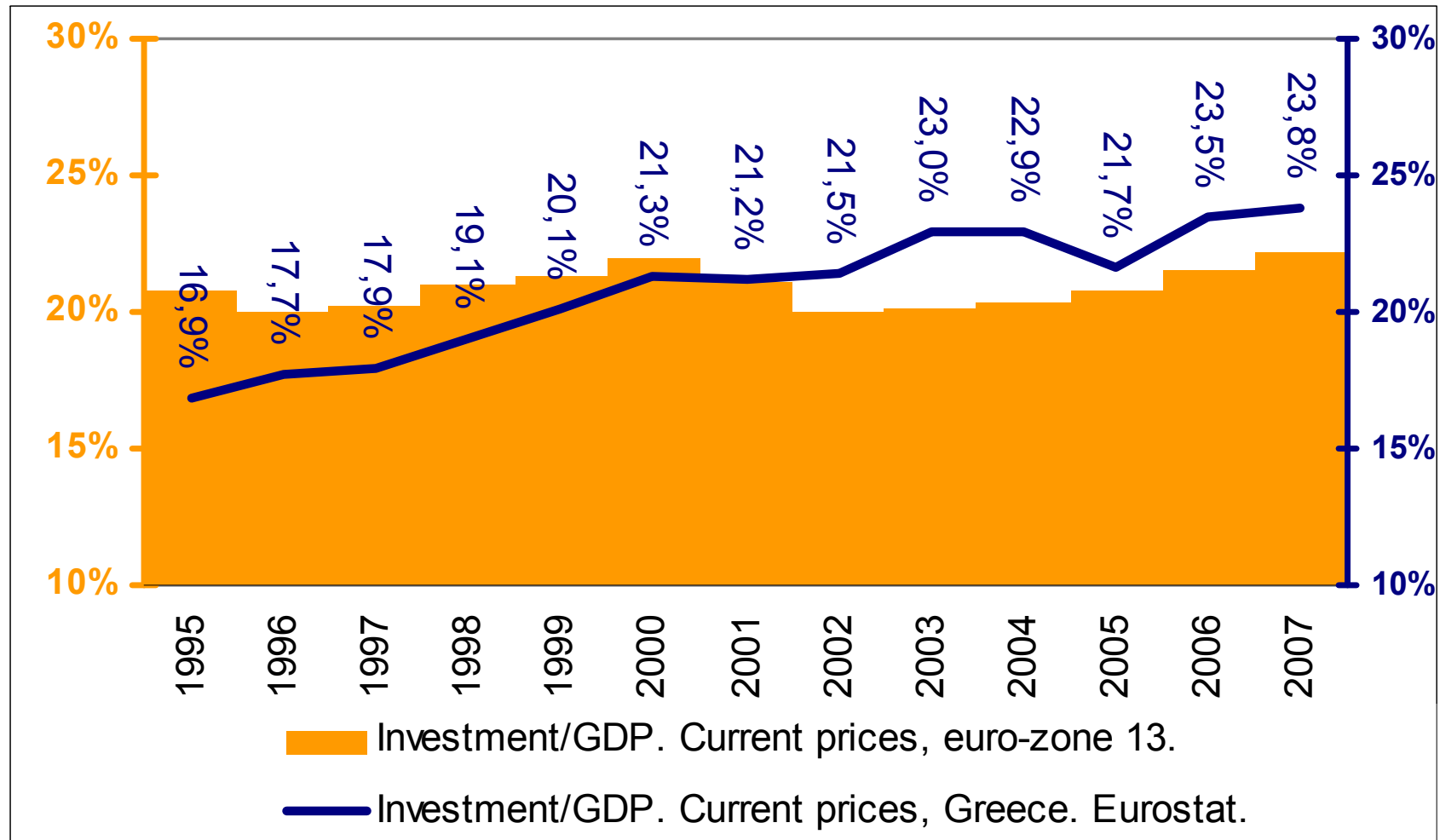


- The picture of low employment and a shrinking income share of wages are paired with impressively long working hours that emerge primarily from the long

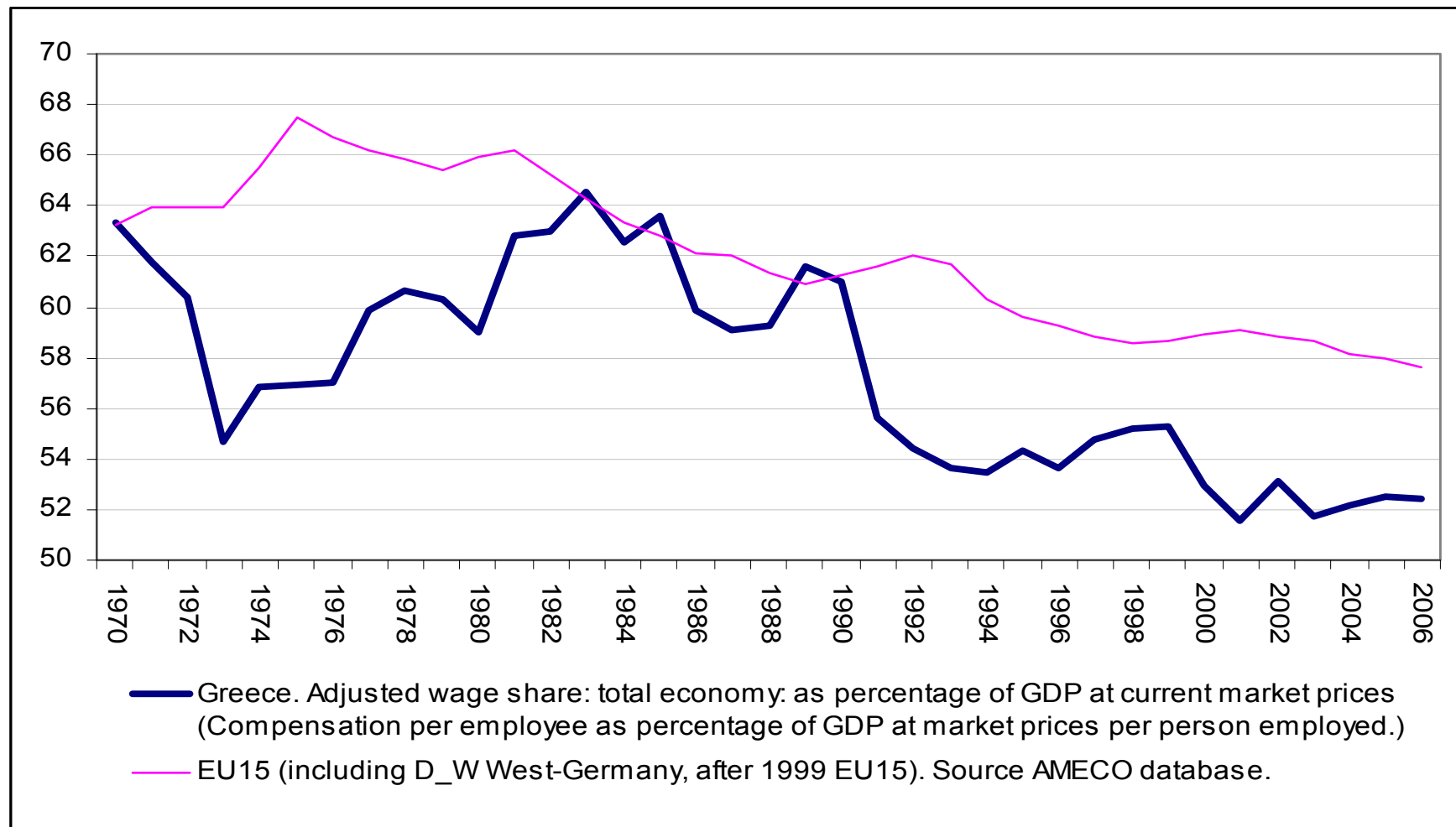
workdays of a large population of self-employed.

ILO. Average annual hours actually worked per worker								
Employment status	Total employment							
Frequency	Annual							
Time	2000	2001	2002	2003	2004	2005	2006	
<b>Country</b>								
Australia	1 777	1 748	1 727	1 730	1 728	1 719	1 714	
Austria	1 632	1 630	1 632	1 642	1 650	1 656	1 655	
Belgium	1 554	1 577	1 579	1 575	1 549	1 565	1 571	
Canada	1 768	1 762	1 744	1 734	1 752	1 738	1 738	
Czech Republic	i 2 092	i 2 000	1 980	1 972	1 986	2 002	1 997	
Denmark	1 554	1 562	1 556	1 552	1 558	1 574	1 577	
Finland	i 1 750	1 734	1 728	1 720	1 724	1 718	1 721	
France	1 591	1 578	1 536	1 530	1 555	1 559	1 564	
Germany	1 473	1 458	1 445	1 439	1 442	1 437	1 436	
<b>Greece</b>	<b>2 080</b>	<b>2 086</b>	<b>2 087</b>	<b>2 087</b>	<b>2 060</b>	<b>2 053</b>	..	
Hungary	2 061	2 019	2 026	1 997	1 996	1 994	1 989	
Iceland	1 885	1 847	1 812	1 807	1 810	1 794	..	
Ireland	1 719	1 709	1 695	1 671	1 668	1 654	1 640	
Italy	1 861	1 843	1 831	1 826	1 826	1 815	1 800	
Japan	1 821	1 809	1 798	1 799	1 787	1 775	1 784	
Korea	2 520	2 506	2 465	2 434	2 394	2 354	2 305	
Luxembourg	1 662	1 646	1 634	1 614	1 585	1 570	1 604	
Mexico	1 888	1 864	1 888	1 857	1 849	1 909	1 883	
Netherlands	1 372	1 372	i 1 348	i 1 363	1 362	1 375	1 391	
New Zealand	1 830	1 817	1 817	1 813	1 827	1 810	1 787	
Norway	1 455	1 429	1 414	1 399	1 417	1 421	1 407	
Poland	1 988	1 974	1 979	1 984	1 983	1 994	1 985	
Portugal	1 765	1 769	1 767	1 742	1 763	1 752	1 758	
Slovak Republic	1 811	i 1 799	1 746	1 673	1 708	1 741	1 749	
Spain	1 815	1 817	1 798	1 800	1 799	1 769	1 764	
Sweden	1 625	1 603	1 580	1 562	1 585	1 588	1 583	
Switzerland	1 685	1 646	1 629	1 639	1 629	1 659	..	
Turkey	..	..	..	..	1 918	1 918	..	
United Kingdom	1 711	1 714	1 696	1 677	1 672	1 676	1 669	
West Germany	1 451	1 439	1 428	1 422	1 426	1 422	1 421	
<b>United States</b>	<b>1 841</b>	<b>1 819</b>	<b>1 814</b>	<b>1 806</b>	<b>1 809</b>	<b>1 804</b>	<b>1 804</b>	

# On the other hand investment to GDP rose well over euro-zone average



# As a result the labor share of income has declined

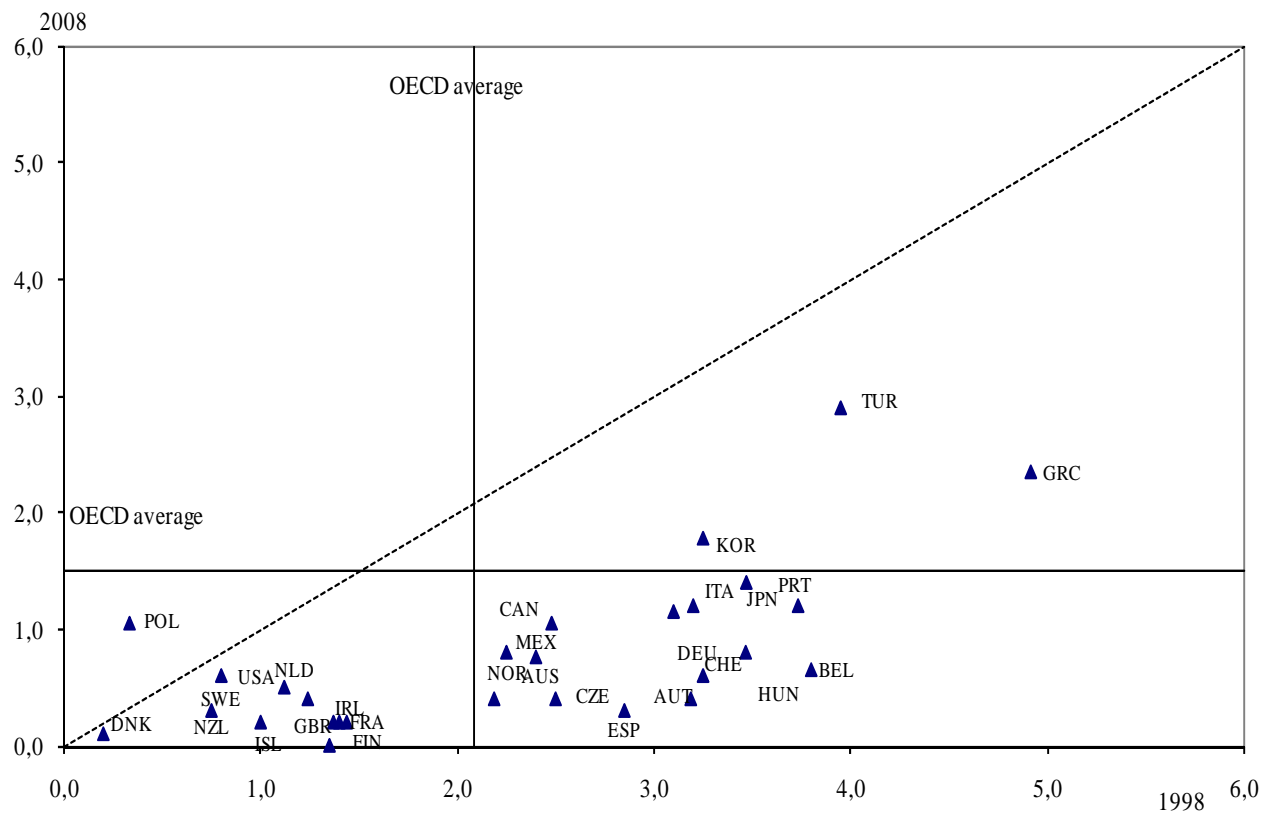


# Summary of the paradox

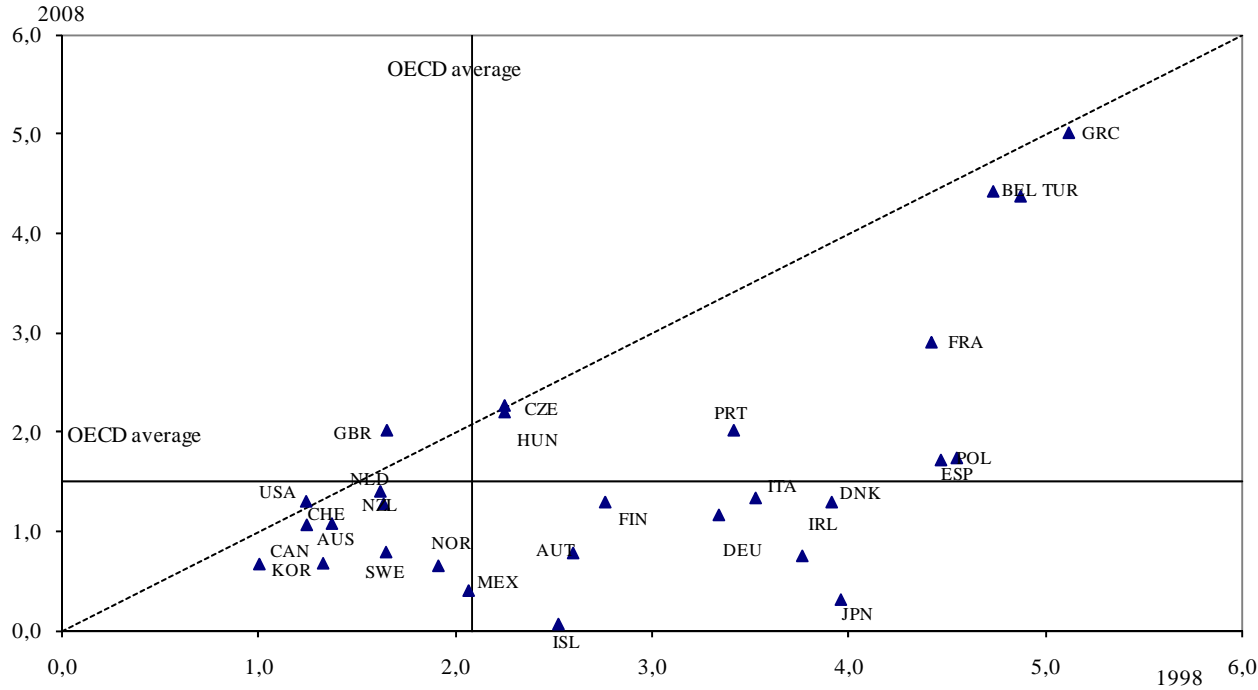
- High growth rates were mainly due to ‘irresponsible of competitiveness’ demand injections (cheap credit, money from tourism and shipping boom, EU structural funds, the boost from the Olympic Games and Athens area infrastructure, extensive public borrowing) and some reforms (banking, telecoms, some Private-Public Partnerships but that is it more or less).
- High Productivity index during that period is a combination of an artificially ballooning GDP (nominator) and low labour force participation rate (denominator). (Closed markets + low competitiveness being the culprit for that).
- Very few unregulated and tax evading self employed (over)work and few salaried employees work in Greece as product, service and as a consequence, labour markets are extremely closed and rigid. So, unemployment and non-employed rates are very high, especially among unconnected young.
- The, at the same time, “high productivity- ‘high (and of bad quality) market regulation’ ” puzzle is explained very well in the above context. High productivity is rather a deception, extensive market regulation and low competitiveness (in a high demand growth environment financed by borrowing and ‘subsidies’ indeed)- is true.
- Persisting inflation differentials and double-digit current account deficits and budget deficits + zero FDIs are only phenomena / consequences of falling competitiveness.
- The consistent ranking of Greece by all competitiveness, business environment, administrative cost and governance surveys at a rank that is disproportionately low when compared to its per capita GDP (Even compared to the productivity that is measured as GDP per worker, that we said we believe is to some or to a large extent, a deception).
- Corruption and institutional weaknesses characterized mainly by rent-seeking match well with this.
- Policy: Open markets, reduce unnecessary regulation, encourage reform in education and job creation (through any kind of tax credits), fix public finances by cutting public waste and taxing the untaxed privileged so as not to hit domestic demand. Create incentives for the black economy to incorporate to the official one. And build well working, independent institutions and an administration that is not

# MORE GRAPHS DEPICTING RIGIDITIES

## 24. State control - Price controls

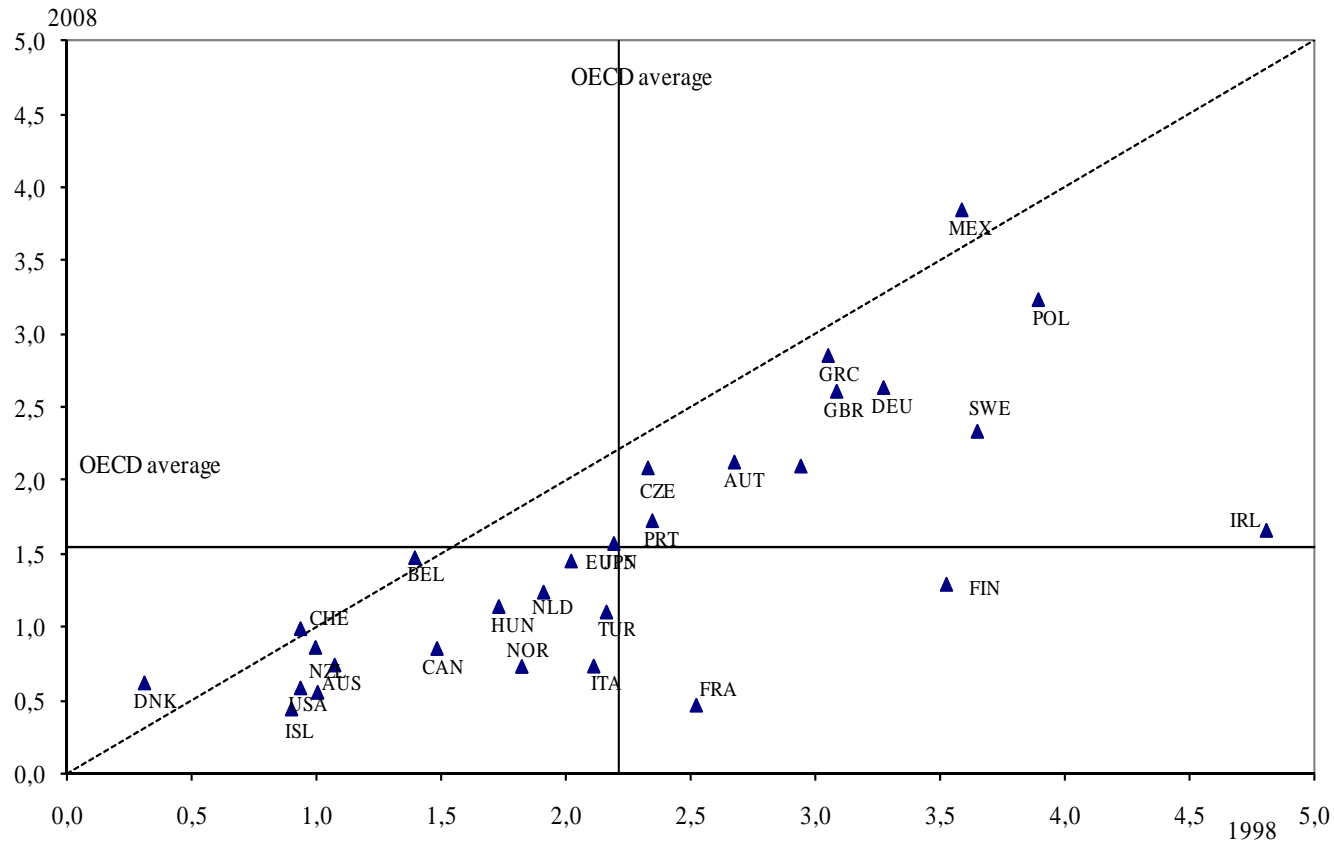


# 25. State control. Use of command and control regulation



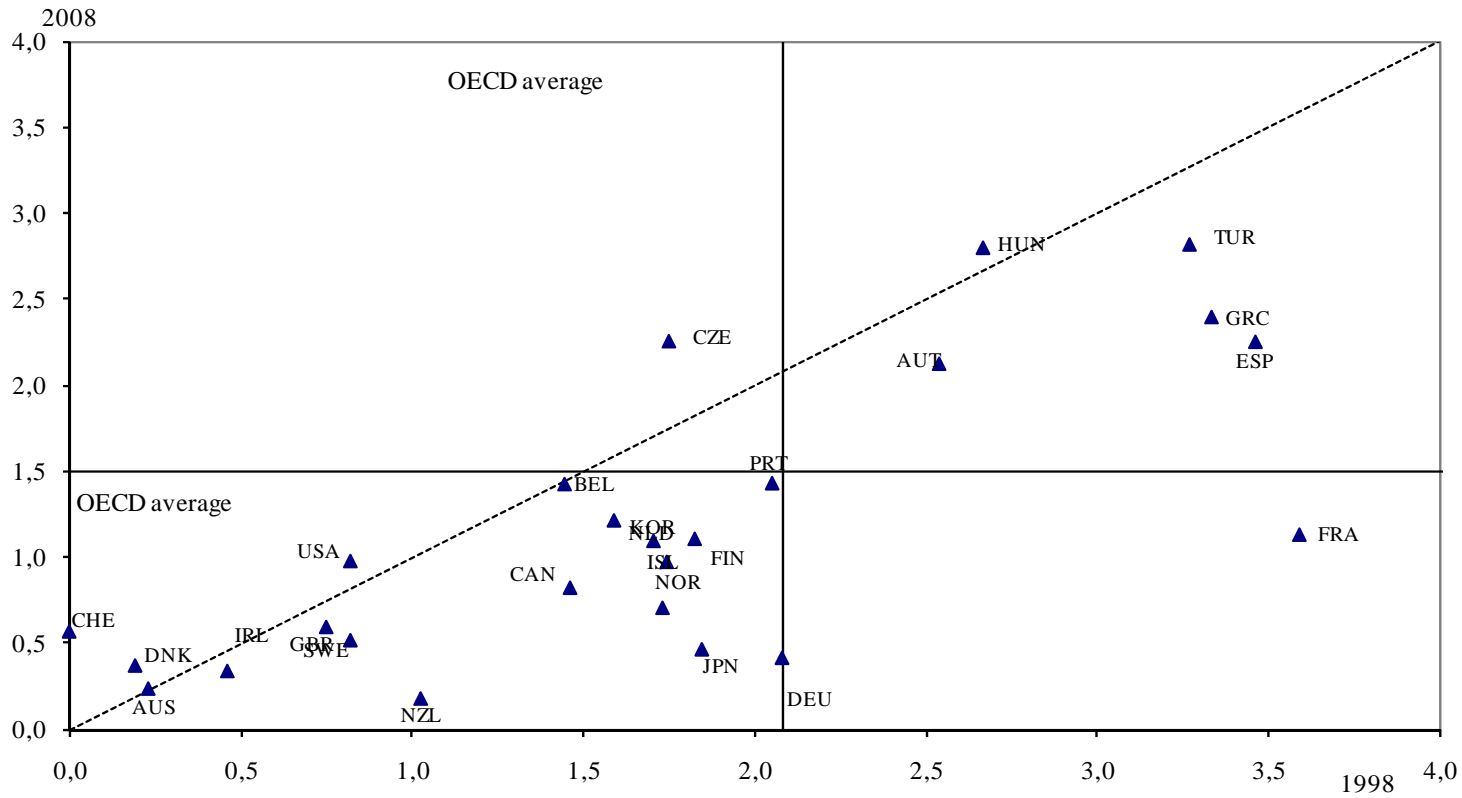
# Figure 26

## Administrative burdens on start-ups



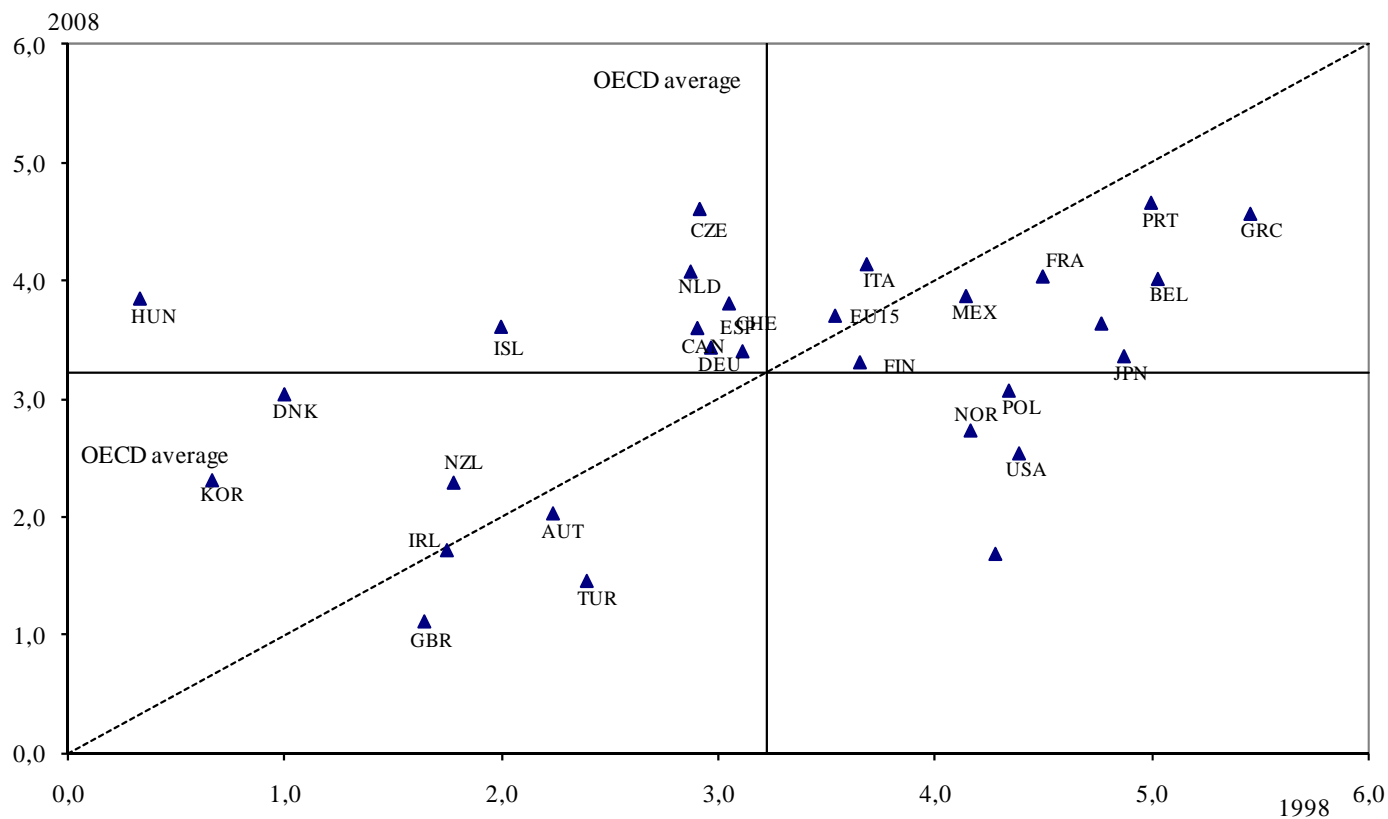
# Figure 27

## Barriers to entrepreneurship - Sector-specific administrative burden



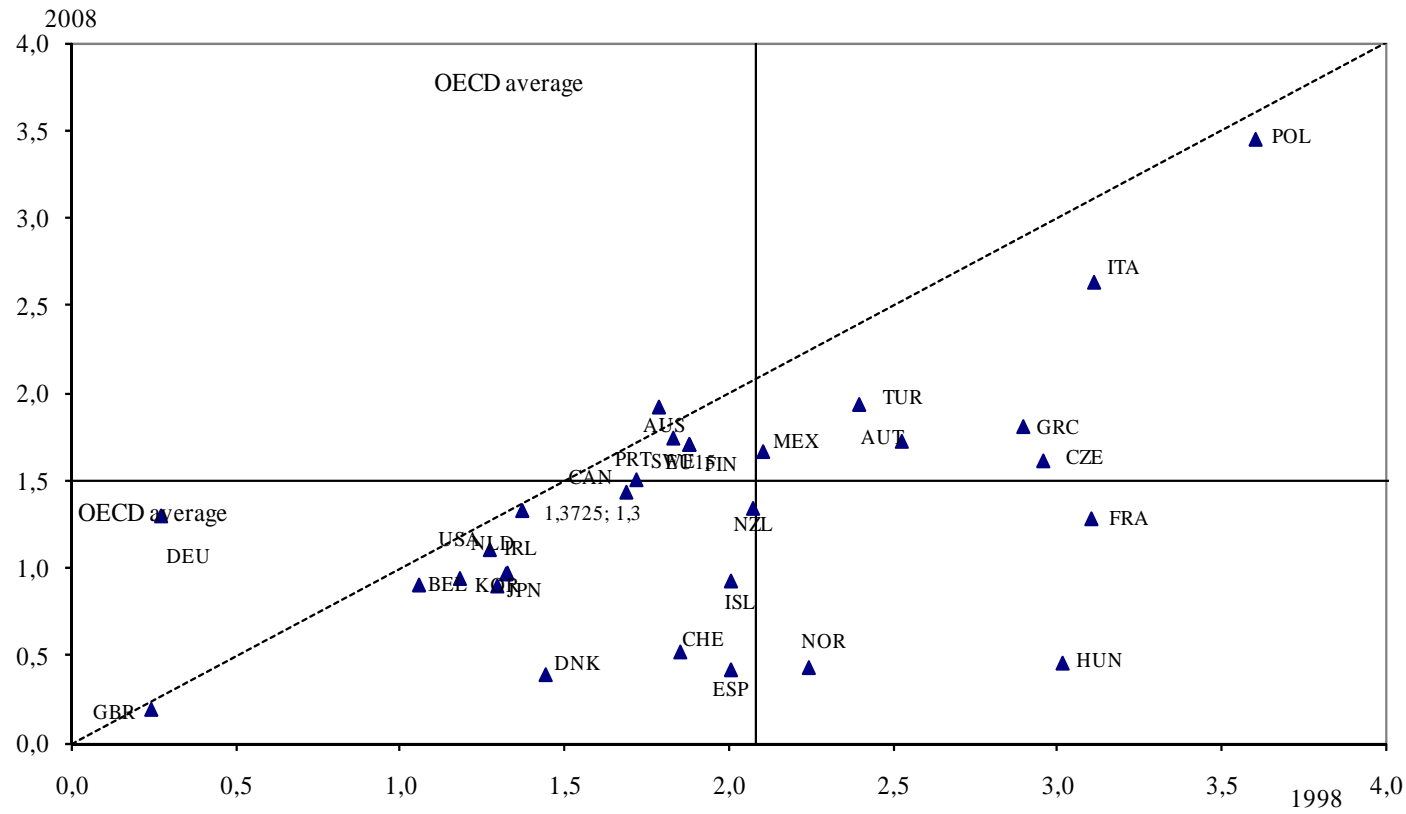
# Figure 28

## Barriers to entrepreneurship - Barriers to entry in services



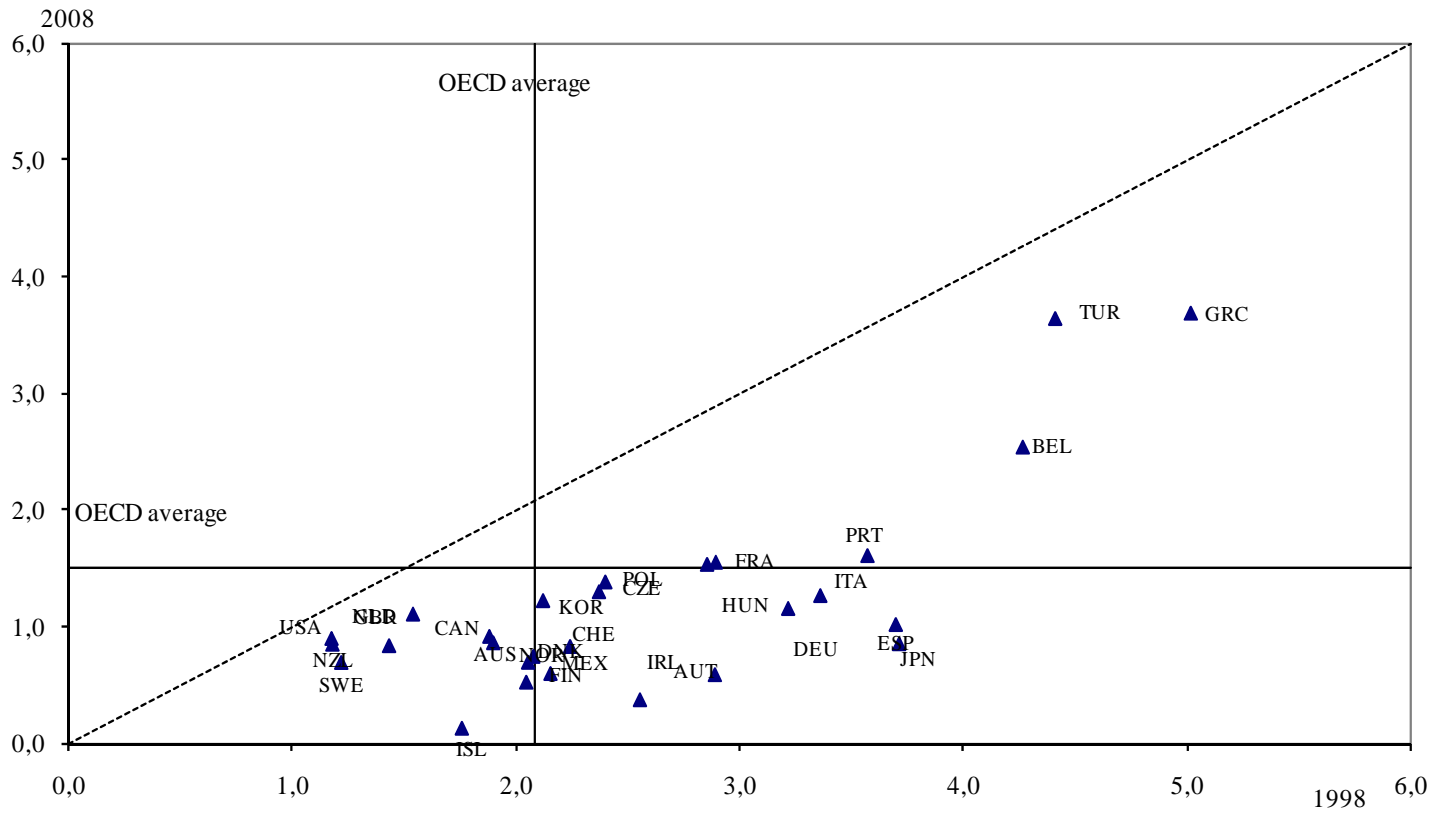
# Figure 29

## Barriers to foreign direct investment



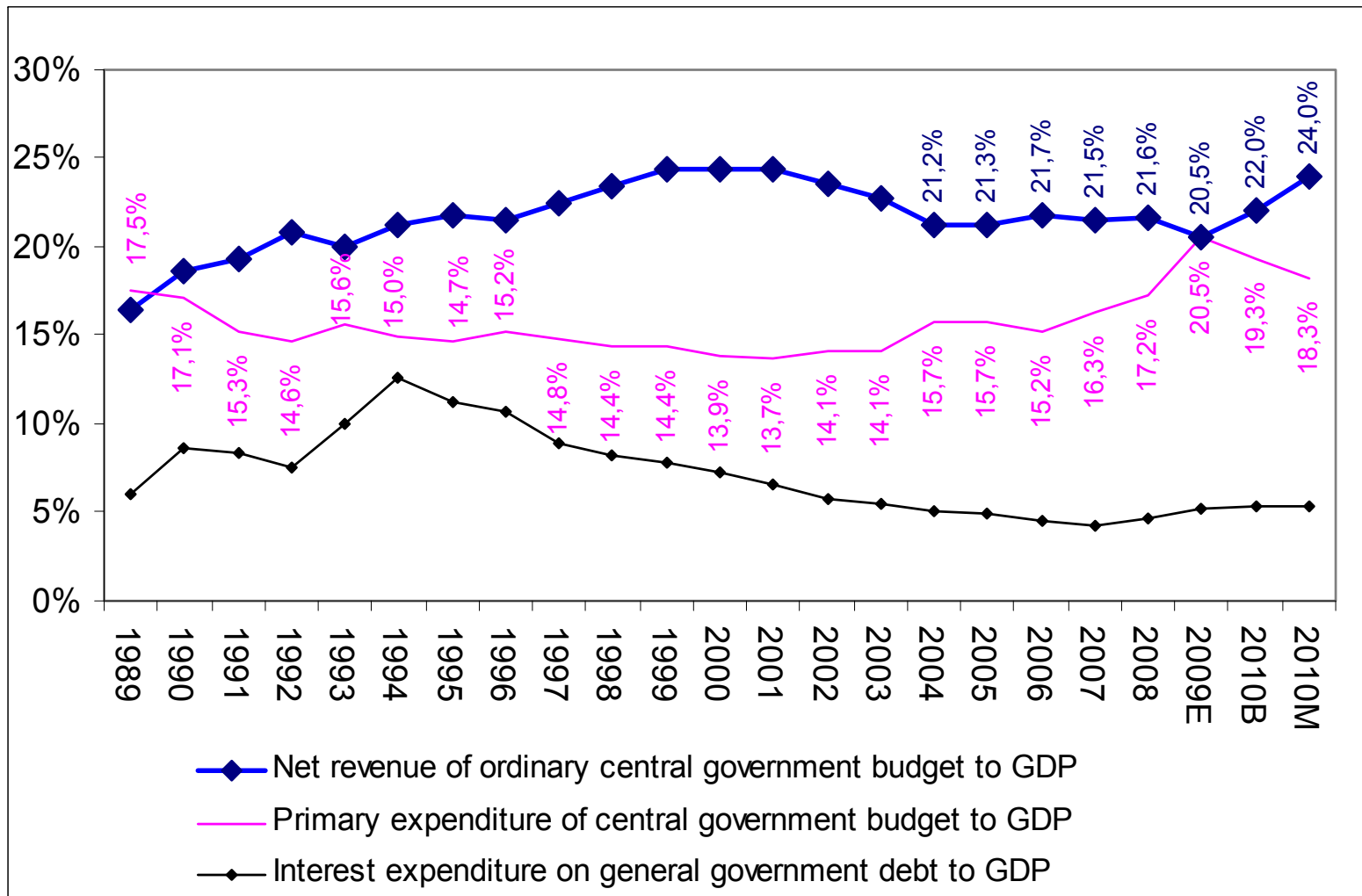
# Figure 30

## State control. Involvement in business operation

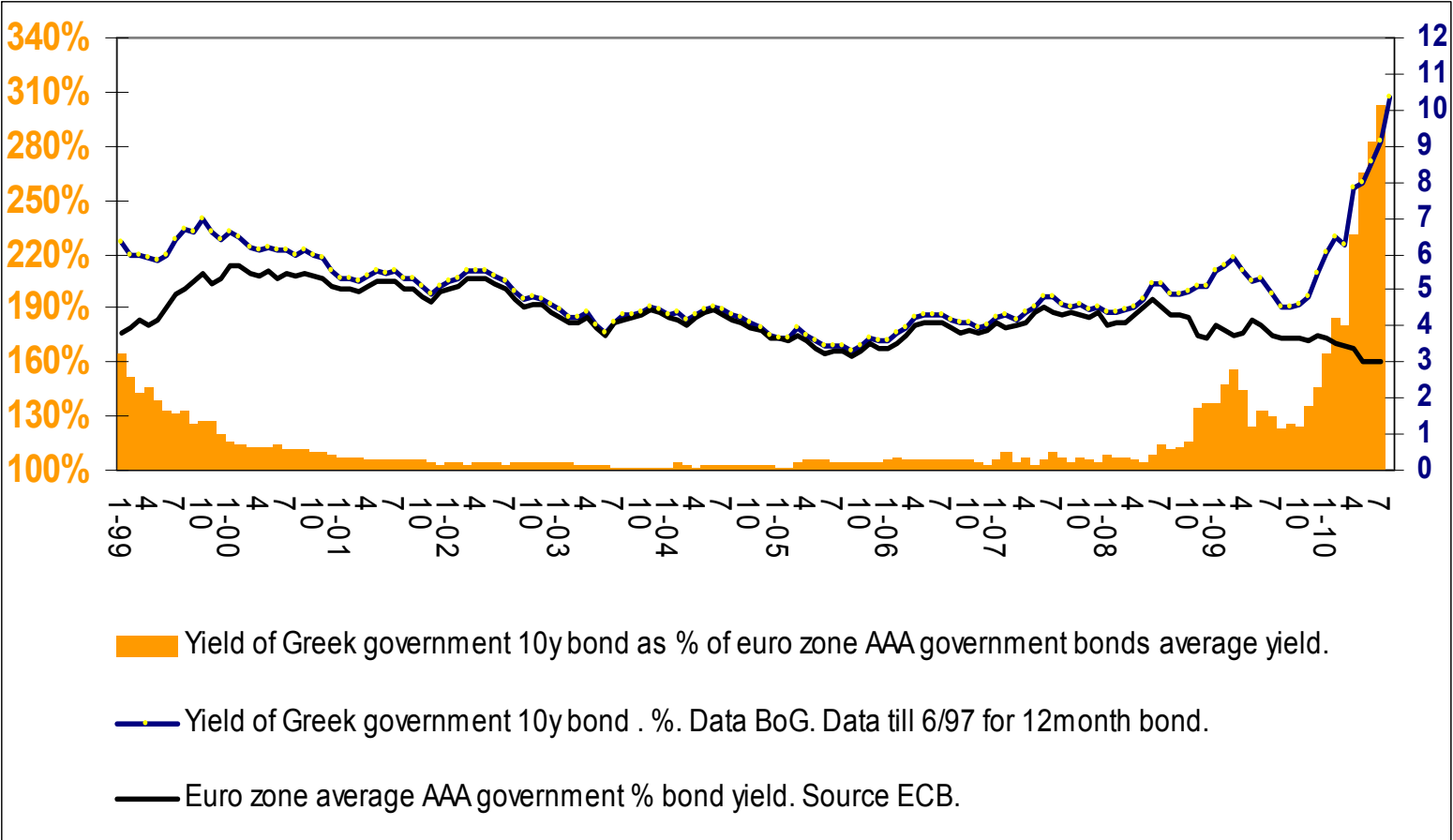


# Figure 1

## Net revenue, primary expenditure and interest expenditure of Greek central government budget



**Figure 3 Greek government and euro zone AAA rated government 10 year bond yields**



**TABLE I: MACROECONOMIC INDICATORS, MIL. EUROS**

YEAR	GDP*	REVENUES	EXPENDITURES	DEFICIT	DEBT**	DEBT % GDP
2003	153.045	37.500	40.735	-3.235	179.008	117,00%
2004	164.421	40.700	45.414	-4.714	198.832	120,90%
2005	196.609	42.206	48.685	-6.479	209.723	118,90%
2006	213.085	46.293	50.116	-3.823	224.162	105,10%
2007	228.180	49.153	55.733	-6.580	237.742	104,20%
2008	239.141	51.680	61.642	-9.962	260.439	108,90%
2009	237.494	48.491	71.810	-30.866	298.524	125,68%
2010	231.000	52.700	66.188	-19.473	340.680	147,48%

# Debt dynamics

$$\lambda = r - g - \pi$$

- $\lambda$  = Ratio of public debt to GDP
- $r$  = interest rate % GDP
- $g$  = nominal growth rate
- $\pi$  = primary surplus % GDP
- Sustainability:  $\lambda$  is not rising, so  $\pi$  should equal the difference between  $r - g$
- Public Debt today: 355 bil. Or 155 % of GDP

# r projections

Year	Interest payment on debt	Interest rate, % of GDP
2010	14.2 bil.	5.5%
2011	15.8 bil.	6.9%
2012	17.0 bil.	7.4%
2013	19 bil.	8.2%
2014	20 bil.	8.3%
Total	86 bil., 27% of current debt	

# g projections (real)

2010	-4.4 (GPD deflator 3.0, imf estimations)
2011	-5.5? (GPD deflator 1.5, imf projections)
2012	-2.2, -3.0 ?/ Who knows?
2013	?
2014	?

**primary budget:  
Why  $\pi$  remains negative (primary deficit)**

	<b>Direct taxes (% GDP)</b>	<b>Indirect taxes (% GDP)</b>
<b>Greece 2010</b>	<b>7.3%</b>	<b>12.9%</b>
<b>EU-27 2010</b>	<b>12.3%</b>	<b>14.8%</b>

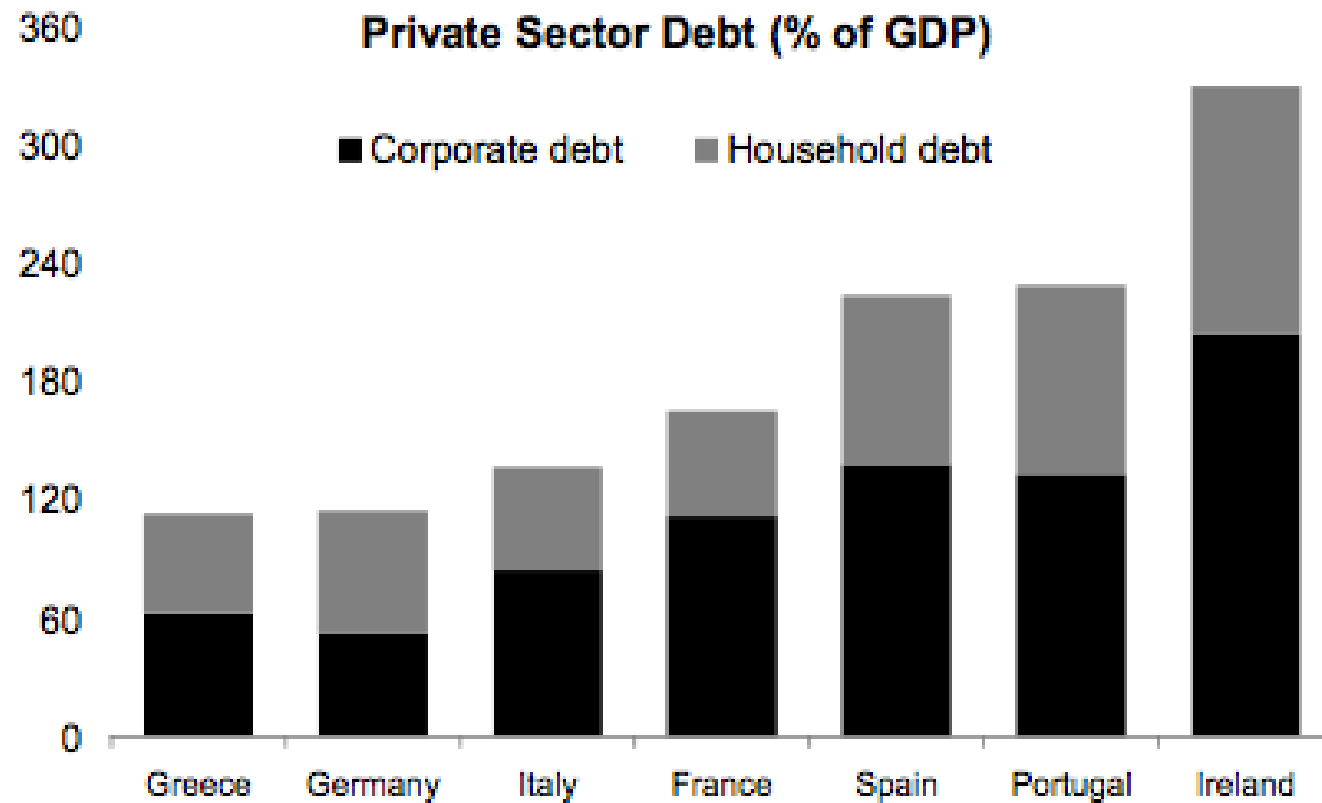
# **Who are the creditors?**

## **The opponents of restructuring**

- Greek Banks: 49 Bil. Greek bonds**
- ECB: 50 bil. Bonds, Notional value (40 bil. Bought, haircut 20%)**
- ECB: Greek banks have borrowed 106 bil. from ECB as of the end of September, with 144 bn collateral or more.**
- European Banks hold 50 bn bonds. Another 115 bn of private sector exposure. Total: 165 bn**
- Central Bank of Greece: 7 bn exposure in Greek bonds.**
- Greek social security and public entities: 30 bn bonds**

Exhibit 9

## EMU periphery – high private sector debt



Source: Haver Analytics, Morgan Stanley Research

## Η εξέλιξη του δανεισμού έως τα μέσα του 2013

Ποσά σε δισ. ευρώ

	2010		2011	2012				2013	
	3ο τρίμ.	4ο τρίμ.		1ο τρίμ.	2ο τρίμ.	3ο τρίμ.	4ο τρίμ.	1ο τρίμ.	2ο τρίμ.
<b>Ελλειμμα γενικής κυβέρνησης</b>	4,6	4,6	16,4	3,6	3,6	3,6	3,6	2,7	2,7
Ελλειμμα γενικής κυβέρνησης και δανειακές ανάγκες	4,9	4,9	18,0	4,0	4,0	4,0	4,0	3,0	3,0
<b>Απόσβεση χρέους (υφιστάμενων ομολόγων)</b>	5,4	4,4	43,1	19,1	13,2	12,6	5,5	9,8	15,6
Βραχυπρόθεσμο χρέος	4,6	4,3	16,0	4,0	4,0	4,5	4,5	4,0	4,0
<b>Μακροπρόθεσμο χρέος</b>	0,8	0,1	27,1	15,1	9,2	8,1	1,0	5,8	11,6
Προσαρμογή αποθεμάτων - ροών	0,1	0,1	0,4	0,1	0,1	0,1	0,1	0,1	0,1
<b>Ανάγκες χρηματοδότησης δημόσιου τομέα</b>	10,4	9,4	61,6	23,2	17,3	16,7	9,6	12,9	18,7
Νέος δανεισμός γεν. κυβέρνησης	4,0	4,0	17,0	15,3	10,9	11,1	5,8	9,8	15,6
<b>Βραχυπρόθεσμος δανεισμός</b>	4,0	4,0	17,0	4,0	4,0	5,0	5,0	4,0	4,0
Μακροπρόθεσμος δανεισμός	0,0	0,0	0,0	11,3	6,9	6,1	0,8	5,8	11,6
<b>Σχέδιο στήριξης τραπεζών</b>	5,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Χρηματοδοτικό έλλειμμα	11,4	5,4	44,6	7,9	6,4	5,6	3,8	3,1	3,1
<b>Εκταμιεύσεις δανείων</b>	9,0	9,0	40,0	10,0	6,0	6,0	2,0	6,0	2,0
Από ΔΝΤ	2,5	2,5	11,0	2,7	1,6	1,6	0,5	1,6	0,5
<b>Από Ε.Ε.</b>	6,5	6,5	29,0	7,3	4,4	4,4	1,5	4,4	1,5

Τα στοιχεία του πίνακα υπόκεινται σε αναθεώρηση.

**Συνολικές λήξεις χρέους (ληξιάριο χρέους Ελληνικού δημοσίου)**

