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Editorial Policy

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IOBE

The Foundation of Economic and Industrial Research is a private, non - profit, public benefit research organisation. Its purpose is to promote research on current problems and prospects of the Greek Economy and its sectors and to generate reliable information, analysis and proposals for action that can be of value to policy makers.

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FOREWORD

IOBE is publishing its first report for 2010 in the framework of its periodic reviews of the Greek economy. Its publication coincides with what is perhaps the most critical period for the Greek economy in recent decades, as shaped by the turmoil in the country's public finances, the far-reaching measures taken to tackle the crisis, the heated discussions on the same issue within the European Union which led to the recent decisions and the lingering uncertainty about the final outcome of all these efforts. As with all IOBE reports, this one too is divided into **four sections** and – as always – is accompanied by an **Appendix** of structural indicators, used to track quantitative progress toward attainment of the Lisbon Strategy objectives. More specifically:

At the methodological level, the report refers to and is supported by data which were available up to 26/03/2010. The **first section** contains a **summary overview** of the report, presenting its main points which are subsequently analyzed in detail in the main text. The **second section** focuses on the more general economic environment and includes: a) an analysis of the **global economic environment** based on the most recent reports of the European Commission and the OECD, b) a presentation of the **economic climate** in Greece, as outlined by IOBE's business and consumer surveys, and c) an analysis of developments in **economic policy**, particularly the fiscal outlook as reflected in the relevant targets and policy measures of the Stability and Growth Program.

The **third section** focuses on the performance of the Greek economy. The **macroeconomic environment** and medium-term prospects are outlined, **developments** in **key sectors of the economy** are described, the export performance of the Greek economy in 2009 as a whole is summarized, while developments in terms of **employment** and **unemployment** are also recorded. In addition, an analysis is presented of **inflation** and the factors which shape its course, while this section concludes with a presentation of the **balance of payments**.

Lastly, the **fourth section** of the report comments on the initial findings of a special study being carried out by IOBE concerning the quantification of the impacts from the structural reforms in the Greek economy in terms of key macroeconomic indicators.

IOBE's next quarterly report on the Greek economy will be published in late June 2010.

1. OVERVIEW – CONCLUSIONS

Prerequisites for the fiscal measures to serve as springboard for economic growth

The fiscal measures announced on 3 March are absolutely necessary to remedy the major problems of the Greek economy. At the same time, they provide an opportunity to correct mistakes of the past and put the Greek economy back on a new, sustainable trajectory of economic growth, though only after a period marked by negative rates. IOBE considers that the measures taken are adequate to achieve the target of reducing the general government deficit to 8.7% of GDP in 2010, despite the anticipated 2.5% contraction of GDP in 2010 and higher interest on government debt.

Moreover, these measures make the corresponding targets for 2011 and 2012 more realistic and create a greater margin of time for the structural measures aimed at increasing public revenue and reducing public expenditure to bear fruit. However, it should be noted that the public debt as a percentage of GDP will continue to rise up to and including 2011, which is a cause for concern and necessitates a more aggressive policy of privatization and utilization of state assets.

Emphasis should now be placed on the meticulous implementation of the measures and the boosting of competitiveness. The results of the execution of the state budget in the two-month period January-February 2010 were encouraging and provided this trend continues will contribute to an improvement in the climate on international bond markets prior to the crucial two-month period of April-May in order to meet public sector borrowing requirements. The slow decline of interest rate spreads on Greek government bonds is indicative of the fact that efforts to restore the credibility of the country's fiscal policy will be a long, non-linear process.

The creation of negative rates of economic growth diminishes the effectiveness of the fiscal measures to some degree, but in no way negates it. International experience, as well as Greece's experience in the 1990s, shows that in small, open economies with a public debt higher than 70% of GDP, the reduction of the fiscal deficit has only a relatively small impact on economic activity, and even this impact lasts only a fairly short time. In the medium term, economic activity recovers due to the improvement in borrowing spreads and sentiment and the reduction of imports. These arguments apply especially in the case of the Greek economy, whose credibility has reached its nadir, mainly due to the high public debt.

There is no doubt that the government must ensure that this period of the economy's negative reaction to the necessary fiscal shock is a short one. This will depend to a large extent on whether the government proceeds at a rapid pace toward an outward-looking policy of

economic growth revolving around competitiveness, which of course necessitates a break with the current philosophy and practice. The Greek economy has the potential for high rates of economic growth if the necessary structural reforms are advanced and the restrictions imposed by the state on competition are lifted (e.g. closed professions, particularly in transport, cabotage, restrictions in the energy and health markets, etc.), the minimum prices of certain goods and services are abolished, mandatory fees are introduced for a number of professional activities and efforts are made to remove the bureaucratic restrictions on entrepreneurship, which deprive the Greek economy not only of important sources of growth that are so necessary in the present circumstances, but also capital and new jobs, while condemning it to a vicious circle of high operating costs and low competitiveness.

The opening up of markets and professions and the abolition of restrictions will create a new cycle of outward-oriented economic growth, especially if it is combined with privatizations, public-private partnership ventures, the utilization of state assets and the inflow of foreign capital. This will enable the country to capitalize on its dynamic comparative advantages in tourism (upgrading of services, extension of the tourism season, development of tourist homes), in health (creation of rehabilitation centers for foreigners who are about to retire and wish to live in Greece for a large part of the year), in renewable energy sources, shipping, culture and the primary sector, thus making possible the transition from the old growth model to the new one.

In past reports, IOBE has attempted to quantify the benefits from the opening up of markets and professions and to identify the sources of gain (see, for example, the previous quarterly report). The present report confirms the considerable benefits to be gained from the liberalization of markets (their long-term impact on GDP exceeds 10 percentage points) with the use of a modern econometric model.

These encouraging preliminary results, which substantiate IOBE's established positions, mean that the Greek economy has significant unexploited opportunities which, if seized without delay, are capable of creating high rates of economic growth for a number of years, at the same time underpinning fiscal adjustment.

The recent decisions of the Eurogroup regarding the creation of an 'emergency' rescue mechanism and the decision of the European Central Bank to extend its emergency rules on accepting collateral as security in liquidity operations help to ensure liquidity in the Greek economy on terms that are not prohibitive, while also providing more time for adjustment. However, a permanent improvement in the situation can only be achieved through the speeding up of the government's plans relating to fiscal adjustment, steps to ensure the viability of the social security system and the opening up of closed markets and professions. From a broader perspective, a permanent improvement can only be achieved through an adjustment of Greek society's value system, which will eliminate the causes and rea-

sons for the Greek economy's present predicament.

Global economy remains on trajectory of recovery, though at the expense of public finances

The world economy is recovering from the economic crisis, as the strengthening of economic activity has now spread to all the main economic regions, with the exception of Southeast Asia from where it began, gathering pace somewhat in late 2009 and early 2010. This development is reflected in: a) the slowing of the decline and even the recovery of production indices, b) the stabilization – for the time being – of the unemployment rate, albeit after a long period of increase, c) the improvement in economic sentiment, as evidenced by the relevant surveys and d) the constant improvement of leading indicators of economic activity. Undoubtedly, a key role in the relatively fast reversal of the downward trends in the global economy has been played by the fiscal and monetary policy measures taken during 2009 by national governments and central banks.

On the other hand, the implementation of an interventionist economic policy resulted in a significant deterioration in public finances in many countries, making it more difficult for them to service their fiscal obligations. This specific development has already set in motion procedures aimed at regaining fiscal balance, especially in the European Union, which however are expected to change – to a greater or lesser degree – the measures planned for this year to tackle the economic crisis and stabilize the operation of the financial system.

Deepening of the recession in the Greek economy at the end of 2009, despite the expansionary fiscal policy

The recession in the Greek economy deepened in the second half of 2009, according to the latest national accounting data, to reach 2.5%, resulting in a 2.0% decline in GDP for the year as a whole relative to 2008, when it had risen by 2.0%. This decline is mainly attributed to the faster contraction of private investment and to a lesser extent to a reduction of household consumer spending. An even deeper economic recession was averted by the sizeable expansion of government consumption, the growth of public investment (although one consequence of this was the country's fiscal derailment) and the less negative performance of the external sector.

Before the country's fiscal impasse had become fully apparent and at its outset, the course of the main indicators of economic activity had been mixed, with the decline in industrial production moderating and turnover in retail trade rising slightly. In contrast however, turnover in tourism and construction, sectors which to a large extent determine trends in the Greek economy, moved sharply downward in the final quarter of 2009. While increasingly negative signals were being sent by business and consumer surveys after the parliamentary elections.

The worsening of the economic recession is having a strong impact on the labor market...

The labor market appears to have suffered the strongest negative impacts from the accelerating decline of GDP. Unemployment rose especially in the final quarter of 2009, by 1 percentage point to reach 10.3% and for the year as a whole 9.5%, exceeding the rate recorded three years previously and nearing 2005 levels (9.9%). One of the main reasons for this development was the drop in employment, for the first time since 1998, of 1.1%, with its decline accelerating constantly during the previous year and reaching 1.7% in the final quarter. These negative trends have been exacerbated in 2010 by the continuation of the economic recession and the effort to reduce and rationalize employment in the public sector, which is expected to push the jobless rate to over **11%**.

...while the new measures are fuelling inflation

In 2009 inflation was running at 1.2%, compared to 4.2% in 2008. The stabilizing trend seen in the first two months of 2010 is expected to be halted in the coming months by the increase in indirect taxes which was announced in early March, as well as by higher prices of oil relative to last year and of imports in general. However, the fuelling of inflation due to higher taxation is moderated by its negative effect on net disposable income. On a year-to-year basis, inflation is expected to slightly exceed 3.0% this year **(3.1%)**.

IOBE special study: Macroeconomic impacts of the structural policies to boost competitiveness in non-market goods and services and in the labor market.

In addition to the fiscal imbalances that recently became glaringly apparent, the Greek economy also suffers from long-standing structural problems, which are partly responsible for the fiscal instability. The restrictive fiscal policy being implemented to gradually consolidate public finances can be accompanied by structural reforms, which will propel economic growth, as has repeatedly been pointed out in the past in theoretical and empirical papers on Greece, moderating the impacts of the fiscal stabilization policy on output and employment. In a special study currently in progress, IOBE endeavors to assess the benefits from the implementation of specific reforms in terms of key macroeconomic indicators, such as GDP, investment, employment and the fiscal deficit. For this purpose, it is using a dynamic stochastic general equilibrium (DSGE) model, the Global Integrated Monetary and Fiscal Model (GIMF), which was recently developed by the International Monetary Fund, with suitable adjustments so that it can respond to the particularities of the Greek economy.

According to the initial, indicative results, the introduction of reforms that make non-market goods and services more or less as flexible as their counterparts in the Eurozone would have particularly beneficial consequences for all the macroeconomic variables under examination (GDP, private consumption, employment), without burdening the fiscal deficit.

2. ECONOMIC ENVIRONMENT

2.1 Trends and Prospects in the International Economy

The Global Economic Environment

The negative impacts of the international financial crisis on the global economy appear to be dissipating relatively smoothly, without any particular signs of 'fatigue' in all main economic regions. This development is reflected in the significant slowing of negative growth rates in the final quarter of 2009, the gradual recovery of economic sentiment indicators and the progressive improvement in leading indicators of economic activity. On the other hand, there are differences among countries with regard to the speed at which their economies are reverting to the conditions that prevailed before the economic crisis.

The rapid abatement of the economic recession from mid-2009, due to the – unprecedented in extent – support provided to economies via measures taken by states and international organizations to shore up their financial systems, as well as fiscal and monetary policy interventions, has led to a revision of the estimates for 2010 made at the end of the previous year. In its most recent forecasts for 2010, the International Monetary Fund (IMF) sees global economic growth reaching nearly 4% (2.9%), compared to 3.1% in its previous report[1]. Even higher rates of growth for all economic regions: 2.1% for the G-7 countries (against a previous estimate of 1.3%), 1.0% for the European Union and Eurozone, compared to 0.5% and 0.3% respectively in the autumn forecasts and 8.5% in the developing countries of Asia, from 7.3%. In its Interim Forecast, the European Commission also revised upward its forecast for the global economy in the current year, estimating that global output (excluding the EU) will grow at rate of around 4.5%, 0.5 percentage points higher than in its report last November[2]. However, its projection of limited growth of about 0.7% in both the Eurozone and EU-27 has not changed.

The gradual restoration of confidence is due, apart from the improvement of conditions in financial markets, also to the continuation of state support programs in 2010. However, the measures to boost liquidity and economic activity have already caused serious fiscal problems in some of the strongest economies, with the United Kingdom feeling the strongest consequences of this policy, while smaller countries are facing difficulties at a fiscal level, with Greece so far being the most prominent case.

The deterioration of public finances has again increased concern about the stability of financial markets, to a much lesser extent – for the time being – than the spread of the financial crisis. Soaring

[1] World Economic Outlook Update, January 2010, IMF, World Economic Outlook, October 2009.

[2] European Commission, Interim Forecast, February 2010.

budget deficits and the simultaneous significant expansion of public debt in many advanced economies have caused turbulence in sovereign bond markets, especially in the European Union. As a consequence, it is considered quite likely that the cost of financing for households and businesses will rise more than initially expected, partly offsetting the positive impacts of the monetary policy measures taken in 2009 by the European Central Bank and national governments. In addition, credit institutions in the USA and Europe, despite the gradual improvement of liquidity and their financial results, still have a long way to go to repair their balance sheets, with the possibility of fresh losses in their loan portfolios, particularly in the case of home loans, still present, a prospect that is keeping bank lending at low levels.

This raises one of the key issues for economic policy in 2010: the turmoil in public finances appears to be prompting governments and groups of states, such as the European Union, to reformulate the measures they had scheduled for 2010 to tackle the financial crisis, redirecting their efforts toward arrangements/actions aimed at restoring fiscal stability. In the United Kingdom the decision has already been taken not to extend the program of quantitative easing, designed to boost liquidity in the economy. Consequently, the effort to avoid difficulties in the handling of side-effects from the expansion of the public debt will probably moderate the interventions in support of the financial system and economic activity. On the other hand, these adjustments must not raise serious obstacles to the process of rejoining the path of economic recovery.

Irrespective of whatever negative developments there may be at the level of public finances, the fiscal and monetary policy interventions have significantly boosted economic activity worldwide. The emerging and advanced economies first showed signs – in the second quarter of 2009 – of a recovery in their production, which spread through global trade to countries with the highest participation in exports on a world scale. The decline of GDP (on a year-to-year basis) began to moderate in the developed economies, a development that escalated in the final quarter of 2009 in the European Union and Japan, while in the USA the corresponding change was, albeit marginally, positive (0.1%), for the first time since the second quarter of 2008[3]. Between successive quarters, the growth of GDP in the final quarter was higher relative to the previous one in the USA and Japan, though it weakened in EU-27, perhaps revealing for the first time the declining effectiveness of the measures taken.

The pick-up in the global economy is reflected in the course of indices of production, trade transactions, business and consumer surveys and other leading indicators of economic activity. The deceleration in the decline of industrial production on a year-to-year basis in EU-27 up to the end of 2009 was followed by a rise of around 1.5% in January 2010, whilst its increase also accelerated between succes-

[3] News Release Euro Indicators, EUROSTAT, 34/2010, 04/03/2010.

sive months[4]. The global Purchasing Managers' Index (PMI) for manufacturing in January reached its highest level for 5½ years, weakened slightly in February, but for the past nine months has still remained above 50, which indicates that the sector is expanding. The corresponding index in Services was moving at a slightly lower pace, reflecting trends of a more moderate recovery in this sector[5]. World trade, meanwhile, is constantly growing and in the final quarter of 2009 the volume of trade transactions was 6% higher relative to the immediately preceding quarter[6]. In the first half of 2010 economic activity will expand in the seven most advanced economies of the Eurozone and OECD member states overall, as emerges from the continuing rise in January of the OECD's Composite Leading Indicators (CLIs) of the economic cycle[7].

The strengthening of production, trade transactions and total demand have reversed the decelerating/downward course of inflation seen up to mid-2009. The rapid return of the economy to a trajectory of growth in the developing Asian countries and in emerging economies of other regions led to a sharp rebound in prices of oil and other key commodities. The significantly reduced turbulence in financial markets, the decrease in uncertainty about how 'healthy' they are, and the easing of the economic recession due to the measures taken, have generated a pick-up in consumer demand. Inflation exceeded 2.0% in January in the OECD countries, was running at around 1% in the two-month period January-February in the European Union, from negative up to an including the third quarter of 2009, and reverted to a positive rate also in the USA in November, with its most recent value reaching 2.6% (January). The upward revision of the initial estimate for the growth of the global economy in 2010 also led to corresponding forecasts for inflation: the IMF projects a rate of 1.3% in the advanced economies and 6.2% in developing/emerging economies, i.e. 0.2 and 1.3 percentage points higher respectively than its previous forecasts[8]. Specifically regarding oil prices, the forecast for 2010 remains unchanged in the IMF's most recent report at $ 76.5 per barrel, while prices of the other basic commodities are seen rising faster, at a rate of 5.8% compared to the initial estimate of 2.4%.

The gradual easing of the economic recession since the second half of 2009 has begun to generate – though with a time lag since the transition of developments in production to the labor market is not immediate – positive developments on the unemployment front. The jobless rate in the OECD countries declined in January this year for the first time since April 2007, to 8.7%, from 8.8% in the final quarter of 2009, which is the historically highest level of the 2000s. Its decline is mainly attributed to the drop in unem-

[4] News Release Euro Indicators, EUROSTAT, 37/2010, 12/03/2010.
[5] J.P.Morgan Global PMI in Manufacturing/Services News Release, 01/03 March 2010.
[6] World Trade Monitor, March 2010, CPB Netherlands Bureau for Economic Analysis.
[7] OECD Composite Leading Indicators, March 2010.
[8] World Economic Outlook Update, January 2010 – IMF, World Economic Outlook, October 2009.

ployment in the USA in January, when it fell below the rate of 10.0% recorded in the final quarter of 2009 to 9.7%, as well as to its decrease in Japan, from 5.3% in the last month of 2009 to 4.9% in January. Stabilizing trends in unemployment prevailed for the first time since the first quarter of 2008 in the Eurozone and the European Union as a whole. Among the seven most advanced economies, the jobless rate rose marginally only in France in January[9].

The most significant easing of the recession among the seven most advanced economies has been seen in the **USA** and **Japan**. In the United States, GDP grew marginally in the final quarter of 2009 by 0.1% on a year-to-year basis, compared to a corresponding drop of 2.6% in the immediately preceding quarter. In Japan the recession – i.e. the contraction of GDP observed for the past two years – eased considerably from 4.9% to 0.9%. The rapid recovery of the US economy has been underpinned by the expansionary fiscal policy exercised, although this more than tripled the federal government deficit to 9.9% of GDP in 2009 ($ 1.41 trillion), from 3.2% in 2008. In 2010 the deficit is again expected to expand slightly to over 10% of GDP, despite the anticipated – in contrast with 2009 – growth of domestic product by 2.7%.

One of the first positive developments in the US economy in 2010 has been the rise of 0.9% in industrial production in January relative to the same month of the previous year, for the first time since May 2008, and the steady decrease in the number of unemployment benefit applications. On the other hand, the 11% drop in sales of newly-built residences kept them at their lowest level since 1963, while a decline was also recorded in sales of existing homes, which also raises the specter of renewed instability in the US housing market.

The moderation of the decline in the domestic product of **Japan** in the final quarter was mainly due to the significant deceleration of the rate of decline of exports and the growth of private consumption. Government consumption and public investment both slowed, although this development was to be expected after the sharp rise, of public investment in particular, in previous quarters. The pick-up in private consumption slowed the rate of deflation, which fell below 2.0% at the end of 2009 and continued to drop in January (1.3%). Support from the external sector would have been stronger were it not for the yen's continued appreciation against the dollar, the euro, the Chinese renmimbi and other currencies of emerging markets. Despite this, exports continued to grow in January, exceeding last year's by 41%. Imports too showed a positive change, the first since September 2008, reflecting the rise in domestic demand. The improved course of the Japanese economy on the one hand eased its recession in 2009 to 5.2%, which was the bottom limit of relevant forecasts, and while at the same time heightening expectations of economic growth in 2010, which

[9] OECD Harmonized Unemployment Rates, March 2010.

is expected to reach 2.0%, according to more recent projections.

The economy of **China** is among those which have seen an accelerated recovery beginning as early as the second quarter of the previous year. In the final quarter of 2009, GDP growth on a year-to-year basis exceeded 10%, as had been projected in IOBE's previous report (10.7%), up from 9.0% in the third quarter. In 2009 as a whole, the rate of economic growth stood at 8.7%, which is only slightly below the rate recorded in 2008 (9.6%). The acceleration of the country's economic growth is undoubtedly due to the extensive program of public investment, which has been implemented with consistency over the past five years.

On the other hand, as noted in the past, the rapid increase in domestic demand has to a great extent been directed toward imports. This fact, in conjunction with the decline in exports (-16% in 2009), is expected to shift the current account surplus into deficit, perhaps even during the current year, and this would be a particularly important development since it would most likely smooth over the differences between China and the USA regarding this issue. Meanwhile, rapidly expanding private consumption, which boosted the growth of retail trade to 18.5% in December 2009, is also fuelling inflation. The fiscal policy that continues to be implemented in 2010 is expected to be the main driving force of the Chinese economy. The most recent forecasts for its growth in 2010 are around 10%, and although they are more optimistic than the corresponding projections made at the end of 2009, the possibility that they may even be surpassed cannot be ruled out.

The economic recession in the countries of the **former Soviet Union (CIS)** stood at 6.7% in 2009, confirming the relevant projections of international organizations. The sharp drop in exports, particularly to countries of the region which are not energy exporters, and the spread of its impacts to the other countries of this geographical region, since economically they are closely intertwined, was the main cause of the decline in GDP. An even greater contraction was averted by the easing of the recession in the Russian economy in the second half of 2009, which also moderated the decline in exports of its trading partners in the region. In 2010 however, with the global economy overcoming the economic recession, demand especially for the energy products of the CIS countries is expected to rise significantly, playing a key role in their return to rates of economic growth, of around 4.0% according to the IMF.

Regarding the **Russian** economy in particular, the contraction of GDP accelerated in the first half of 2009 to reach 10.4% due to the sharp decline of exports, of the price of crude oil, the country's main export product, and the tight credit squeeze following the significant withdrawal of capital from the Moscow stock exchange and the banking system in late 2008. The gradual rebound of demand for oil at the end of the second quarter, as well as for other export products, along with the increase in their prices, was chiefly respon-

sible for checking the decline of domestic product. Indicative of this development is the fact that net exports rose by 59% in 2009 as a whole. Additional support for the operation of the economy came from the monetary policy measures aimed at boosting liquidity and the expansionary fiscal policy. As a result of the above developments/interventions, the decline of GDP for 2009 as a whole was 7.9%, compared to an increase of 5.6% in 2008. The continued implementation of the government's measures in 2010 and the higher demand for/price of oil in particular will allow GDP to expand, at rates that are expected to exceed 4%.

Summing up, the majority of developments in terms of aggregates and indicators of countries and regions in all geographical zones point to a dynamic and relatively rapid exit from the global economic recession. A similar picture emerges also from the economic climate indicators of the 'World Economic Survey', which is conducted by the Munich-based IFO Institute. The indicators for the first quarter of 2010 were constructed on the basis of a survey conducted in 94 countries (Tables 2.2 and 2.3).

Table 2.1

International Environment – International Monetary Fund (real annual % change)

	2009	2010	2011
USA	-2,5	2,7	2,4
Japan	-5,3	1,7	2,2
Developing Asia	6,5	8,4	8,4
China	8,7	10,0	9,7
ASEAN5	1,3	4,7	5,3
Euro area	-3,9	1,0	1,6
Commonwealth of Independent States (CIS)	-7,5	3,8	4,0
of which Russia	-9,0	3,6	3,4
Middle East	2,2	4,5	4,8
Africa	1,9	4,3	5,3
Sub-Saharan Africa	1,6	4,3	5,5
World	-0,8	3,9	4,3

Developing Asia: India, Indonesia, Philippines, China etc.
ASEAN5: Indonesia, Malaysia, Philippines, Thailand, Vietnam.
Middle East: Egypt, United Arab Emirates, Jordan, Iran, Qatar, Kuwait, Lebanon, Libya, Bahrain, Oman, Saudi Arabia, Syria, Yemen
Sub-Saharan Africa: Algeria, Morocco, Tunisia.
Source: International Monetary Fund, World Economic Outlook Update, January 2010.

Table 2.2

IFO - Economic Climate Index for global economy (Index, 2005=100)

Quarter/Year	**I/08**	**II/08**	**III/08**	**IV/08**	**I/09**	**II/09**	**III/09**	**IV/09**	**I/10**
Economic Climate	91,4	82,4	74,2	60,6	50,7	65,2	79,6	91,4	99,5
Current Situation	112,1	99,1	87,9	69,2	46,7	39,3	43,0	54,2	67,3
Expectations	71,9	66,7	61,4	52,6	54,4	89,5	114,0	126,3	129,8

Source: IFO, World Economic Survey, WES 02/2010

Table 2.3

IFO - Economic Climate Index in economic zones (Index, 2005=100)

Quarter / Year	I/08	II/08	III/08	IV/08	I/09	II/09	III/09	IV/09	I/10
North America	68,6	57,7	59,4	51,0	46,0	66,9	78,7	85,4	90,4
Western Europe	95,3	88,3	73,4	59,6	52,6	64,5	76,4	89,3	98,3
Asia	95,6	83,3	71,9	57,9	47,4	69,3	89,5	101,8	108,8

Source: IFO, World Economic Survey, WES 02/2010

More specifically, the world economic climate indicator in the first quarter of 2010 completed one year of constant improvement. The indicator rose to 99.5 and for the first time in two years exceeded its long-term average (1991-2009: 96.9). This value is interpreted as a clear indication that the impacts on the global economy from the financial crisis have tapered off. For a second quarter, the improvement in the indicator was primarily due to less unfavorable assessments of the present economic situation, while the already positive expectations for the coming six months became even more optimistic.

Despite the moderation of negative estimates of the current economic situation, its assessment on average remains unfavorable in most regions, particularly in the **Eurozone**, **N. America**, **Eastern Europe** and **Russia**. Expectations for the coming six months are optimistic in all regions, although a slight weakening of the positive outlook was recorded in **Asia** and **North America**, while strengthening mainly in **Western** and **Central Europe**. Despite the slight decline in optimism regarding the coming period, the economic climate overall is improving, as in the previous quarter, especially in **Asia**, followed by **North America** and **Western Europe**.

On the other hand, the consolidation of a climate of economic recovery is prompting forecasts of higher inflation in 2010, relative to the corresponding expectations in IFO's previous report: inflation is now expected to reach 2.9% in the current year, up from the corresponding projection of 2.5% recorded in the previous quarter. The relatively favorable economic environment will also have an impact on the course of interest rates, with both short-term and long-term rates expected to rise in the coming period.

The Economies of the EU and Eurozone

The economic recession continued to ease in the Eurozone and the European Union as a whole in the final quarter of 2009. On a year-to-year basis, the decline in GDP in the final quarter will exceed 2.1% and 2.3% in the Eurozone and EU-27 respectively, compared to a contraction of 4.1% and 4.3% in the third quarter. However, with the criterion of changes between successive quarters, GDP growth in the final quarter of 2009 relative to the third quarter was more moderate than that recorded in the third quarter relative to the second[10]. This deceleration is attributed to the petering out of the impact of tempo-

[10] News Release Euro Indicators, EUROSTAT, 34/2010, 04/03/2010, which is also the source for all the national accounts data that follow.

rary factors (car-scrapping scheme in Germany), but also as a possible sign of the diminishing effectiveness of the economic policy measures taken mainly at the beginning of the year. For 2009 as a whole, GDP fell relative to 2008 by 4.0% in the Eurozone and 4.1% in EU-27, confirming the relevant forecasts of the European Commission in its Autumn report.

As in the case of the global economy, the halting of the downward course of the economy in the European Union is due to the fiscal policy measures and interventions in support of the financial system by the European Commission, national governments and central banks, whilst a decisive contribution to the easing of the recession in the EU has been the rapid recovery of the developing economies in Asia, which is driving their demand for imports. However, the price paid for supporting economic activity and financial markets, a quite heavy one for certain countries, has been an increase in the budget deficit and the expansion of the public debt. Of the European Union member states, 20 showed a general government deficit higher than 3% in 2009 and as a result of this, have been set deadlines for adjustment in accordance with the terms of the Stability and Growth Pact. It is estimated that the budget deficit will be about 6.9% on average in 2009 in the EU countries, compared to 2.3% in 2008. Indeed, initial projections for 2010 point to a new, slight expansion in 2010, to 7.5%.

The escalation of imbalances in public finances in 2009 and its consequences will most probably lead to modifications of national economic policies planned for the current year, given also the obligation of countries to comply with the 3% deficit limit within a specific timeframe. Moreover, the recent strong volatility in sovereign bond markets, which has upset the relative calm prevailing in financial markets in the last few months, makes it more difficult to service the public debt, narrowing the margins for the exercise of economic policy, especially fiscal policy. The present turbulence in public finances extends to the vast majority of Eurozone countries, to 13 of the 16 member states, highlighting the lack of a mechanism for providing support to those in a particularly difficult position and safeguarding the stability of the Eurozone. The decisions of the Eurogroup on March 25 constitute a reply to the request for the creation of such a mechanism stemming from the maintenance of Greece debt spreads at particularly high levels.

As for the impetus from the **external sector**, a further improvement was seen in the last three months of 2009: net exports made a positive contribution of 0.3% of GDP in its marginal growth in the Eurozone in the final quarter relative to the immediately preceding quarter, and was in fact the highest among all of its components. The corresponding contribution of the external sector in EU-27[11] was 0.2%. On a year-to-year basis, declined at a lower rate than imports in the final

[11] News Release Euro Indicators, EUROSTAT, 173/2009, 03/12/09, which is also the source of all the following national accounts data.

quarter (-5.2% against -6.9%), with the result that the contribution of net exports changed from negative to positive for the first time during 2009 (0.7% of GDP in both economic regions). The initial indications for 2010 (PMI data, European Commission surveys) signal robust export growth in the first months of 2010.

The above factors shaped a cautiously optimistic economic environment in the European Union at the beginning of 2010. After averting a long-term deep economic recession, views differ sharply about the possibility of returning to steady economic growth. The course of key indicators is sending mixed signals. Industrial production rose in January by 1.4% in the Eurozone and 1.5% in EU-27, for the first time since April 2008[12]. However, the volume of retail trade, which is influenced to a high degree by private consumption and consequently the factors that shape it (inflation, unemployment), registered a slight drop in January, of around 0.3% in the Eurozone and EU-27, despite the fact that it had risen in December, by 0.5% and 0.2% respectively[13]. A wait-and-see attitude toward current developments is also evident in the course of economic sentiment, with the relevant indicators in the Eurozone and EU-27 remaining unchanged in February, following ten months of constant improvement.

The wariness on the part of households is reflected by consumer expenditure more vividly than any other variable: in the final quarter of 2009 consumer spending remained at the same level as the previous quarter in the Eurozone and EU-27, when in the USA and Japan it had begun to grow on a quarterly basis from the third quarter. Relative to 2008 also, private consumption remained at lower levels in the last quarter, whilst the difference was not significantly smaller in comparison with the corresponding one in the third quarter of 2009/2008. This development is attributed to the stabilization of unemployment in the final quarter at its highest level since the first half of 2005, but also to the acceleration of inflation in the autumn, following its decline up to the middle of the summer. Since consumer confidence did not strengthen in the two-month period Jan.-Feb. 2010, remaining below its long-term average, private consumption may begin to grow in spring, provided there is a stabilization of prospects for economic growth.

The other component of consumer demand, government consumption, showed no change between successive quarters, following its constant rise in the other quarters, though this was expected after the gradual completion of the economic measures for last year. The decisions regarding the way in which most EU countries must achieve fiscal adjustment will constitute, as noted previously, the deciding factor for its course in 2010. In this context, its estimated limited growth, or around 1%, is thought to be quite likely, while it is considered fairly difficult to exceed this rate.

[12] News Release Euro Indicators, EUROSTAT, 37/2010, 12/03/2010.
[13] News Release Euro Indicators, EUROSTAT, 33/2010, 03/03/2010.

Regarding the realization of investments, the downward trend seen since the first months of the previous year meant a reversal was not possible at some point during 2009. Fixed capital formation has fallen steadily from quarter to quarter, with its decline in EU-27 accelerating to 1.3% in the final quarter from 0.7% in the third, when it had slowed considerably. In comparison with corresponding periods one year previously, the contraction of fixed capital formation was smaller in the final quarter of 2009, but it did not fall below 8.7% in the Eurozone and 9.7% in the European Union as a whole. With the capacity utilization rate having dropped significantly due to the economic recession (73% in the first quarter of 2010), businesses are in a position to expand production with their available capital stock. Moreover, weak demand – at least within the EU – means firms are unlikely to keep a high level of inventories. In addition, the tight credit policy being implemented by banks has limited the sources of investment capital, a fact that also has a negative impact on residential construction. The accelerating growth of exports and state investment initiatives are expected to provide the main impetus for investments, but will not avert a fresh decline in 2010, which will probably exceed the relevant estimates of around -2.0%.

The overall picture that emerges from the above trends in key variables/indicators of supply and demand at the end of 2009 and in the first two months of 2001 increases the likelihood of low economic growth in the Eurozone and EU-27. Indeed, this possibility has been pointed out by all international organizations since autumn 2009. This outlook is also reflected in the European Commission's Interim Report , in which its forecast for GDP growth in the Eurozone this year remained unchanged, at 0.7%, while its projection for economic growth in EU-27 was marginally improved, at 1.4%, up from 1.3%[14]. Growth of around 1.0% in both economic regions is forecast by the IMF in the recent update to its regular report[15].

Turning to trends at a country level, the easing of the recession was more pronounced in the final quarter in Estonia, Sweden, Finland and Slovenia. In contrast, GDP growth remained unchanged or declined further in Greece, Cyprus and Bulgaria. The relevant data reveal no significant difference in the easing of the recession between countries within and outside the Eurozone. According to the new forecasts for seven countries made by the European Commission in its Interim Report, faster growth is expected in Poland and the Netherlands, the recession is seen easing in Spain, no change is projected for Germany-France-Italy, while economic growth in the United Kingdom is expected to be lower.

[14] European Commission, Interim Forecast, February 2010.
[15] World Economic Outlook Update, January 2010.

Table 2.4

Main Macroeconomic Figures, EU27, Euro area *(annual % changes)*

	EU-27			Euro area		
	2009	2010	2011	2009	2010	2011
GDP	-4,1	0,7	1,6	-4,0	0,7	1,5
Private Consumption	-1,7	0,2	1,2	-1,0	0,2	1,0
Public Consumption	2,0	1,0	0,6	2,0	1,1	1,0
Investment	-11,4	-2,0	2,5	-10,7	-1,9	2,1
Employment	-2,3	-1,2	0,3	-2,3	-1,3	0,0
Unemployment	9,1	10,3	10,2	9,5	10,7	10,9
Inflation	1,0	1,3	1,6	0,3	1,1	1,5
Exports	-13,8	2,1	4,2	-14,2	2,1	3,9
General Govern. Balance (% of GDP)	-6,9	-7,5	-6,9	-6,4	-6,9	-6,5
General Govern. Dept (% of GDP)	73,0	79,3	83,7	78,2	84,0	88,2
Current account balance	-1,7	-1,5	-1,3	-1,0	-0,8	-0,7

Source: Economic Forecast Autumn 2009, European Commission, November 2009

Limited growth of output in the current year does not point to significant changes in the labor market. Unemployment rose and in the last three months of 2009 persisted at its highest level for the past five years, in both the Eurozone and EU-27, at around 9.9% and 9.5% respectively, where it remained also in January[16]. Its stabilization, after rising for 1½ years, is attributed to the incorporation of positive developments since the beginning of autumn in production activity, particularly in industry, which always occurs with a time lag. Whether they continue will depend on the improvement/deterioration in the level of caution on the side of labor demand, and secondly on the growth of unemployment or its decline from the turning point at which it appears to be. With regard to this, the relevant estimates of the European Commission of a rise in unemployment in 2010, to 10.7% in the Eurozone and to 10.3% in EU-27 were not revised in its recent report. Encouraging messages, however, are being sent by the new – albeit slight – deceleration in the contraction of employment in the final quarter of 2009 and the declining pessimism in the employment expectations of companies in the business survey.

The fluctuations in production and in the labor market will also determine inflation trends. In February inflation stood at 0.9% in the Eurozone, which is more or less the same level as in the two-month period January-December, while it declined slightly in EU-27, to 1.4%, from 1.7% in January and 1.5% in December[17]. Its stabilization/reduction in February is considered to be an assimilation of its increase after last October, when it was at a much lower level, -0.1% in the Eurozone and 0.5% in EU-27. The rekindling of inflation comes from the reversal of the trend in prices in transport, which include

[16] News Release Euro Indicators, EUROSTAT, 29/2010, 01/03/2010.

[17] News Release Euro Indicators, EUROSTAT, 39/2010, 16/03/2010.

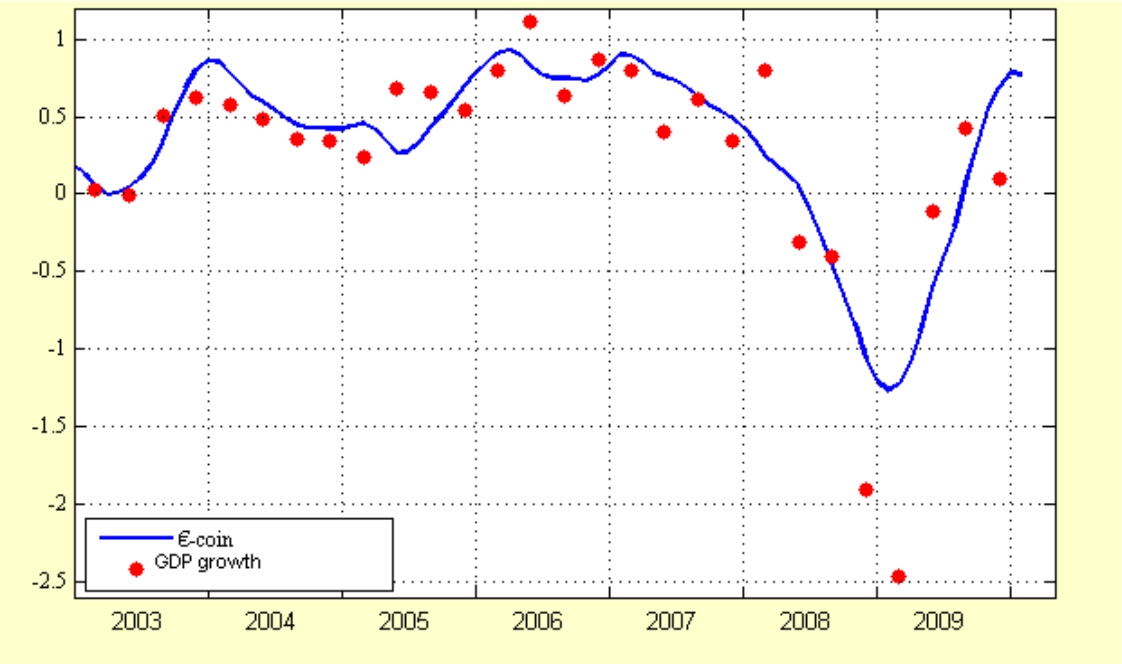
those of gasoline, from downward to significantly upward, as well as from the slowing of the decrease in the cost of housing. Despite its rise in the last two months, inflation in 2009 as a whole did not exceed 0.3% in the Eurozone and 1.0% in the EU. The augmenting effect of transport will grow, at least in the first months of 2010, due to the very low price of oil in early 2009, but is moderated by the decline in the value of the euro against the dollar. In the other categories of goods, on the assumption of moderate economic growth in 2010, which entails a small rise in consumption, similar price increases are expected which, together with that of transport, without excessively stoking inflation will probably take it higher than the forecasts of the European Commission (Eurozone: 1.1%, EU-27: 1.4% in its latest report).

The uncertainty surrounding the next stages of the Eurozone and EU-27's exit from the economic recession and concern about the impacts of the marked deterioration of public finances during the process have influenced business and consumer expectations. This is reflected in leading indicators, such as the indicator of economic activity calculated by the CEPR (Centre for Economic Policy Research)[18] and the economic sentiment indicators of the European Commission (DG ECFIN), which either remained unchanged or fell slightly in the first two months of 2010. More specifically, the CEPR indicator for the Eurozone, after rising for 11 months, declined marginally in February this year. However, its value remained firmly in positive territory, which is interpreted as an estimation of GDP growth in the Eurozone in the first quarter of 2010 relative to the immediately preceding quarter. Its decline is attributed to the reversal of the upward trend in equity and credit markets, as well as to sluggish industrial production in December.

[18] The CEPR in cooperation with the Bank of Italy each month calculates the €-COIN leading indicator of economic activity for the Eurozone. The indicator provides a forecast of GDP growth and is constructed from a range of different data, such as the course of industrial production and of prices, as well as labor market and financial data.

Figure 2.1

€-COIN Index (CEPR)



Source: CEPR (www.cepr.org)

Table 2.5

European Commission– Economic sentiment indicator EU-27 & Euro area (1990-2009=100)

Month	Apr-09	May-09	Jun-09	Jul-09	Aug-09	Sep-09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10
EU-27	71,1	74,3	77,1	80,5	85,4	87,0	90,0	91,5	95,0	97,2	97,4
Euro area	73,0	75,6	78,3	80,8	84,8	86,7	89,6	91,9	94,1	96,0	95,9

Source: European Commission (DG ECFIN), February 2010

A wait-and-see attitude and cautiousness in the European economy are also evident in the European Commission's economic sentiment indicators for the Eurozone and EU-27, which in Greece are compiled by IOBE. In February, both remained at the levels recorded in January this year. As for the individual sectors, the economic climate indicator for services rose slightly in both economic regions. In contrast, the corresponding indicators for retail trade registered a slight drop. The indicator for industry rose by 1 point in the European Union as a whole, but the corresponding indicator for the Eurozone remained unchanged. Lastly, consumer confidence in both zones dropped by 1 point, keeping it slightly below its long-term average.

2.2 The Economic Background in Greece

A) Economic sentiment

The **Economic Sentiment Indicator for Greece** in the first two months of 2010 remained below its long-term average for the period 2001-2009, standing at 74. However this value is 8 points higher

than the level recorded in same period of the previous year, which means that economic sentiment is not as unfavorable as it was in the first two months of 2009, when the fear and uncertainty about the intensity of the crisis was greater. In other words, there has been a gradual adjustment on the part of businesses and consumers to the new difficult conditions and a more assessment is being made, without this meaning that sentiment is positive.

On the contrary, immediately after national elections and a prolonged pre-election period (following European Parliament elections) during which expectations had recovered, the indicator has entered a new downward phase which, although moderate, has been continuous up to February. This deterioration is the result of less optimistic expectations in all sectors of the economy, as well as the decline in consumer confidence. The lower expectations in November-December can be interpreted to some extent as a 'correction' of the strong rebound they had registered during the election period. Since then however, the decline of the indicator has been mainly due to the difficult fiscal state of the country and the negative climate that has been created on account of the implementation of fiscal adjustment measures. The tax measures and restrictive incomes policy is expected to lead to a reduction of disposable income for the first time in many years, a fact that is being taken into consideration and is aggravating the negative sentiment and uncertainty among businesses and consumers during the first months of the year.

Moreover, the fact that the crisis in the recent period is more a result of the domestic fiscal situation rather than the broader unfavorable climate in the other markets is also indicated by the non-convergence of the course of economic sentiment in Greece in the last two months with the corresponding course of the indicators of most European countries, which registered an improvement. The average indicator value for EU-27 has risen steadily from April onwards, stabilizing only in the first two months of 2010 at around 97, which is markedly higher than in the corresponding period of the previous year.

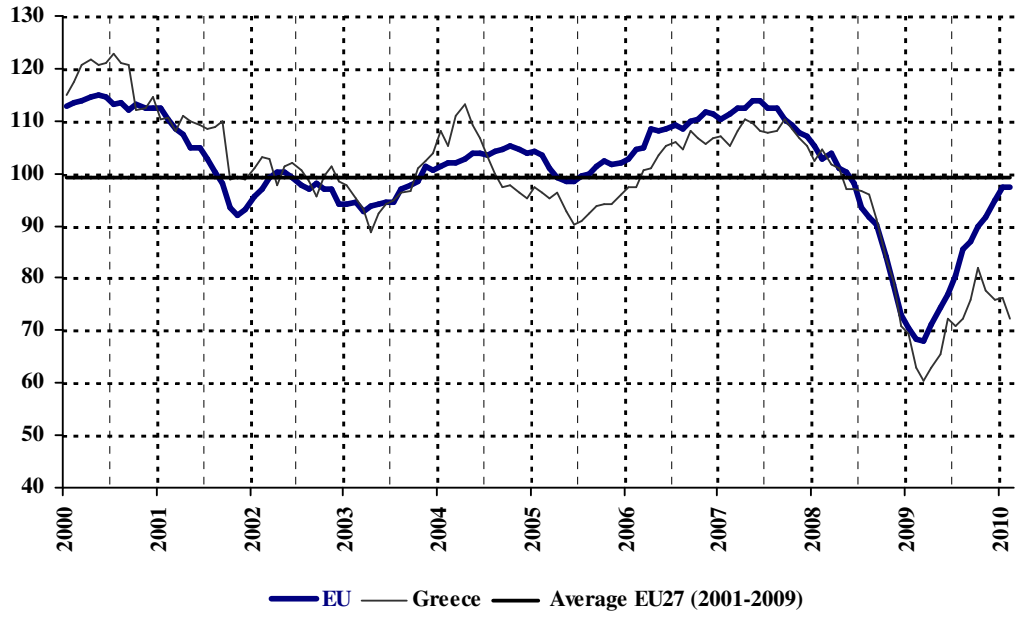
In the first two months of 2010, business expectations in Greece were higher than the corresponding levels recorded last year in Industry and Retail Trade, lower in Construction and at the same levels in Services, while among consumers, the relevant indicator was slightly higher than in the corresponding period of 2009, but remained at very low levels. In greater detail:

The **Consumer Confidence Index**, after registering a sharp rise during the pre-election period, decline steadily from November onwards to reach -49 in the two-month period January-February, which is slightly better than the corresponding level last year (-52). The average values of European indices for the same period were much higher, at -13 and -17 for the EU and Eurozone respectively, which

means Greek consumers continue to be among the most pessimistic Europeans. In their expectations, however, Greek households take into account the strong uncertainty about the scope, extent and impacts of the fiscal adjustment measures that have already begun to be implemented and are expected to reduce both their nominal and real income. From the commencement of the first discussions regarding the new measures at the end of the previous year, consumer expectations had already begun to be negatively affected. The decline in consumer confidence in the period January-February was the result of a deterioration in all its individual components. Thus, the negative expectations of the financial situation of households and the country in general over the coming 12 months worsened significantly, while uncertainty about the course of unemployment rose, with the relevant index registering its historically highest value in February. Lastly, propensity to save declined in January, before picking up slightly in February.

Figure 2.2

Economic Sentiment Indicator, EU27 and Greece (seasonally adjusted data*, 1990-2009=100*)



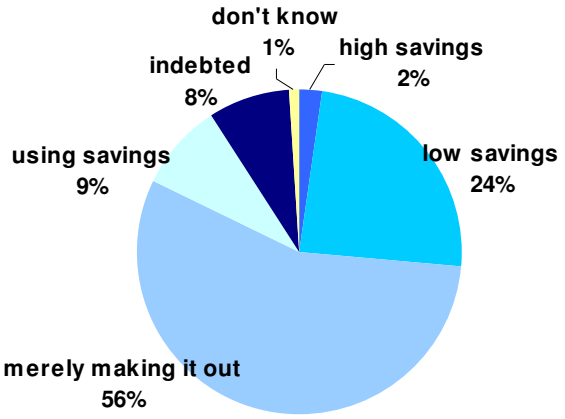
Source: European Commission, DG ECFIN

Table 2.6
Economic Sentiment Short-Term Indices

	Economic Sentiment Indicator[1]		**Business Confidence Indicators** [2] (Greece)				**Consumer Confidence Indicator**[1] (Greece)
	EU-27	*Greece*	*Industry*	*Constructions*	*Retail Trade*	*Services*	
2001	101,0	107,6	101,9	114,0	92,2	105,8	-26
2002	94,9	98,9	101,2	114,0	93,3	82,8	-28
2003	93,2	93,2	97,9	115,0	102,0	85,5	-39
2004	102,5	102,9	99,1	81,5	104,8	94,6	-26
2005	99,4	89,3	92,6	63,0	96,8	93,6	-34
2006	108,4	103,1	101,5	91,1	110,8	103,7	-33
2007	110,8	108,0	102,8	92,5	120,8	106,6	-29
2008	90,7	89,0	91,9	95,2	102,5	97,8	-46
2009	79,9	70,6	72,1	65,5	80,4	70,1	-46
Jan-09	70,3	69,4	68,2	65,0	65,3	62,6	-48
Feb-09	68,2	63,1	62,8	68,3	61,9	64,5	-55
Mar-09	68,0	60,4	63,8	59,1	60,2	66,0	-56
Apr-09	71,1	63,0	68,9	63,0	64,5	66,7	-51
May-09	74,3	65,3	71,0	52,8	80,7	73,2	-50
Jun-09	77,1	72,3	76,0	69,0	90,4	75,3	-45
Jul-09	80,5	70,7	73,8	67,4	91,4	73,7	-49
Aug-09	85,4	72,3	75,5	61,4	88,5	75,8	-45
Sep-09	87,0	75,7	80,4	67,6	91,4	68,4	-39
Oct-09	90,0	81,8	79,4	71,6	99,0	72,4	-27
Nov-09	91,5	77,7	74,8	72,4	91,1	71,8	-38
Dec–09	95,0	75,9	71,0	68,1	81,0	70,6	-44
Jan–10	97,2	76,1	75,8	64,1	75,3	67,2	-47
Feb-10	97,4	72,4	72,6	48,5	71,6	63,1	-51

Source: [1] European Commission, DG ECFIN, [2] IOBE

Figure 2.3
Consumer survey data on their household's financial situation
(January – February 2010 average)



Source: IOBE

The consumer survey yields extremely useful conclusions regarding the saving behavior of households and their assessments of their current financial situation. For the period under examination, the proportion of consumers reporting that they were 'indebted' was 8% on average, slightly higher than the 10% recorded in the same period of the previous year. Moreover, the percentage of those stating that they were saving small or large amounts reached 26% on average (compared to 30% last year), while more than half of the consumers in the survey (56%, up from 50% in 2009) reported that they were "just making ends meet". Lastly, 9% of households said they were dipping into their savings, a percentage that remains unchanged relative to the corresponding period of 2009.

In **Industry**, the Confidence Indicator in the first two months of 2010 stood at 74 on average, up from 65 in the same period of the previous year. The upward movement of the indicator, from March 2009 up to an including September, was halted in October, since when it has deteriorated almost constantly. In January however it rebounded, before declining again in February. In the first two months of the year most indices of business activity in the sector remained negative. Expectations regarding the course of production in the coming 3-4 months continued to be pessimistic, with the relevant balance at -6 on average, while estimates of levels of orders and demand were also stuck at very low levels, with just 5% of businesses considering them to be high for the time of year. A slight reduction relative to the previous period was seen in inventories of finished products, with 27% of businesses assessing them to be high for the time of year, against 7% reporting the opposite. Employment expectations in the sector moved downward, with the relevant indicator standing at -21 and one in four businesses anticipating a decline, a fact which also suggests a continuation of job losses in industry.

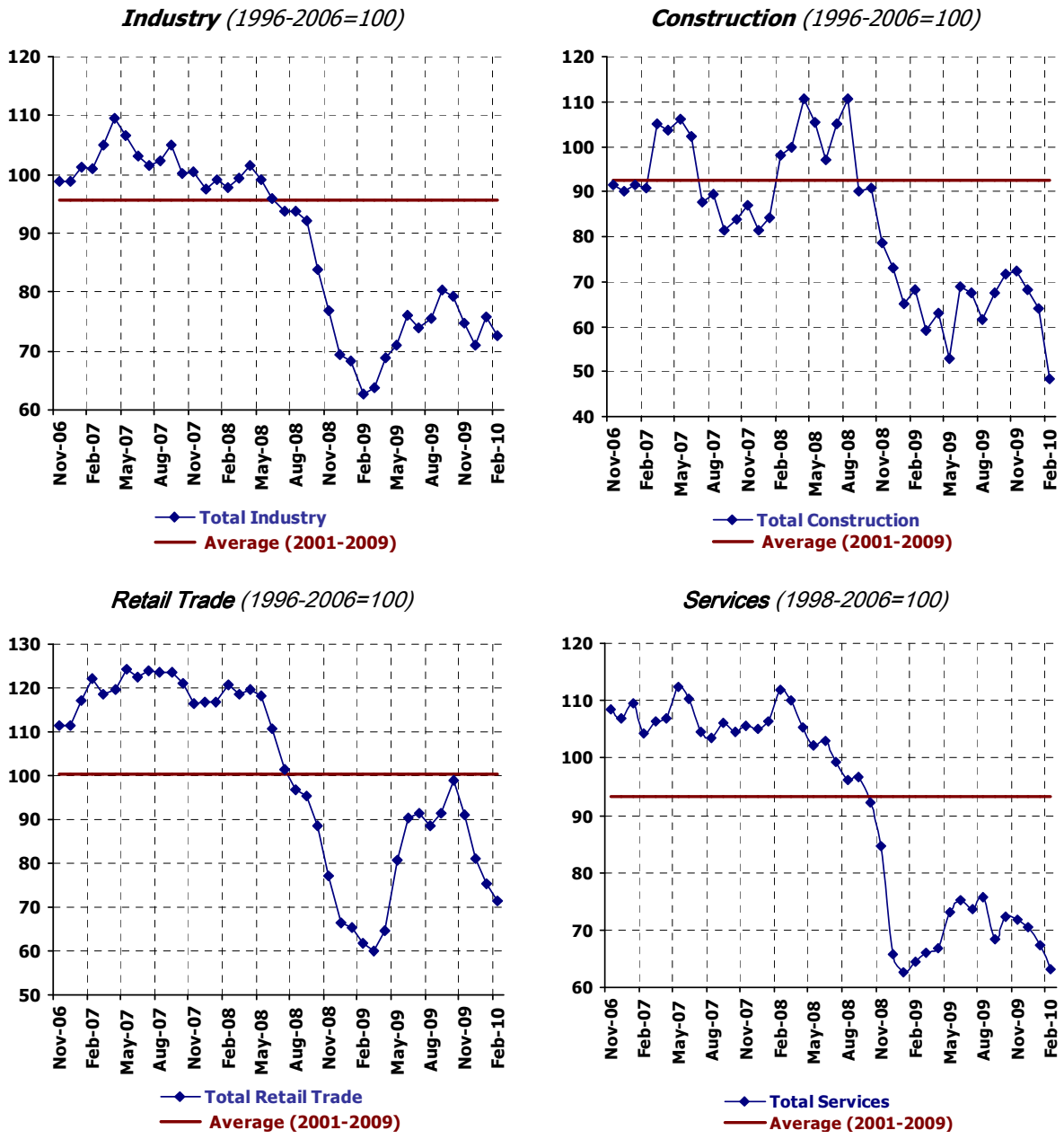
The Confidence Indicator in **Retail Trade** in the period January-February 2010 stood at an average of 73, having risen 9 points relative to the corresponding period of the previous year. Despite this, expectations in the sector have shown a steady deterioration since November, with most indices of activity declining. The liquidation of inventories, despite the sales period, was not particularly satisfactory, which meant they remained bloated with the relevant balance at +12. Businesses' estimates of their sales were also fairly weak, with 51% assessing them to lower relative to the previous quarter. Projections of sales over the coming three months too were marked by pessimism, with the relevant balance at an average of -21, which is far worse relative to the previous period, while estimates of orders placed with suppliers were significantly down (-24 on average). Despite weakening demand, the employment balance remained positive, thus contributing to the creation of new jobs in the Greek economy. Lastly, with regard to prices, most businesses expect a reduction relative to those projecting an increase, although a high percentage anticipate stability during the next three months.

Construction continues to be the sector worst hit by the economic recession over the past year and a half, with the Confidence Indicator standing at average of 56 in the period January-February, even lower than the level recorded last year (67). Thus, the indicator, after a moderate improvement in the three-month period September-November and the moderation of the very negative projections of businesses regarding their current work schedule and employment, entered a new period of decline in December, which peaked in February with one of the historically lowest values in the sector and the worst since the 2000s. Indicator data on activity in the sector show that the sharpest decline was in the expectations of firms regarding their work schedule in the short term, with the relevant negative balance reaching -50 on average, which represents one of the lowest values of recent years. Employment expectations remain negative, with almost half of the companies surveyed anticipating a deterioration. The number of months of assured activity total an average of 11.5, though these correspond more to works that have already started and are still in progress. As for prices, deflationary expectations steadily prevail, while lastly, the percentage of companies reporting that they were not facing any obstacles to their construction activities stands at just 8%, with 41% assessing low demand and 33% lack of financing as the main obstacle to their operation.

In **Services**, the Confidence Indicator stood at 65 on average in the first two months of 2010, which is the same as the level recorded in the corresponding period of 2009, suggesting that this sector too has been badly hit by the weakening of demand during the past year and a half. Regarding the various data of the indicator, assessments by businesses of their present situation remain strongly negative, with the relevant balance falling to the low level of -24. The picture is much the same regarding their estimates of the future course of demand, where for three months now over 30% of businesses have steadily been expecting a decline. Assessments of current demand also show a sharp deterioration, with the relevant balance standing at -18, indeed falling markedly in February. Forecasts for employment in the sector are also negative, having deteriorated continuously from November onwards. The prices balance has remained slightly negative for the past five months, indicating a decrease, while lastly, the percentage of companies reporting that their business activity is being conducted without obstacles stood at 29%, with insufficient demand cited as the biggest obstacle to business operations (34% of firms in the sector), followed by insufficient working capital (16%) and factors associated with the economic situation (19%).

Figure 2.4

Business Confidence Indicators[1]



1. In the calculation of Business Confidence Indicators a period - base is used, instead of a year- base. Thus the Confidence Indicators of Industry, Construction and Retail Trade sectors are calculated under a common period - base(1996-2006=100) and the Indicator of the Services sector under the period – base 1998-2006=100, as there are no available data before 1998. This change allows a more precise imprinting of fluctuations of expectations in a long-term period, while at the same time it allows the construction of comparable sub – sector confidence Indexes.

Source: IOBE

B) Economic policy: prerequisites for the new fiscal measures to serve as springboard for economic growth

The fiscal measures recently announced are absolutely necessary to remedy the major problems of the Greek economy. At the same time, they provide an opportunity to correct mistakes of the past and put the Greek economy back on a new, sustainable trajectory of economic growth, though only after a period marked by negative rates. IOBE considers that the package of measures adopted are adequate to achieve the crucial target of reducing the general government deficit to 8.7% of GDP in 2010 from 12.9% of GDP in 2009, despite the fact that GDP is expected to contract by about 2.5%, i.e. at a significantly higher rate than envisaged in the Stability and Growth Program, and with higher interest on government debt. Moreover, these measures make the corresponding targets for 2011 and 2012 more realistic and create a greater margin of time for the structural measures aimed at increasing public revenue and reducing public expenditure to bear fruit. However, it should be noted that the public debt as a percentage of GDP will continue to rise up to and including 2011, which is a cause for concern and ultimately necessitates a more aggressive policy of privatization and utilization of state assets.

Emphasis from now on should be placed on the meticulous implementation of the measures and improving competitiveness. The state budget expenditure and revenue results in the first two months of the current year were encouraging and on target. If this continues in March, it will contribute to an improvement in the climate on international bond markets prior to the crucial two-month period of April-May in order to meet public sector borrowing requirements. The slow decline of interest rate spreads on Greek government bonds is indicative of the fact that efforts to restore the credibility of the country's fiscal policy will be a long, non-linear process.

Many may argue that the creation of negative rates of economic growth cancels out the effectiveness of the fiscal measures. The truth is that they may reduce their effectiveness to some degree but in no way do they negate it. International experience, as well as Greece's experience in the 1990s, shows that in small, open economies with a public debt higher than 70% of GDP, the reduction of the fiscal deficit has only a relatively small impact on economic activity, and even this impact lasts only a fairly short time. In the medium term, economic activity recovers due to the improvement in borrowing spreads and the climate of confidence along with the reduction of imports. These arguments apply especially in the case of the Greek economy, whose credibility has reached its nadir, mainly due to the high public debt.

There is no doubt that the government must ensure that this period of the economy's negative reaction to the necessary fiscal shock is a short one. This will depend to a large extent on whether the government proceeds at a rapid pace toward an outward-looking policy of economic growth revolving around competi-

tiveness, which of course necessitates a break with the current philosophy and practice. The Greek economy has the potential for high rates of economic growth if the necessary structural reforms are advanced and the restrictions imposed by the state on competition are lifted: For example, closed professions, particularly in transport, cabotage restrictions on cruises, restrictions in the energy and health markets, etc., restriction on the opening hours of stores, banks, museums, etc., minimum prices of certain goods and services, mandatory profit margins, the way in which the state issues a series of permits, the introduction of mandatory fees for a number of professional activities and the bureaucratic restrictions on entrepreneurship, which deprive the Greek economy not only of important sources of growth that are so necessary in the present circumstances, but also much needed capital and new jobs, while condemning it to a vicious circle of high operating costs and low competitiveness. The opening up of markets and professions and the abolition of all these restrictions will create a new cycle of outward-oriented economic growth, especially if it is combined with privatizations, public-private partnership ventures, the utilization of state assets and the inflow of foreign capital. This will enable the country to capitalize on its dynamic comparative advantages in tourism (upgrading of services, extension of the tourism season, development of tourist homes), in health (creation of rehabilitation centers for baby boomers from abroad who are about to retire and wish to live in Greece for a large part of the year), in renewable energy sources, shipping, culture and the primary sector (biocrops, mineral wealth), thus making possible the transition from the old growth model to the new one.

In its past publications, IOBE has attempted to quantify the benefits from the opening up of markets and professions and to identify the sources of gain (see, for example, the institute's previous quarterly report, December 2009). The present report (see Chapter 4) confirms the considerable benefits to be gained from the liberalization of markets (their long-term impact on GDP exceeds 10 percentage points) with the use of a modern, international econometric model.

These encouraging preliminary results, which substantiate IOBE's established positions, mean that the Greek economy has significant unexploited opportunities which, if seized without delay, are capable of creating high rates of economic growth for a number of years, at the same time underpinning fiscal adjustment.

The recent decisions of the Eurogroup regarding the creation of an 'emergency' rescue mechanism and the decision of the European Central Bank to extend its emergency rules on accepting collateral as security in liquidity operations help to ensure liquidity in the Greek economy on terms that are not prohibitive, while also providing more time for adjustment. However, a permanent improvement in the situation can only be achieved through the speeding up of the government's plans relating to fiscal adjustment, steps to ensure the viability of the social security system and the opening up of closed markets

and professions. From a broader perspective, a permanent improvement can only be achieved through an adjustment of Greek society's value system, which will eliminate the causes and reasons for the Greek economy's present predicament.

C) Fiscal developments: The new Updated Stability and Growth Program (SGP)[19]

In January 2010, the government submitted to the European Commission the updated SGP which focuses on resolving the fiscal problem through a mix of direct measures to reduce the deficit and structural changes in public finances as well as in the rest of the economy.

The general picture of the key fiscal aggregates according to the SGP is presented in Figure 1, which first of all shows the debt starting to decline from 2012, when a primary surplus begins to be created and the net deficit is trimmed to below the 3% limit, falling to 2% IN 2013.

The SGP is regarded as 'front-loaded', in the sense that in the four-year period up to 2013, the necessary fiscal adjustment – equal to 10.7% of GDP – is to be achieved by two-thirds in the first two years. More specifically, the net deficit is to be cut by 4% of GDP in 2010 and 3.1% in 2011. The overall reduction of the deficit stems primarily from the central government subsector (9.2% of GDP) and secondarily from the social security subsector (1.4%). However, this particular type of front-loaded program has its shortcomings, since only one half of the reduction of the deficit by 4% of GDP in 2010 is to be achieved through measures of a permanent nature. This weakness of the SGP has since been remedied however with the recent measures included in Law 3383/2010.

The reduction of the deficit will be achieved on the assumption that changes in the debt that are independent of or not taken into account in the deficit remain at more or less zero levels (e.g. depreciation of the euro or advance payments for arms expenditures). Consequently, any deviations (for example, slower progress in planned privatizations) will mean a slower reduction of the debt[20].

With regard to interest payments, the SGP envisages a long term rate of around 3.8% (3.5% for 2010). In such a case, and given annual gross borrowing of approximately € 50 billion, each divergence of 100 bp (1%) will mean a difference of around 0.2% of GDP for interest payments.

The primary deficit is to be reduced by 7.5% of GDP up to and including 2011 and by 3.4% in the two-year period 2012-2013, to reach a surplus of 3.2%. This means that the front-loaded adjustment of the deficit applies also to the primary deficit, or, put differently, the SGP is sufficiently realistic not to be based on adjustments from the side of interest rates.

[19] All data have been taken from the new SGP 2009-2013 or Eurostat's database.

[20] The SGP is based on the assumption of a steady exchange rate of €/$=1.48 from 2010 onwards. However, in the first quarter of 2010 the euro has remained constantly below 1.4.

Lastly, the adjustment of the primary balance, which amounts to 10.9% of GDP in total, is to be achieved in a fairly balanced way, since it will result approximately 45% from expenditure (4.9% of GDP) and about 55% from revenue (6% of GDP).

Generally speaking, the SGP is considered to be sufficiently front-loaded, a fact that adds to its credibility. Moreover, it appears to be quite balanced with respect to the expenditure-revenue mix, although its soundness would be better judged through a comparison of alternative scenarios that would include not only budget efficiency, but also the impacts on other variables of the economy (e.g. growth rates, employment and unemployment, income distribution, inflation, etc.).

The fact that Greece's expenditures are 1.5% of GDP higher than EA-16 (though this is solely due to interest rates), while its revenue lags by 4.2%[21], suggests perhaps that there are greater margins for budget gains from the side of revenue.

Apart from taming the deficit, the main problem with public finances is the high debt ratio. Its reduction is considered to be slow, since in 2013 it simply reverts to the level of 2009. And even this is subject to uncertainties, since it assumes that: a) the surplus results will be achieved in their entirety, b) interest rates will be in line with estimates, and c) growth rates will gradually be restored up to 2013 in accordance with projections. Otherwise, the debt will continue to grow with extremely adverse consequences. According to the SGP, if for any reason growth rates are lower by about 0.6% annually, this will necessitate additional measures equivalent to approximately € 700-800 billion each year.

What is clear, as presented in Figure 2, is that although a continuous effort has been made to trim the debt from 1993 onwards (albeit with fluctuations), as shown by the double lines, in 2000 and 2009 it showed a sudden shift to higher levels from which it then had to be reduced. Thus, the debt contracted by 4.3% of GDP between 1993 and 1999, rose by 9.7% in the two-year period 2000-2001, dropped again by 8.1% up to 2007, before growing 17.8% in the two-year period 2008-2009 (14.2% in 2009 alone[22]). These sudden shifts in a relatively short period neutralized all other systematic efforts to reduce the debt. Once out of the present crisis, future governments will have to make long-term plans for the drastic reduction of the debt ratio. In view of the pressures exerted by the size of interest payments and demographic aging, any other policy will spell the non-sustainability of public finances.

The SGP submitted in January 2010 sets out the policies for the reduction of the primary deficit and the measures that will be taken to increase revenue and curtail spending. In March these measures were further specified and strengthened by Law 3383/10 on the 'Protection of the national economy' and the tax bill that contains

[21] These data are for 2008, the most recent year for which relevant data are available.

[22] The size of this increase in just one year can only be compared to the rise of 20.1% in the period 1992-1993 when, however, debt settlements were made to the Bank of Greece.

additional measures. The new initiatives relate to 2010, but are permanent in nature, and are aimed at bolstering efforts to cut the deficit by € 4.8 billion (2% of GDP). This reduction is to be achieved in a balanced way from the side of expenditure and revenue and would, theoretically, exceed the reduction envisaged in the SGP. The lack of any official commitment in this respect leads to the conclusion that these measures have been replaced by others with a less certain or immediate yield.

Revenue

As can be seen in Figure 3, revenue followed a downward course after 2000, when it represented 43% of GDP, and this despite the favorable conditions up to and including 2008. The SGP sees a total increase in revenue equal to 6% of GDP between 2009 and 2013. More specifically, as shown in Figure 1, adjustment is distributed fairly evenly among the main categories of revenue, with 1.3% coming from direct taxes, 1.4% from indirect taxes, 1.6% from social security contributions and 1.4% from other revenues.

According to the tax bill submitted to Parliament, the income tax scale for natural persons changes from 2010, while at the same time the tax base is broadened. These measures are intended on the one hand to shift the tax burden to higher income brackets (see Figures 4 and 5) and, on the other, boost revenue. The main features of the new system are the abolition of most forms of flat-rate taxation (including of share dividends) as well as a series of tax exemptions. It is also encouraging that income criteria are introduced for those exemptions that will remain. In addition, eligibility for the tax-free limit will once again be subject to the collection and submission of receipts. In the event that a taxpayer is unable to collect the necessary receipts, s/he will be liable to higher taxation (see Figure 5), while in the opposite case increased tax revenue is expected from the higher turnover declared by suppliers of goods and services. Lastly, the incomes of various categories of self-employed persons will be determined on the basis of account books they will be required to keep. The above reforms are primarily structural in nature and should have been introduced years ago. Their success, however, depends on the full implementation without exceptions (e.g. the fact that farmers do not keep account books fosters tax evasion among all the occupations connected with agricultural production).

It is hoped that the above measures will yield a total of € 1.1 billion (approximately 0.5% of GDP). The impact on revenue from the change in marginal tax rates will most likely be zero or just slightly positive, given that about 70% of incomes which account for 35% of taxes are up to € 40,000 and will be entitled to some tax relief. Consequently, the highest proportion of revenue is expected to come from the broadening of the tax base and, especially for 2010, from the increase in the withholding tax on profits and remuneration.

Under the provisions of the tax bill, the taxation of profits and dividends becomes

much more progressive in nature and the marginal tax rates for labor and capital income are equalized. The tax rates for corporations and limited liability companies are also equalized. Bearing in mind the significant decline in economic activity, businesses would probably feel some relief if they were able to (partially) offset any losses with the profits of coming fiscal years, as is the case in many other countries.

Regarding revenue from Value Added Tax (VAT), the increase in rates from 4.5% to 5%, from 9% to 10%, and from 19% to 21% (i.e. by approximately 10%), introduced by virtue of Law 2282/10, is expected to boost revenue by € 1.3 billion (0.55% of GDP), which is a fairly realistic estimate, provided there is no sizeable reduction in turnover. At the same time, the increase in the special consumption tax on fuel, tobacco and alcoholic beverages, as well as other provisions relating to this tax, is expected to add a further € 1.1 billion, in view also of the significant increase in tax rates. The government is anticipating additional revenue of € 120 million from the imposition of tax on luxury items. Such taxes, which are usually low-yield, could either be incorporated in others (e.g. those applicable to cars), or abolished, given the administrative cost involved and the additional complexity for the system (which usually leads to corruption and lower revenues).

Lastly, the SGP is anticipating specifically for 2010 non-recurring revenue totaling € 1.2 billion from the bank support program and the special taxes that will be imposed on profit-making businesses and property of high value.

Expenditure

As can be seen in Figure 6 and Table 2, government expenditure in 2009 exceeded 50% of GDP, which represents the highest level in the country's post-war history. In 2008 they had already exceeded the EA-16 average. Between 2006 and 2009, primary expenditures rose by 8.6% of GDP. Overall, the increase in primary expenditures totaled € 28 billion, compared to total GDP growth of € 27 billion.

The SGP envisages a total reduction of primary expenditures by 4.9% of GDP for the period 2009-2013, which includes an increase in investment expenditure of 0.8% of GDP and a reduction of all other spending by 5.7%.

The reduction in consumption expenditure foreseen by the SGP comes chiefly from a relative small decrease in the government operating cost (0.1% of GDP), from cuts in arms spending totaling € 457 million (which is actually deferment of an expenditure) and from cuts in expenditures for hospital supplies (0.3%+0.3% which applies only to 2010). Law 3383/10 foresees savings of around € 1 billion (0.4% of GDP). The fact that in 2008 the expenditure for medical and pharmaceutical supplies and equipment reached 1.7% of GDP (around € 4 billion), which is almost double that spent by countries such as Italy or Sweden[23], despite the fact that Greece ranks bottom in total expenditure on health, shows that there is still consider-

[23] Data from Eurostat (COFOG).

able margin for reductions without cutting back on the services provided. Indeed, this is acknowledged in the SGP which, however, prefers to make more conservative projections. A vital prerequisite of course is the establishment of a stringent and effective framework of control for procurements.

The reduction of expenditures for wages and salaries is planned mainly via a strict incomes policy and the abolition of a large number of allowances. In general, there will be zero increases in salaries and pensions above € 2,000, as well as salary reductions of 7% in the case of employment contracts governed by private law. The SGP initially envisaged savings of € 650 million from a 10% reduction in allowances (20% for members of the judiciary). Subsequently, with the relevant law passed in March this figure rose to 12%, which translates into additional savings of € 130 million. The same law reduces the '13th' and '14th' salaries by 30%. The total gain is estimated at around € 1.1 billion. These cuts will have an immediate impact on budget outcomes, since they will apply retroactively from the beginning of the year.

Similar cutbacks will apply to hiring in general government. The application of the ratio 1:5 (one person hired for every five departures) is expected to have a relatively small fiscal impact initially, particularly in view of the fact that the payroll expenditure relating to those employees departing will be replaced, at least in part, by a corresponding expenditure for pensions. In the long term however, and provided the measure is not reversed as has been the case in the past, it will have permanent effects of a structural nature. Immediate results are expected from the one-third reduction in the number of employees with fixed-term employment contracts and the abolition of works contracts (approximately € 120 million).

As for the reduction of transfers to subsidized agencies, the SGP focuses mainly on budget transfers to social insurance funds. The reduction in subsidies is expected to be offset by the anticipated recovery in the labor market (with the integration of foreigners) and, chiefly, by the curbing of contribution evasion. Nevertheless, the SGP does not adequately explain where the reduction in social transfers will come from, given the government's general policy aimed at supporting low pensions (which are the majority), the rate of demographic aging (it is estimated that the population aged over 65 is growing at an annual rate of 2%) and measures to stimulate the labor market (such as the € 750 million program of the Manpower Employment Organization).

In general, the problem of government expenditure is one of spending associated with high cost of services and low effectiveness, whilst at the same time the size of certain other expenditures (e.g. for education or health) remains low. The SGP and the recent initiatives illustrate that in the present tight fiscal framework the government is primarily interested in cutting costs and increasing effectiveness, leaving for a later phase the issues of volume and quality. This strategic choice is a

necessary one and in the right direction and could be the key to returning to fiscal normality, provided of course that it is adhered to with consistency.

Conclusions

The SGP is a front-loaded program that envisages a quite significant reduction in the deficit ratio up to 2013, but with no spectacular developments regarding the debt ratio. The risks of deviating from its targets (for example with respect to revenue, where savings of 1% of GDP were expected from efforts to combat tax evasion and contribution evasion) have been addressed with the new package of measures, in particular Law 3383/10, which includes the additional increases in indirect taxation and spending cuts, with a total yield of approximately 1.5% of GDP during 2010, on top of the gains from the provisions of the SGP. In view of the above, it is estimated that the SGP can achieve its targets, provided there is no deterioration of economic conditions and the government proceeds with the implementation of all the measures announced.

At the same time, the government must press ahead boldly with the institutional rehabilitation of public finances through major structural changes, many of which have already been set out in the SGP or in government announcements. More specifically, apart from the reform of the tax and social security system, which has already been set in motion and must be the subject of separate analyses, the following measures should also be taken immediately:

- a) the complete and radical overhaul of the public sector pay scale. The payment of allowances instead of a salary must be abolished, even if this places a future cost on pensions, while salaries themselves must be rationalized and correspond to the task performed, and
- b) the modernization of the labor framework, with the creation of a small number of braches (e.g. political, judicial, administrative, medical, educational, military/public order, scientific), each with its own pay scale, hiring by the branch rather than any one agency, with a specific framework of rights and obligations (e.g. review of the issue of the right to hold a second job), and advancement through the hierarchy in a rational way.

The result will be a more rational distribution of employees in the public sector and an increase in efficiency and productivity.

- c) thorough rationalization of the system of procurements for government consumption and public investments. The state and the agencies it subsidizes 'purchase' at excessively high prices, keeping government expenditure at high levels and fuelling corruption.

The scourge of the high public debt must be addressed, not only within the framework of medium-term SGPs, but as part of a long-term (e.g. ten-year) program with a clear description of its objectives and main directions, one that binds future governments to achieve its targets while allowing them to choose the various implementation policies.

Table 2.7

General Government Revenues

(% of GDP)	Direct Taxes	Indirect Taxes	Capital Taxes	Contribu-tions	Property Income	Other Revenues	**Total Revenues**
1999	8,8	13,5	0,2	12,2	1,7	4,8	**41,3**
2000	9,7	13,6	0,3	12,5	1,5	5,4	**43,0**
2001	8,6	13,3	0,3	12,6	1,6	4,6	**40,9**
2002	8,6	12,9	0,2	13,6	1,4	3,6	**40,3**
2003	7,8	12,0	0,2	13,8	1,1	4,1	**39,0**
2004	8,0	11,6	0,2	13,3	1,0	4,0	**38,0**
2005	8,5	11,7	0,2	13,4	0,8	4,0	**38,5**
2006	8,0	12,1	0,1	13,3	0,9	5,2	**39,7**
2007	7,9	12,3	0,1	14,0	1,0	5,1	**40,4**
2008	7,7	12,1	0,3	14,7	0,9	4,9	**40,6**
2009	7,9	11,3	0,2	14,2	1,0	4,8	**39,3**
2010	8,6	12,0	0,4	14,7	1,0	5,2	**41,9**
2011	8,8	12,3	0,4	15,3	1,0	5,7	**43,5**
2012	9,2	12,7	0,4	15,8	1,0	5,9	**45,0**
2013	9,2	12,7	0,4	15,8	1,0	6,2	**45,3**
2009-2013	*1,3*	*1,4*	*0,2*	*1,6*	*0,0*	*1,4*	***6,0***

Table 2.8

General Government Expenditure

(% of GDP)	Compensations	Intermediate Consumption	Social Transfers	Investment	Other	**Primary Expenditure**	Interest pay-ments	**Total Expenditure**
1999	10,5	5,4	14,1	3,1	4,0	**37,1**	7,4	**44,4**
2000	10,5	6,4	14,8	3,6	3,9	**39,2**	7,4	**46,7**
2001	10,4	6,2	15,4	3,6	3,3	**38,9**	6,5	**45,3**
2002	11,1	6,5	15,4	3,4	3,1	**39,5**	5,6	**45,1**
2003	10,8	6,0	15,9	3,5	3,6	**39,8**	5,0	**44,7**
2004	11,5	5,5	15,5	3,5	4,5	**40,5**	4,8	**45,4**
2005	11,5	5,3	16,3	2,8	3,4	**39,3**	4,6	**43,8**
2006	11,1	4,9	16,7	3,0	2,7	**38,4**	4,4	**42,9**
2007	11,2	5,4	17,4	2,9	3,2	**40,1**	4,4	**44,4**
2008	11,5	5,0	19,1	2,9	5,4	**43,8**	4,6	**48,3**
2009	12,7	6,0	21,0	2,8	4,5	**47,0**	5,0	**52,0**
2010	12,5	5,3	21,1	3,0	3,5	**45,4**	5,2	**50,6**
2011	12,0	4,3	20,9	3,1	3,4	**43,7**	5,4	**49,1**
2012	11,7	3,4	20,7	3,2	3,4	**42,4**	5,4	**47,8**
2013	11,3	3,4	20,3	3,6	3,5	**42,1**	5,2	**47,3**
2009-2013	*-1,4*	*-2,6*	*-0,7*	*0,8*	*-1,0*	***-4,9***	*0,2*	***-4,7***

Figure 2.5

General Government Deficit and Debt (% of GDP)

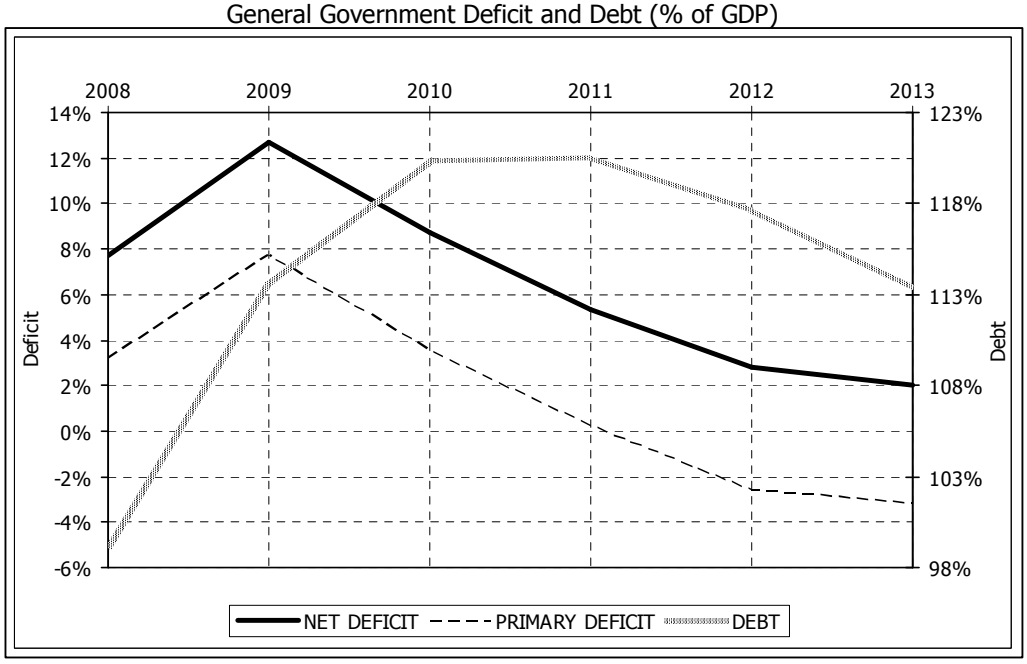


Figure 2.6

The Growth Pattern of the Public Debt

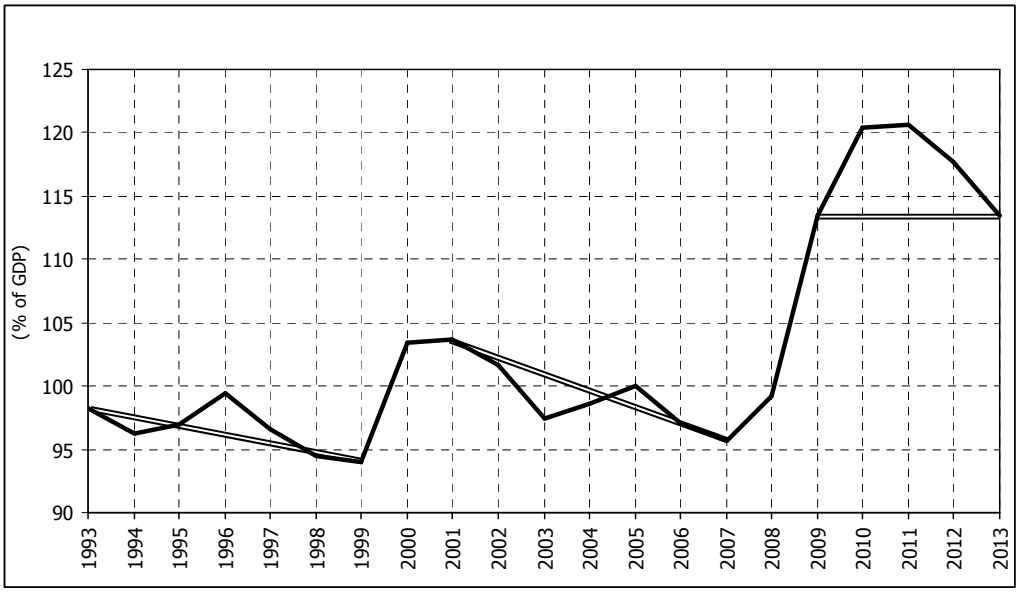


Figure 2.7
General Government Revenues

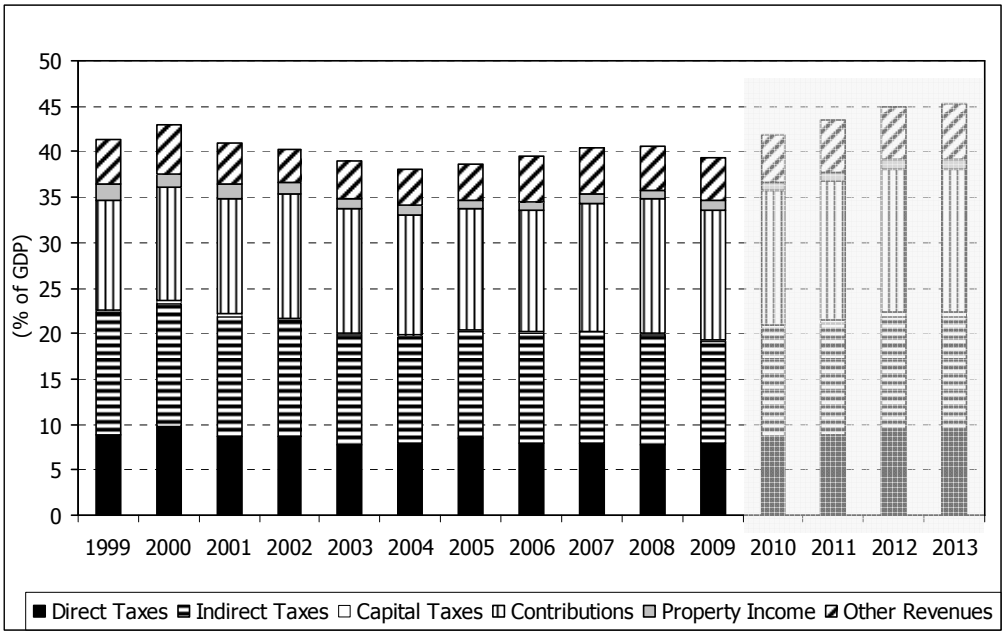


Figure 2.8
Income Tax Rates

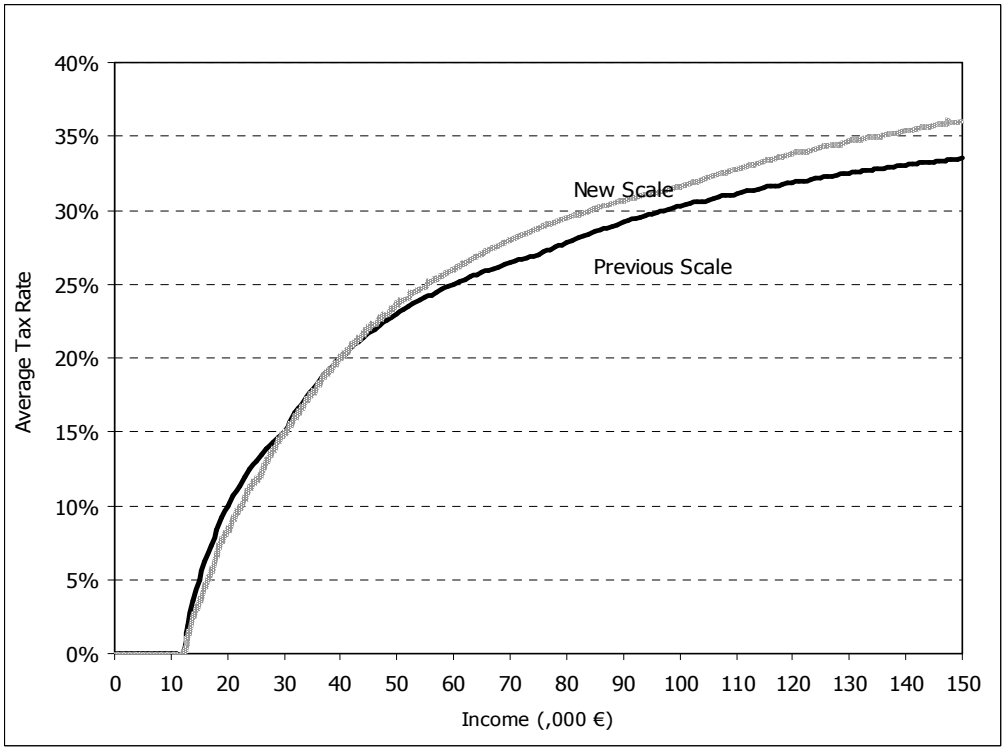


Figure 2.9
Shifts in Income Tax Rates

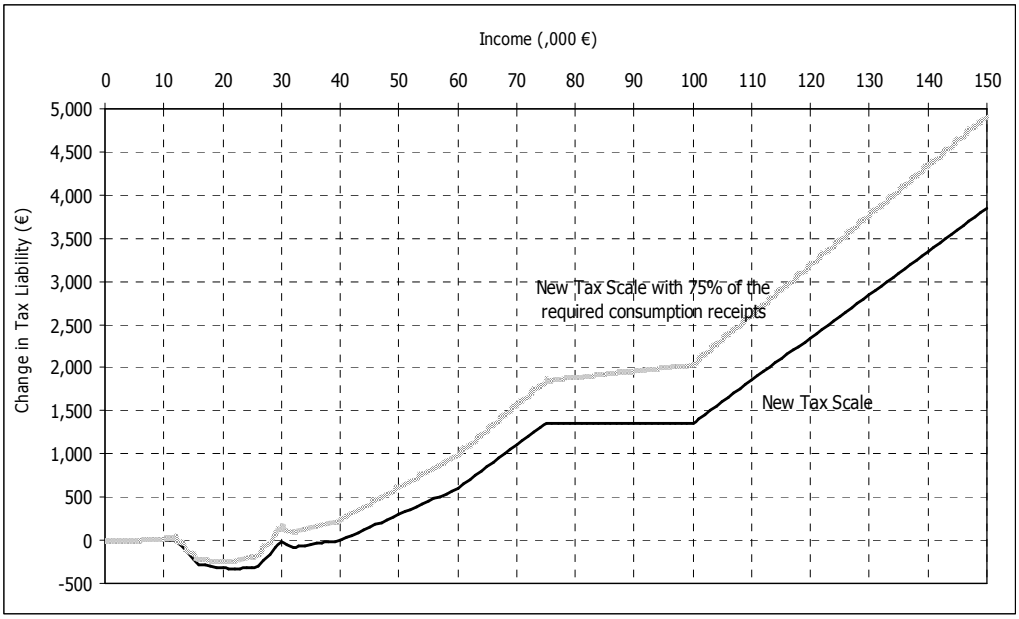
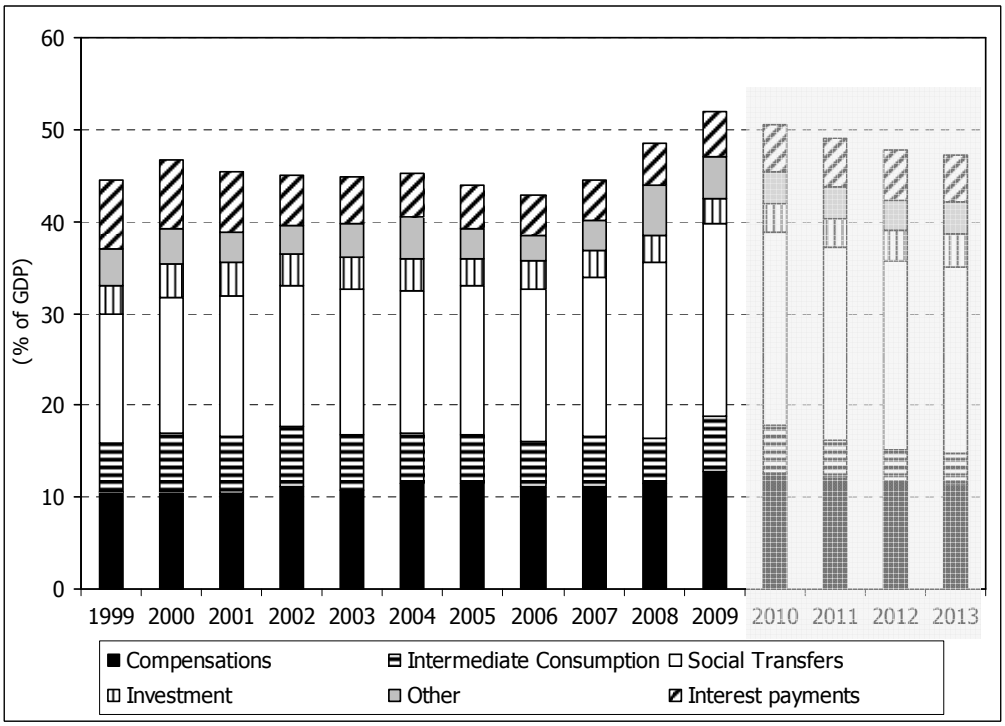


Figure 2.10
General Government Expenditure



3. PERFORMANCE AND PROSPECTS

3.1 Macroeconomic Developments

Developments in 2009

The course of the Greek economy in 2009, similar in some way to that of the world economy, was mainly affected by the impacts of the international financial crisis and the ensuing global economic recession. In 2009 as a whole, GDP fell 2%, compared to growth of 2% in 2008. Moreover, the recession in Greece was deeper than the relevant forecasts of international and domestic organizations and agencies (Bank of Greece: -1.0%, European Commission, OECD: -1.1%, Ministry of Finance: -1.2%)[24]. In its previous report at the end of December, IOBE estimated that GDP would contract by 1.5%, when according to the available data at the time the decline in the nine-month period January-September was 1.1%.

The new revision of GDP and its components for 2009 did not change the factors that determined its decline, which had become evident in data up to the third quarter of the year. The slump in private investment chiefly, and to a lesser extent the drop in private consumption, were the main reasons for the contraction of domestic product. The significant growth of government consumption, at a much faster pace than in 2008, and the increase in public investment, acted in support of GDP, but with the familiar particularly onerous consequences for the public deficit and debt. On the other hand, the proportionately higher decline in exports relative to imports was more than offset by the latter in terms of absolute figures, as the value of exports over time remains lower than that of imports.

In greater detail, total final consumption grew by around 0.3% in 2009, compared to an increase of 2.0% in 2008. This small increase was due exclusively to the significant growth of government consumption by 9.6%, as private consumption fell by 1.8%. The expansion of government consumption was the highest in the 2000s, and followed its slight increase of just 0.6% in 2008. It emerges from historical data that the last time private consumption declined in Greece prior to 2009 was in 1993, and before that in 1986. In both cases however, the decline was more moderate[25]

Gross investment expenditure fell in 2009 for the second straight year but at a much faster rate than in 2008 (13.4% against 2.5%), despite the growth of public investment by 8% last year. Following the trend on an international and European level, residential construction

[24] Monetary Policy, Interim Report 2009, Bank of Greece, October 2009, OECD Economic Outlook No. 86, November 2009, Economic Forecast Autumn 2009, European Commission, November 2009, Stability and Growth Program, Ministry of Finance, January 2010.

[25] Source: AMECO, Final Private Consumption Expenditure, at constant prices 2000 (coinciding with the consumption of households and non-profit institutions serving households reported in the National Accounts of the Hellenic Statistical Authority).

declined at a faster rate than the other main categories of fixed capital formation, by 21.7%, followed by metal products/machinery (19.8%) and transport equipment (17.2%). An increase was recorded throughout the year by agricultural machinery, of around 7.6% on average. The smaller growth of non-residential construction, of 4.0%, is attributed to the rapid expansion of this category in the first quarter of the year, for after that there was a marked deceleration and from the third quarter a decline.

In the external sector of the economy, developments were as follows during the course of 2009: exports declined in the first three months by 17%, a percentage that hardly changed in the next two quarters, while the period Oct.-Dec. saw the smallest decline of the year (15.5%). Meanwhile, imports weakened at a constantly accelerating rate, beginning with 10.0% in the first quarter and reaching 18.0% in the final quarter. On average, exports fell by 18.1% in 2009 and imports by 14.1%, compared to increases of 4.0% and 0.2% respectively in 2008. However, because the rate at which imports are covered by exports has not exceeded 70% in recent years (64.3% in 2008), the contraction of the former in absolute figures was € 1.3 billion higher. Consequently, the external sector deficit as a percentage of GDP fell marginally last year, to 11.1% from 11.6%, reducing its negative contribution to domestic product.

The economic recession, which took on various dimensions on the side of production activity (decline in industrial production, reduction of turnover in wholesale/retail trade and in many other branches of services, etc.), inevitably had a negative impact on the labor market. Unemployment stood at 9.5% for 2009 as a whole, 1.9 percentage points higher than one year previously. In the last quarter of 2009 it even surpassed 10% for the first time since the first quarter of 2005, reaching 10.3%. The course of employment too showed a deterioration, falling by 1.1%. However, its change is more moderate than that of unemployment and given its increase of a similar size in 2008, employment in 2009 stood at exactly the same level as in 2007. On the inflation front, the fact that it remained at a low level up to the middle of the third quarter moderated the negative impacts of the economic recession on demand. Since then, due to the increase in tax on alcoholic beverages-tobacco and especially on account of the increase in the cost of transport, which includes gasoline and road tax, inflation in Oct.-Dec. rose to 2.0% from 0.7% in the immediately preceding quarter, with the result that for 2009 as a whole it reached 1.2% compared to 4.2% in 2008.

Table 3.1

Main Economic Volumes-Quarterly National Accounts

(constant 2000 prices)

Year/ Quarter	GDP		Final Consumption		Investment		Exports		Imports	
	mil. €	Quarter % change (n/n-4)	mil. €	Quarter % change (n/n-4)	mil. €	Quarter% change (n/n-4)	mil. €	Quarter% change (n/n-4)	mil. €	Quarter% change (n/n-4)
2001	**142.001**	**4,2%**	**127.980**	**4,1%**	**33.025**	**3,9%**	**33.878**	**-0,01%**	**52.882**	**1,2%**
2002	**146.885**	**3,4%**	**134.663**	**5,2%**	**33.442**	**1,3%**	**31.034**	**-8,4%**	**52.219**	**-1,3%**
2003	**155.613**	**5,9%**	**137.952**	**2,4%**	**39.627**	**18,5%**	**31.940**	**2,9%**	**53.768**	**3,0%**
2004	**162.807**	**4,6%**	**142.899**	**3,6%**	**39.109**	**-1,3%**	**37.498**	**17,4%**	**56.579**	**5,2%**
a' 2005	40.910	2,4%	36.627	4,1%	8.763	-9,5%	9.485	4,9%	13.967	0,3%
b' 2005	41.229	1,5%	36.867	3,6%	8.803	-12,0%	9.334	0,3%	13.762	-3,4%
c' 2005	41.748	2,1%	37.287	3,8%	8.718	-10,6%	9.829	3,6%	14.083	-1,2%
d' 2005	42.571	3,0%	37.676	4,1%	9.737	0,7%	9.760	1,1%	14.581	3,0%
2005*	**166.458**	**2,2%**	**148.458**	**3,9%**	**36.020**	**-7,9%**	**38.408**	**2,4%**	**56.392**	**-0,3%**
a' 2006	42.543	4,0%	38.123	4,1%	9.448	7,8%	9.923	4,6%	14.960	7,1%
b' 2006	43.386	5,2%	38.544	4,6%	9.939	12,9%	10.198	9,3%	15.287	11,1%
c' 2006	43.890	5,1%	38.860	4,2%	10.361	18,9%	10.093	2,7%	15.400	9,4%
d' 2006	44.165	3,7%	39.270	4,2%	10.516	8,0%	10.237	4,9%	15.849	8,7%
2006*	**173.984**	**4,5%**	**154.798**	**4,3%**	**40.264**	**11,8%**	**40.452**	**5,3%**	**61.496**	**9,1%**
a' 2007	44.960	5,7%	39.780	4,3%	11.204	18,6%	10.306	3,9%	16.300	9,0%
b' 2007	45.269	4,3%	40.204	4,3%	10.947	10,1%	10.461	2,6%	16.325	6,8%
c' 2007	45.650	4,0%	40.536	4,3%	10.613	2,4%	10.999	9,0%	16.498	7,1%
d' 2007	45.886	3,9%	40.845	4,0%	10.762	2,3%	11.017	7,6%	16.742	5,6%
2007*	**181.765**	**4,5%**	**161.365**	**4,2%**	**43.525**	**8,1%**	**42.783**	**5,8%**	**65.865**	**7,1%**
a' 2008	46.193	2,7%	40.896	2,8%	10.992	-1,9%	11.141	8,1%	16.827	3,2%
b' 2008	46.479	2,7%	41.125	2,3%	10.553	-3,6%	11.278	7,8%	16.470	0,9%
c' 2008	46.539	1,9%	41.229	1,7%	10.538	-0,7%	10.951	-0,4%	16.164	-2,0%
d' 2008	46.216	0,7%	41.293	1,1%	10.344	-3,9%	11.104	0,8%	16.544	-1,2%
2008*	**185.427**	**2,0%**	**164.543**	**2,0%**	**42.427**	**-2,5%**	**44.474**	**4,0%**	**66.005**	**0,2%**
a' 2009	45.747	-1,0%	41.213	0,8%	10.554	-4,0%	9.145	-17,9%	15.150	-10,0%
b' 2009	45.609	-1,9%	41.126	0,0%	9.772	-7,4%	9.133	-19,0%	14.430	-12,4%
c' 2009	45.393	-2,5%	41.363	0,3%	8.742	-17,0%	8.781	-19,8%	13.548	-16,2%
d' 2009	45.040	-2,5%	41.422	0,3%	7.670	-25,9%	9.378	-15,5%	13.560	-18,0%
2009*	**185.427**	**-2,0%**	**165.124**	**0,4%**	**36.738**	**-13,4%**	**36.437**	**-18,1%**	**56.688**	**-14,1%**

* provisional data

Source: NSSG, Revised data, December 2009

Summing up the course of key macroeconomic indicators during 2009, the trends that had become apparent in the first half continued throughout the year: private demand weakened, mainly as regards private investment, whose slump was the main factor leading to the decline in GDP. Public sector expenditure grew significantly, with emphasis clearly being placed on boosting government consumption, the growth of which more than offset the de-

cline in private consumption, even though the former is corresponds to only one quarter of the latter. The expansion of government expenditure served as the strongest bulwark against a further reduction of GDP, but it derailed the execution of the budget and caused the – dramatic in recent months – instability in the country's public finances with still unknown consequences for socio-economic activity as a whole.

Medium-term outlook

The worsening of the economic recession in the second half of 2009 was accompanied since the beginning of 2010 by extremely negative repercussions from the deviation of the 2009 budget from the terms of the fiscal monitoring imposed on Greece last year. The consequent dramatic widening of Greek sovereign bond spreads and the downgrading of the country's credit rating have also made it more difficult for domestic credit institutions and the private sector of the economy generally to secure funding, at the same time prompting a downward revision of the credit rating of Greek banks.

In order to meet its fiscal commitments toward the EU which stem from the Stability and Growth Program, but also to ease the pressures from international money markets, the government gradually announced a package of measures to permanently boost budget revenue and reduce government expenditure. Irrespective of the medium- and long-term positive results that these measures may bring, in the first phase they will dampen demand from both private individuals and the public sector.

The impact on the Greek economy from developments on the fiscal front, especially the second package of measures adopted on 3 March, is expected to be reflected in the course of aggregates and indictors in the coming months. The situation regarding the course of production activity and the economic climate shaped at the end of 2009 and, with regard to certain aggregates, in the first month of 2010, when a) the repercussions from the surge of the budget deficit and public deficit and b) the directions of the immediate measures for achieving fiscal adjustment, had already become quite apparent, is creating a deteriorating economic climate in the Greek economy, in which – however – there are also trends in the opposite direction.

In greater detail, on the supply side of the economy, turnover in retail trade rose last December, for the first time in almost a year, assisted however also by the low base level at the end of 2008, while the decline in turnover in wholesale trade moderated in the final quarter of 2009. The downward course of industrial production slowed significantly since last November, with the relevant index in January falling by only 2.5% on a year-to-year basis, underpinned by the good performance of exports in the immediately preceding period. However, activity in two sectors of the Greek economy, which serve as a barometer for trends being shaped therein, deteriorated sharply in the last three months of 2009. In tourism, turnover fell significantly in the final quarter (-18.1%

relative to the same period of 2008), while the corresponding decline in construction was even greater, reaching 30% for the first time since 2005, the year after the Olympic Games in Athens.

Data pointing to a weakening of the Greek economy are particularly in evidence on the demand side: investment expenditure dropped by 25.9% in the final quarter, registering its biggest decline of the 2000s, while in terms of absolute figures it stood at the same levels as nine years ago, in the second half of 2000. This development provides a clear indication of investment intentions for the current year and of estimates for the course of consumption/production. Unemployment rose in one quarter by one percentage point, a change that significantly exceeds the effect of seasonal factors, and had last been seen between the final quarter of 2003 and the first quarter of 2004. In addition, despite the rise in inflation in the final quarter of 2009 by 1.3 percentage points relative to the immediately preceding quarter, the decline in final private consumption slowed only slightly in the fourth quarter, from 1.9% to 1.6%, which points to a clear drop in quantities requested.

The gradually deteriorating outlook for the coming months has been reflected since November in the business surveys conducted by IOBE, with the impact of the election cycle petering out and expectations in key sectors of the Greek economy (industry, retail trade, services) falling to lower levels as Greece's fiscal problem was highlighted, and these levels were maintained with slight fluctuations up to January. In February, when the very serious difficulties in public sector borrowing became quite apparent, the first package of measures was introduced, whilst at the same time the much stronger characteristics of the second package had almost been finalized, the economic climate indicator stood at its lowest level of the past eight months, with the majority of its component indices registering a significant decline. During the same period, households became much more pessimistic, with consumer confidence falling in February this year to the level of April 2009, close to its historically lowest value.

The fiscal instability, the measures to remedy it and the increasing uncertainty and concern about public finances, due to the Greek state's borrowing difficulties and the constant monitoring of the execution of the budget and implementation of the Stability and Growth Program (SGP) by the European Commission and the IMF, will predominate at the level of economic developments in 2010. The new cuts in **government consumption** foreseen in the measures announced, beyond the 4.4% envisaged by the SGP, the implementation of which can already be seen in the results of the budget execution in the first two months of the year (-9.6% in regular budget expenditure), will reverse its markedly expansive course in 2009, which however was the main factor preventing even deeper recession in the Greek economy.

A significant decline relative to the previous year is expected in the other component of domestic consumption, namely **household consumption**. Contributing toward this development are a number of

factors: a) the decrease in incomes in the public sector, b) the growth of unemployment, c) the rise in inflation, not only due to indirect tax increases, but also the higher prices of oil and many imported goods, and d) the decline in credit expansion to households, at a rate close to zero in the current year (2.9% in January[26]). However, it should be noted that the weakening of demand as a result of the drop in real, before direct taxation, income following the new tax measures, will moderate the inflationary pressures that they create. Moreover, since indirect taxes are included in final consumption expenditure, the anticipated sizeable growth of corresponding tax revenue will offset part of the contraction of net consumption expenditure.

Fluctuations, possibly sharper than those in consumption, are expected in **investment expenditure**. The expansion of the Public Investment Program (PIP) by € 700 million, from € 9.6 billion in 2009 according to the latest available data[27] to € 10.3 billion, as foreseen in the 2010 budget, was cut as a result of the second package of fiscal measures. The first two months of the year saw a significant slowing of PIP payments, at a rate of 58.2% relative to the same period of 2009, but they are expected to accelerate in the coming months through programs that have already been announced or are at the stage of application evaluation, such as the program on investments to stimulate 'green development' or the program in support of small and very small enterprises in commerce, services, tourism and manufacturing, within the framework of the National Strategic Reference Framework 2007-2013.

A significant decline is expected in **private investment**. The drop in profitability in 2009 and the tightening of credit policy terms by banks, which slowed the rate of credit expansion to businesses to around 10% last year from approximately 23% in 2008, have considerably reduced the sources of investment funds and propensity to invest. In addition, since the capacity utilization rate fell by 5 percentage points in 2009 to 70.5% and was weakening further at the beginning of 2010 (68.4% in the two-month period January-February), businesses are able to meet even an unexpected increase in demand with their available capital stock. However, such a development does not appear likely in the coming months, since the estimates made by companies in the relevant business surveys regarding their orders and demand have constantly deteriorated since last November and have reached very low levels. Residential investment too will also remain on a downward trajectory in the current year, though at a slower rate than in 2009. On the other hand, there may be a moderation of the funding difficulties faced by enterprises, especially small- and medium-size firms, which appear to have suffered from the sharp credit slowdown in 2009, as a result of the new program to provide low-interest loans to SMEs from the Credit Guarantee Fund for Small and Very Small Enterprises (TEMPME), totaling € 2 billion, which was recently announced and is expected to help businesses meet their current obligations while at the same

[26] Bank funding of domestic businesses and households: January 2010, Bank of Greece, 25/02/10.
[27] Budget Execution Bulletin, No. 2/2010, February 2010, final.

time releasing capital for investments. It should be noted, however, that the size of the program is roughly half the guarantees given last year.

The **external sector** of the economy is expected to have a less negative impact on GDP for the third consecutive year. Greek **exports** will benefit from the easing of the recession in the global economy and the return to economic growth not only in the developing countries of Southeast Asia but also in the European Union, which absorbs more than half of Greek exports. Already in the final quarter of 2009, the weakening of exports on a year-to-year basis slowed to the lowest level of the year. Between successive quarters, exports rose by 6.8% in the period October-December relative to the third quarter, as they reached a higher level than in all other quarters of 2009.

However, support from the external sector will be significantly less than in the previous year, since the prices of **imports**, especially oil, have increased as a result of the rebound in world demand and considerably exceed corresponding prices last year, particularly between the first quarters of 2010 and 2009. In January 2010, the trade deficit expanded, solely due to the oil balance. Its trend in the coming months is expected to again become downward, influenced by the increase in taxation, the income cuts in the public sector, the decline in government consumption and the weakening of demand from businesses for imported capital goods.

The outcome of the developments that are expected to prevail in 2010 in the main components of GDP and in various aggregates/indicators, as set out above, is the anticipated decline of GDP for the second straight year. In its recent Monetary Policy Report, the Bank of Greece estimates that the intensity of the economic recession will most likely be much greater than that foreseen in the SGP (main scenario: 0.3%, alternative scenario: 0.8%), in the area of 2.0%[28]. IOBE, taking into consideration the deepening of the recession in the second half of 2009 – before the grave fiscal problems facing the country became fully apparent – the magnitude of the imbalances in public finances, the impacts of the measures taken to address them and more generally the trends that have been described, estimates that the drop in GDP this year will exceed last year's decline and stand at close to **2.5%**.

The continuation/deepening of the economic recession, combined with the process of curtailing and restructuring employment in the public sector, are resulting in a further deterioration of the situation in the **labor market** in 2010. Indicative of the uptrend in unemployment is the fact that along with its escalation in 2009, its divergence from the corresponding period of 2008 has grown on a quarter-to-quarter basis: from one percentage point in the first quarter of the year, to 2.4 percentage points in the final quarter.

[28] Monetary Policy 2009-2010, Bank of Greece, March 2010.

Table 3.2

Domestic Expense & Gross Domestic Product – European Commission Forecasts
(constant 2000 prices)

	2008	**2009**	**2010**	**2011**
Annual Percentage Changes				
Gross Domestic Product	2,0	-1,1	-0,3	0,7
Private Consumption	2,3	-2,5	-1,3	0,8
Public Consumption	0,6	2,0	-0,1	0,7
Gross Fixed Capital Formation	-7,4	-16,2	-3,9	1,3
Equipment	6,3	-19,0	-4,8	1,1
Final Demand	1,5	-6,2	-0,9	0,9
Exports of goods and services	4,0	-11,8	2,7	3,1
Imports of goods and services	0,2	-20,3	3,1	1,9
Gross National Income	1,6	-1,6	-0,7	0,7
Employment	0,1	-0,9	-0,8	-0,2
Compensation of employees / head	5,9	2,3	1,4	1,8
Real Unit Cost of Labor	3,9	2,5	0,9	0,9
GDP Deflator	3,5	1,7	1,4	2,3
Harmonized Index of Consumer Prices	4,2	1,2	1,4	2,1
Contribution to real GDP change				
Domestic Demand	0,1	-4,9	-1,6	0,9
Net Exports	0,8	4,4	1,5	0,1
House Inventories	1,0	-0,6	-0,1	-0,4
GDP percentage				
Trade Balance	-16,6	-11,0	-10,3	-10,5
General Government Balance	-7,7	-12,7	-12,2	-12,8
Current Account Balance	-13,8	-8,8	-7,9	-7,7
General Government Debt	99,2	112,6	124,9	135,4
Percentage				
Unemployment (% of civilian labor force)	7,7	9,0	10,2	11,0

Source: European Economic Forecast Autumn 2009, European Commission, November 2009

Moreover, as with the difference in the rate of change of GDP between 2008 and 2009, the corresponding rise in the unemployment rate in Greece exceeded, to a small degree, the average for the Eurozone and EU-27. The decline in employment too has also accelerated, from 0.6% in the period January-March 2009 to 1.7% in the final quarter of last year, a trend that is expected to continue at least in the first half of 2010, since the employment expectations of enterprises deteriorated in the two-month period January-February in all key sectors apart from retail trade, according to IOBE's business survey. On the basis of this situation and these developments in the Greek economy and labor market, IOBE expects unemployment to grow in 2010 at a rate of around **11.0%**, perhaps even higher (for greater detail, see section 3.4).

Table 3.3

Comparison of forecasts on selected Economic Indexes for years 2008- 2010
(constant 2000 prices, annual % changes and levels)

	MFIN*			**EC**			**OECD**			**IMF**		
	2009	*2010*	*2011*	*2009*	*2010*	*2011*	*2009*	*2010*	*2011*	*2009*	*2010*	*2011*
GDP	-1,2	-0,8	1,0	-1,1	-0,3	0,7	-1,1	-0,7	1,6	-0,8[1]	-0,1	:
Final Demand	:	:	:	-6,2	-0,9	0,9	-2,4	-1,5	1,4	:	:	:
Private Consumption	-1,5	:	:	-2,5	-1,3	0,8	-1,4	-0,4	1,4	-0,4	-0,3	0,0
Harmonized Index of Consumer Prices	1,2	:	:	1,2	1,4	2,1	1,2	2,0	1,6	1,1[1]	1,7	:
Gross Fixed Capital Formation	-18,8	:	:	-16,2	-3,9	1,3	-15,5	-6,3	4,6	-10,2	-5,0	0,6
Unemployment (%)	9,0	10,2	11,2	9,0	10,2	11,0	9,3	10,4	10,4	9,5	10,5	10,0
General Government Balance	-12,7	-8,7	-5,6	-12,7	-12,2	-12,8	-12,7	-9,8	-10,0	-6,2	-7,5	-7,9
Current Account Balance (% GDP)	8,1	8,1	7,6	-11,0	-10,3	-10,5	-11,1	-10,0	-10,1	-10,0[1]	-9,0	:
Gross Public Debt (% GDP)	113,4	120,8	120,8	112,6	124,9	135,4	:	:	:	109,0	116,0	122,0

Source: Updated Stability & Growth Programme, Ministry of Finance, January 2010 (*alternative scenario), European Economic Forecast Autumn 2009, European Commission, November 2009, OECD Economic Outlook No. 86, November 2009, IMF, Greece:2009 Article IV Consultation-Staff Report, August 2009.
[1] Estimations extracted from World Economic Outlook, IMF, October 2009

Turning to **inflation**, its acceleration since last October, which was interrupted temporarily in January, will continue in the coming months, on the one hand due to the increase in indirect taxation and, on the other, to last year's low base level of the price index up to the middle of the summer. At the same time however, the higher indirect taxes will squeeze real disposable income, as noted above, and in combination with the income cuts in the public sector and very low credit expansion, will counteract any significant further rise in inflation. In view of these effects, it is estimated that inflation will run slightly above 3% in 2010 as a whole, at a rate of **3.1%**.

On a longer-term horizon, the measures adopted to tackle fiscal instability, the main directions of the SGP and the steps already taken to implement it, as well as the trends observed in the components of GDP, reflect an effort to gradually change the growth model applied in the Greek economy. Consumption expenditure is being cut, with the immediate reduction of government consumption, while the contraction of private consumption is more indirect, via taxation. At the same time, emphasis is being placed, more at the planning level for the time being, on boosting investments – both domestic and foreign – and improving the country's image abroad, both as an investment destination, and by promoting goods and services, where Greece enjoys comparative advantages over other countries.

The conditions are thus being created to gradually a) cut the strong dependence of domestic economic activity on domestic

consumption, b) make the Greek economy more outward-looking and c) return, despite the shocks generated by the upheaval in public finances, to a growth trajectory. IOBE has repeatedly stressed in recent years , including in its quarterly reports, the need to move away from the economic growth model that has so far been followed, which relied primarily on consumption, and toward one based on the above directions.

3.2 Developments and Prospects in key sectors of the economy

This section presents the quarterly indices of activity compiled by the Hellenic Statistical Authority (ELSTAT), which track the course of production in Industry and the turnover of businesses in the sectors of Construction, Commerce and Services. At the same time, it presents the corresponding branch indices compiled by IOBE on the basis of the business surveys it has been conducting in Greece since 1981. The combination of these indices and the evaluation of the trends that emerge, help show the broader picture of the supply side of the economy and clearly reflect the strength of domestic demand.

Industry

The economic recession has also had a negative impact on industrial production, which continued its downward course, but with the relevant index declining at double the rate in 2009 (-9.3%) relative to 2008 (-4.1%). This particular development is the result of a sharp drop in production in Manufacturing, which fell by 11.2% in 2009 compared to -4.7% in 2008, while the decline in Mining-Quarrying was of a similar magnitude (-11.5% in 2009 against -4.5% in 2008). In contrast, production in the Electricity sector fell by 4.2% compared to -2.8% in 2008, while the relevant index for Water Supply registered the smallest decline (-3.1% against an increase of 2.5% in 2008).

In the main branches of **Manufacturing**, the impacts of the crisis were more moderate in Food (-3.3% in 2009, against +0.5% in 2008), in Coke & Refinery Products (-0.1% against -4.3%), products that represent a significant part of manufacturing output in the country, while in Beverages the decline reached -4.8% (-0.5% in 2008). In contrast, production moved sharply downward in Non-Metallic Minerals (-23.9% in 2009 against -6.6% in 2008), in Basic Metals (-18% against -6.4%), Chemicals (-12.3% against -4.8%) and Manufacture of Metal Goods (-13.9% against -2.9%). The negative pressures in Textiles continued in 2009, with the relevant index registering the biggest decline among the branches of manufacturing (-27.7% against -21.7%), while in Clothing too, the decrease reached -23.2%. The only branch that did not appear to be affected by the economic crisis in 2009 was Pharmaceutical Products, where the increase in production (16.2%) five times higher than the corresponding rise in 2008.

The decline in **Mining-Quarrying** was the result of a sharp drop in production in the branches of Mining of Metal Ores and Other Mining & Quarrying activities of 23.3% (compared to an increase of 2.2% in 2008). In Mining of Coal & Lignite,

which accounts for the highest production, the index registered a slight drop of -2.3% against a marginal increase of 0.4% in 2008. In contrast, production rose in the Extraction of Crude Petroleum & Natural Gas by 31.2% (against a decrease of 17.1% in 2008), although output in this branch is too small to have an offsetting effect.

In all the various categories of goods, the decline in 2009 ranged from -2.9% in the Energy branch to -21.7% in Capital Goods, in contrast with 2008 when the decrease ranged from -2.4% and -7.4%. The index for Consumer Durables declined by 20.6 percentage points in 2009 against a drop of -5.7% in 2008, while a similar decline was also recorded by Intermediate Goods (-18.2% against -6.7%). Manufacturing output of Consumer Non-Durables fell by 4.2%, compared to a drop of -2% in 2008.

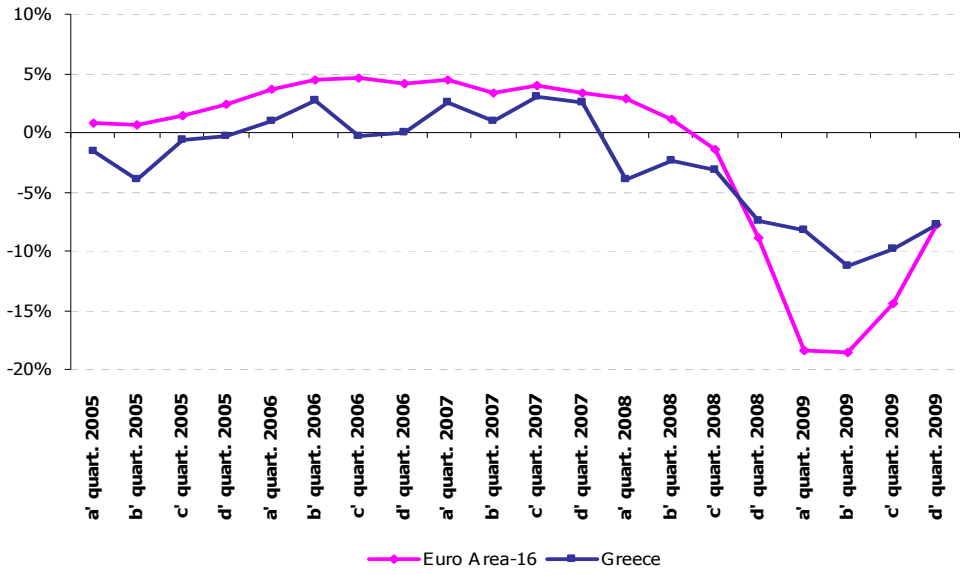
In January 2010, the industrial production index registered a further decline (-2.5% on a year-to-year basis), though this was considerably smaller than the corresponding drop recorded in January 2009 (-13.7%). However, this reduction cumulatively in the constantly downward course of the past 2.5 years has resulted in production on a monthly basis reaching its lowest level of the past five years. In Manufacturing, the index remained more or less unchanged relative to the previous year (drop of -0.6%), when it had declined markedly by 17.3%, while in Mining-Quarrying the decrease reached -2.7% against -22.2% in January 2009. In contrast, in the Electricity sector the decline at the beginning of 2010 was greater (-6.7% against -4%), while the Water Supply index fell by -2.7%, compared to an increase of 3% in the corresponding month of 2009.

Among the branches of manufacturing, in January 2010 production rose in six branches, while in 2009 an increase was registered only by Coke and Refinery Products. The biggest increases were registered by Basic Metals (7.9% against -28.3% in January 2009), Chemicals (9.3% against -24.5%), Plastics (4.4% against -21.4%) and Electrical Equipment (3.7% against -19.5%). In contrast, Food and Beverages registered declines of -3.9% and -4.8%, while smallest decrease was seen in Textiles (-9.6% against -28.1%).

In Mining-Quarrying, the index on a year-to-year basis in January 2010 fell by 2.7%, compared to -22.2% in 2008. In other Mining & Quarrying activities the index registered a drop of -3.4% from -33.3% in January 2009, in contrast with the branches of Extraction of Crude Petroleum & Natural Gas and Mining of Metal Ores, where production increased.

Lastly in the various categories, decreases in production at the beginning of 2010 were recorded in the branches of Energy (-4.6%), Capital Goods (-8.5%) and Consumer Non-Durables (-2.5%), in contrast with Consumer Durables and Intermediate Goods which registered increases of 6.4% and 2.6% respectively relative to January 2009.

Figure 3.1
Production Index in Manufacturing -% change w.r.t the same quarter of the previous year – (2005=100)



Source: NSSG

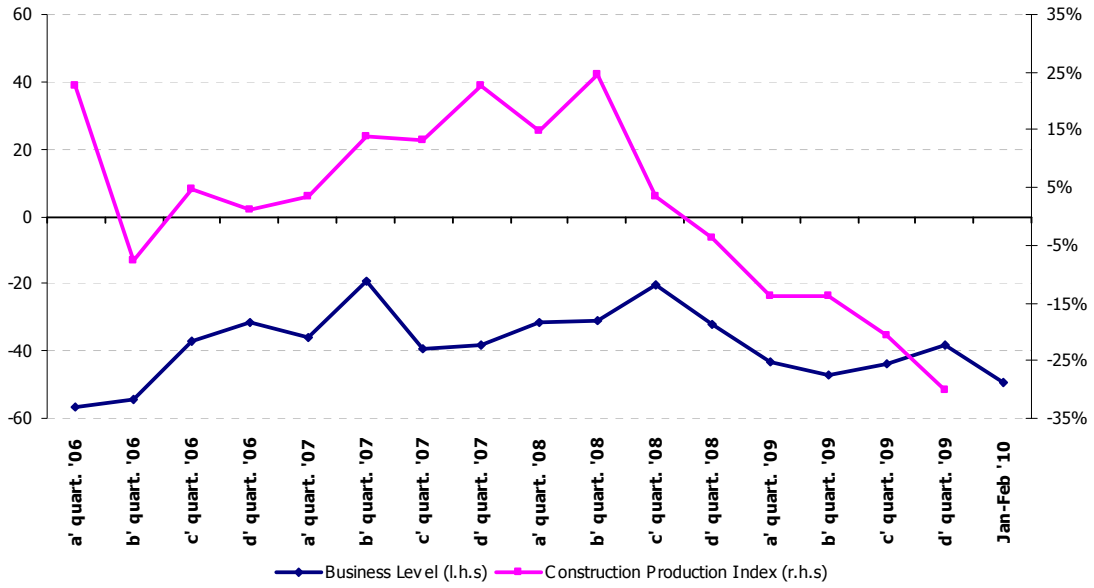
Construction

The general index of production in Construction fell in 2009 by 20.4% relative to the previous year, compared to an increase of 7.8% in 2008, with the result that the index stood at roughly the same level as in 2005. Regarding the various indexes for the sector, production in Building Construction fell by 26.1%, compared to slight decrease in 2008 (-0.6%), while output in Civil Engineering works declined by 16.8% in 2009, compared to an increase of 13.8% in 2008.

Total building activity (private and public) fell in 2009 to 56,205 permits from 65,474 permits issued in 2008 (-14.2%). The biggest decease was seen in the Ionian Islands (-20.1%), followed by Thessaly (-17.9%), the Northern Aegean (-17.6%) and Attica (-17.3%). Contributing to the sharp decline seen in the construction sector was the significant proportion of new residences that remain unsold on the market, as well as the decrease in the rate of home loans granted by banks to households. It is indicative that in January 2010, the rate of home loans to households declined, on a year-to-year basis, to 3.6% from 10.6% in January 2009.

whilst the fact that the European Central Bank has kept interest rates at low levels since the beginning of 2009 does not appear capable of shoring up sluggish demand in the residential market.

Figure 3.2
Construction Production Index (annual changes) and Business Level



Source: NSSG–IOBE

Retail Trade

The negative impacts of the economic recession during 2009 were also clearly manifested on the side of consumption, on the basis of retail sales. The **Volume Index in Retail Trad**e (turnover at constant prices, with automotive fuels and lubricants[29]) dropped in 2009 by 11.3%, compared to an increase of 1.3% in 2008. In the first half of 2009, the index fell to its lowest level of the past five years, before subsequently recovering to reach a level in the final quarter similar to that recorded in the third quarter of 2007.

With the exception of Pharmaceuticals-Cosmetics and Clothing-Footwear, significant decreases were recorded in the other retail trade branches in 2009, following the upward course seen in the three-year period 2006-2008. The biggest drop was in the branch of Automotive Fuels & Lubricants (-27.8% in 2009, against an increase of 17.6% in 2008), while the smallest (-1.5%) was in Food-Beverages-Tobacco, which however stood at a lower level than in 2008 (-4.6%). In the other categories, the decline in the volume index for Books-Stationery-Other Gift Items was 24%, followed by Furniture-Electrical Appliances-Household Goods (-15.4% in 2009 against -4.3% in 2008) and Department Stores (-11.1% against an increase of 1%). Lastly, the index for Supermarkets showed a decline of 6.5% in 2009, compared to a rise of 1.1% in 2008.

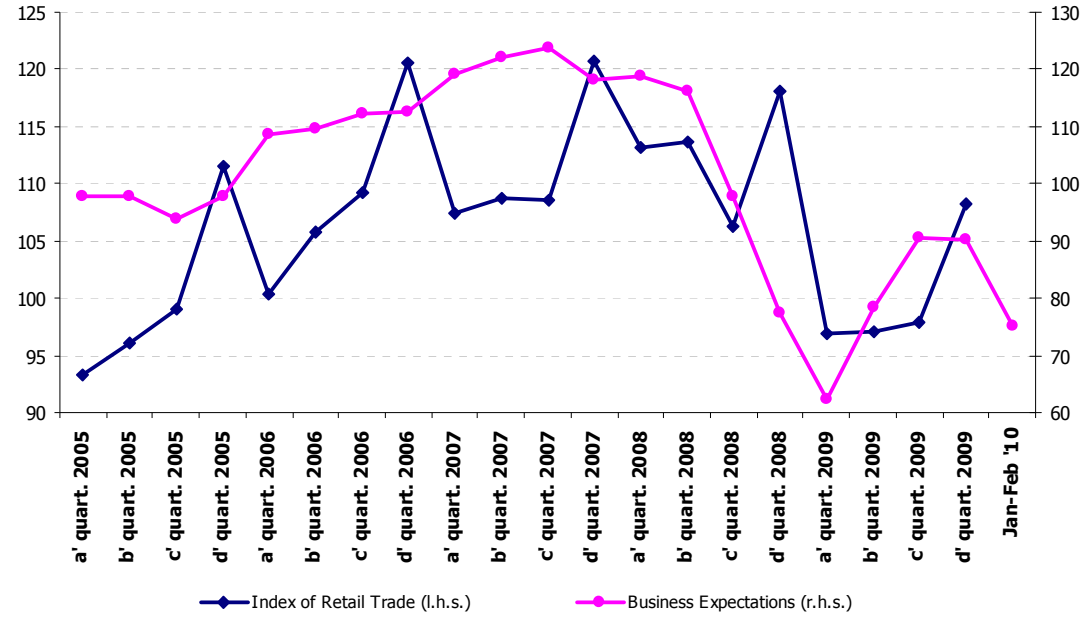
In the final quarter of 2009 – a period in which the index registers its biggest increase each year – the index fell by 8.4% relative to the corresponding quarter of

[29] According to the new statistical classification of economic activities NACE Rev.2, the branch 'retail sale of automotive fuels and lubricants' comes under **retail trade** and no longer belongs to the category 'trade, maintenance and repair of motor vehicles and motorcycles'.

2008 (-2.2% in 2008 relative to the final quarter of 2007). On the other hand, between the fourth and third quarter of 2009 there was an increase of 10.6% in all the separate categories with the exception of Department Stores, which moreover in four branches (Food-Beverages-Tobacco, Pharmaceuticals-Cosmetics, Furniture-Electrical Appliances-Household Goods and Books-Stationery-Other Gift Items) is greater than the corresponding rise for the years 2008 and 2007.

The **Turnover Index** for the Trade, Maintenance and Repair of Motor Vehicles and Motorcycles (branch 45 according to NACE Rev.2) fell by 15.6% in 2009, which is significantly higher than the decline recorded in 2008 (-8%). In the Trade of Motor Vehicles sub-branch (branch 451 according to NACE Rev.2) the index fell at an even faster rate, dropping by 19.7% in 2009, while in 2008 the decrease was -8.8%. However, it is worth noting that in both branches the decline in the final quarter of 2009 (relative the corresponding quarter of 2008) was much more moderate relative to the preceding quarters of the same year, since it reached -7.2% and -12.2% respectively, from -30.7% and -35.5% in the first quarter of 2009. This particular development could however be viewed as a moderation of the downward trends in the market.

Figure 3.3
Index of Retail Trade Volume (turnover in constant prices, 2005=100) and Business Expectations Index in Retail Trade (1996-2006=100)



Source: NSSG-IOBE

In the **Business Surveys** carried out by **IOBE**, the Confidence Indicator for Motor Vehicles declined markedly, with the last month of measurement (February) showing a decrease, while still remaining higher than the very low levels seen in the previous year. The fact that no measures have been taken to strengthen the branch, as well as the unfavorable tax environment – particularly in the automobile branch – are accelerating negative developments. The increase in VAT, in the taxation (from 10% to 30%) of vehicles with an ex-factory price higher than € 17,000, on top of the already high taxation since 2009 (for vehicles over 1,929 cc), combined with the reduction in disposable income as a consequence of the measures to achieve fiscal adjustment, are expected to have a negative impact on the automobile market in 2010.The uncertainty of the previous period led to low sales in February (even lower than the corresponding month of 2009 in the midst of the crisis), and it is estimated that the above measures that were announced in early March will further reduce demand. Inventories in the branch are growing, while negative estimates are being made for orders placed with suppliers.

A corresponding deterioration was seen in the relevant confidence index in 2009, with the sharpest being recorded in Household Goods (-35.5%), Fabrics-Clothing-Footwear (-22.6%) and Food & Beverages (-22%). Thus, IOBE's index of business confidence in retail trade as a whole for 2009 registered a decline of 21.6% relative to 2008. However, in the first two months of 2010 the index recovered, registering an increase of 15.5% relative to the corresponding period of 2009, a trend that was also seen in the various branches, with the exception of Food-Beverages-Tobacco.

Table 3.4
Annual Changes in the Index of Retail Trade Volume

	Volume Index (2005=100,0)				
Store Categories of Retail Trade	**2007**	**2008**	**2009***	**Annual Change (08/07)**	**Annual Change (09/08)**
Overall Index	111,4	112,8	100	1,3%	-11,3%
Overall Index (excluding car fuels and lubricants)	110,4	108,9	98,8	-1,3%	-9,3%
Store Subcategories					
Large Food Stores	113,3	114,5	107,1	1,1%	-6,5%
Multi stores	121,6	122,8	109,2	1,0%	-11,1%
Car Fuels and Lubricants	107,0	125,8	90,9	17,6%	-27,8%
Food-Drink-Tobacco	99,3	94,7	93,3	-4,6%	-1,5%
Medicare-Cosmetics	104,3	107,0	109,2	2,6%	2,1%
Clothing-Footwear	101,9	96,3	97,6	-5,5%	1,4%
Furniture – Electric household appliances - Household Goods	125,6	120,2	101,7	-4,3%	-15,4%
Books - Stationery- Other gift items	110,6	109,2	83,0	-1,3%	-24,0%

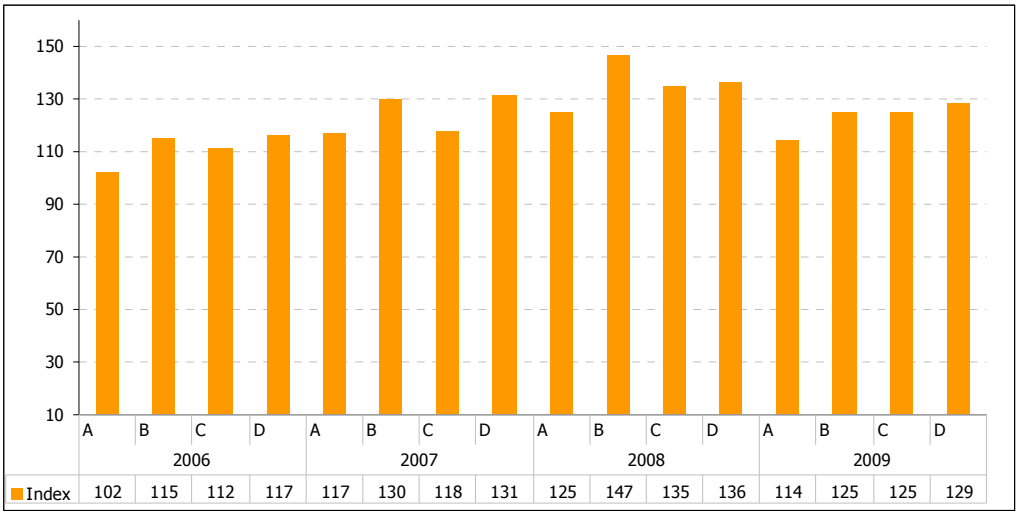
*Provisional Data
Source: NSSG

Table 3.5
Sectoral Indices of Business Expectations in Retail Trade (1996-2006=100)

	2008	2009	P.C.(%)	Jan. '09-Feb. '09	Jan. '10-Feb. '10	P.C.(%)
Food - Drink - Tobacco	112,6	87,9	-22,0%	97,9	92,0	-6,1%
Textile – Clothing - Footwear	117,0	90,6	-22,6%	88,4	90,0	1,8%
Household goods	105,1	67,8	-35,5%	60,1	64,0	6,5%
Motor Vehicles (including parts)	90,0	76,4	-15,2%	24,0	56,5	135,0%
Multi stores	114,5	106,4	-7,1%	108,8	116,7	7,2%
Total in Retail Trade	102,5	80,4	-21,6%	63,6	73,4	15,5%

Source: IOBE

Figure 3.4
Turnover Index in Wholesale Trade -Sector 45- (2005=100)



Source: NSSG

Wholesale Trade

The Turnover Index for Wholesale Trade according to **NACE Rev.2**[30] registered a decline of 9.3% relative to 2008, for the first time in the past five years. However, the final quarter of 2009 saw the smallest decline between quarters of the same year, with the index falling by 5.6% relative to the final quarter of 2008. At the same time, the index rose relative to the third quarter of 2009 (2.9%) with the result that for the year as a whole it was slightly lower than the corresponding level of 2007.

[30] The index for Wholesale Trade is calculated without VAT and includes the total amounts invoiced by a company during the reference period (quarter).

Services

Regarding the turnover indices for the Services sector[31], the course of the majority highlights the deceleration of turnover in 2009, with 10 of the 14 branches showing a decline, compared to just two in 2008 (Publishing and Telecommunications).

More specifically:

The Turnover Index for **Telecommunications** (branch 61[32]) registered a decline of 3.1% in 2009, compared to a drop of -1% in 2008. The downward course of the index which began in 2007, when it fell by -11%, resulted in it reaching its lowest level of the past five years in 2009.

The index that tracks **Computer and Related Activities** (branch 62) rebounded from mid-209 onwards, registering an increase of 19.7% between the fourth and third quarters. However, overall in 2009 it declined by 13.1%, an opposite trend to the one seen in 2008 when it had risen by 9.2%. This development resulted in the index reaching a level slightly higher than the one recorded in 2006.

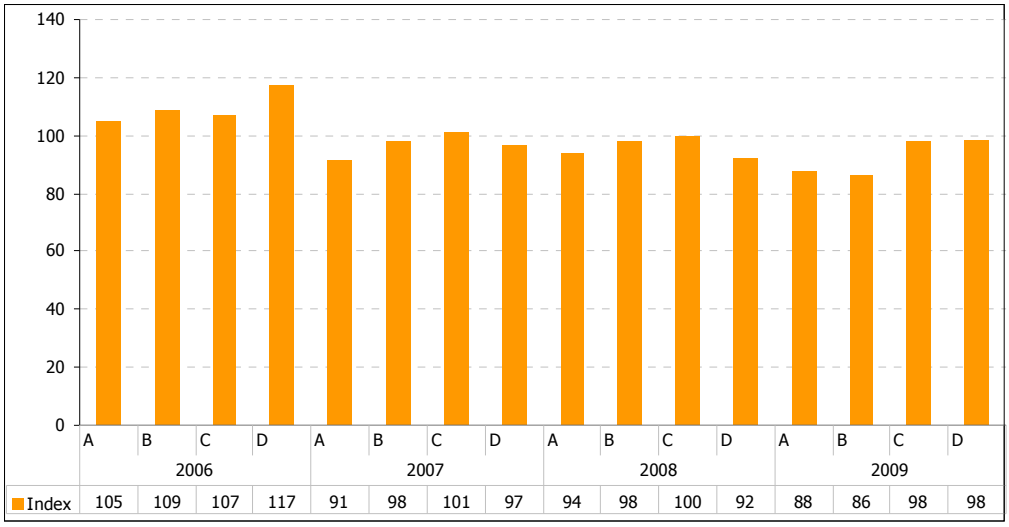
Turnover in branches 69 and 70.2, which group **Legal** and **Accounting activities** as well as M**anagement Consultancy services**, declined markedly by -18% in 2009 (compared to an increase of 13% in 2008). In the final quarter of 2009 it fell sharply by -23% relative to the corresponding quarter of 2008, which represents one of the biggest declines in the Services branches. This resulted in turnover in these branches in 2009 standing at a lower level than in 2007.

A similar drop in turnover of around -19% was recorded in **Advertising, Market Research and Public Opinion Polling activities** (branch 73) in 2009, compared to an increase of 3% in 2008. This development resulted in the index falling to its lowest level of the past five years. Particularly noteworthy is the decline in the index in the third quarter of 2009, despite the intervening pre-election period of national polls. In the final quarter of 2009, the index recovered significantly relative to the third quarter of the year (68.6%), while its decline relative to the final quarter of 2008 (-6.9%) was the smallest recorded during 2009.

[31] The indices that IOBE chooses to present are mainly those for which additional or supplementary data become available from its Business Surveys, which allow an even more comprehensive picture to be formed.

[32] The Telecommunications index no longer incorporates the Post branch, which is now tracked by a separate index (branch 53).

Figure 3.5
Turnover Index in Telecommunications -Sector 61- (2005 = 100)



Source: NSSG

The negative impact of the economic crisis has also been considerable in the Tourism sector[33], on the basis of the course of the index for **Accommodation** and **Catering** services (branches 55 and 56), which in 2009 registered a decline – of 10% – for the first time since 2005. This particular development resulted in the index reaching a level similar to that recorded in 2006. In the final quarter of 2009 the index deteriorated significantly, not only relative to the corresponding quarter of 2008 (-18.8%) but also relative to the third quarter of 2009 (-56.4%), a development that illustrates the considerable elasticity of accommodation and catering services with respect to disposable income. Moreover, the total number of overnight stays in Greece in the first 10 months of 2009 fell by approximately 7.3%, while arrivals of non-residents from abroad in the first nine months of 2009 declined by 6.7% relative to 2008.

The slowdown in the Services sector during 2009 had been identified in the projections of the leading indicators seen in the results of IOBE's business surveys.

For the year as a whole, the confidence indicator for Services was down by 28.3% relative to 2008. This deterioration was reflected in actual data, for in the individual branches of services the majority of indices showed a decline. According to the latest available data for the first two months of 2010, there has been a slight improvement which, however, is not sufficient to lead to an easing of the downturn during 2010.

[33] A determining factor for the course of tourism is the country's receipts from tourism in the Services Balance, where they constitute the expenditure of non-residents for a number of services (hotel, catering, leisure, etc.).

Figure 3.6
Turnover Index in Accommodation, Food and Beverage Service Activities -Sectors 55 & 56- (2005 = 100)

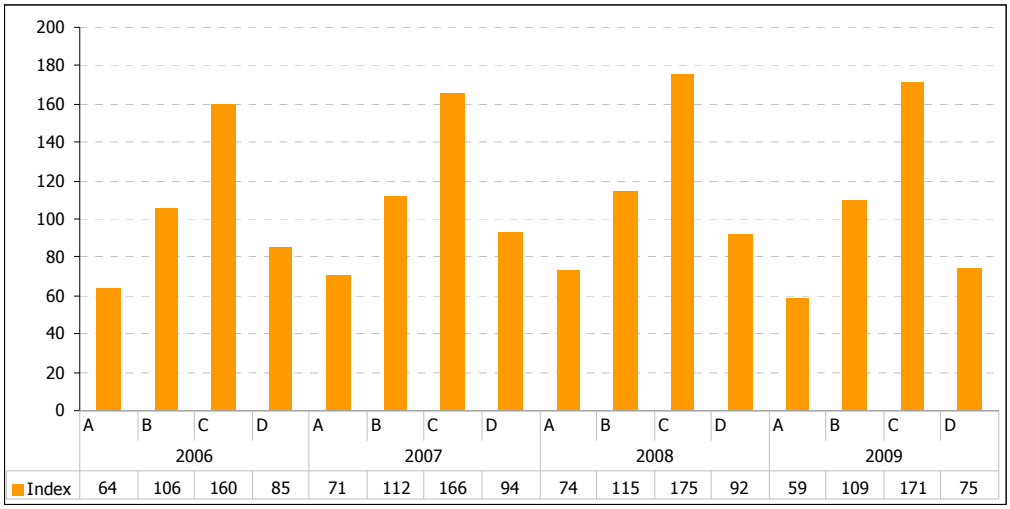


Figure 3.7
Turnover Index in Trade, Maintenance and Repair of Motor Vehicles and Motorcycles -Sector 45- (2005=100)

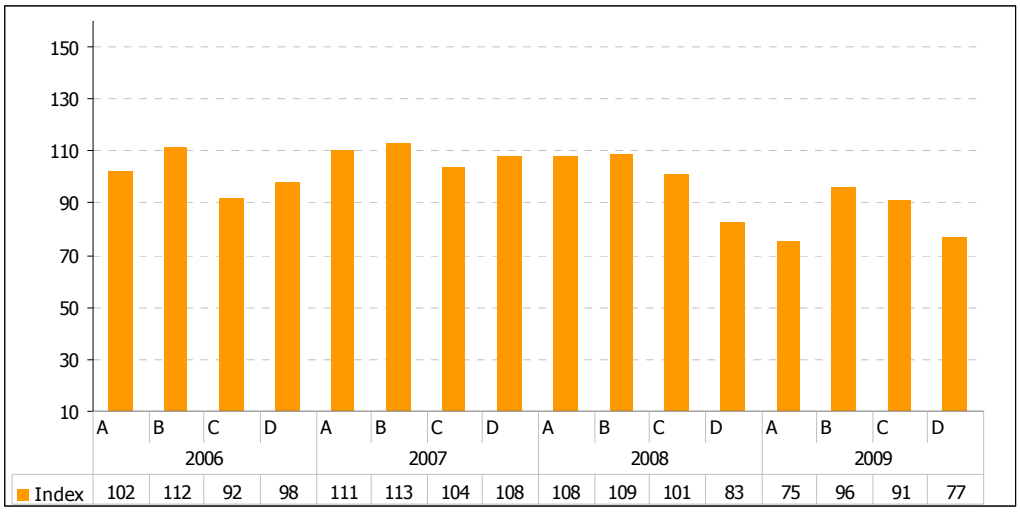
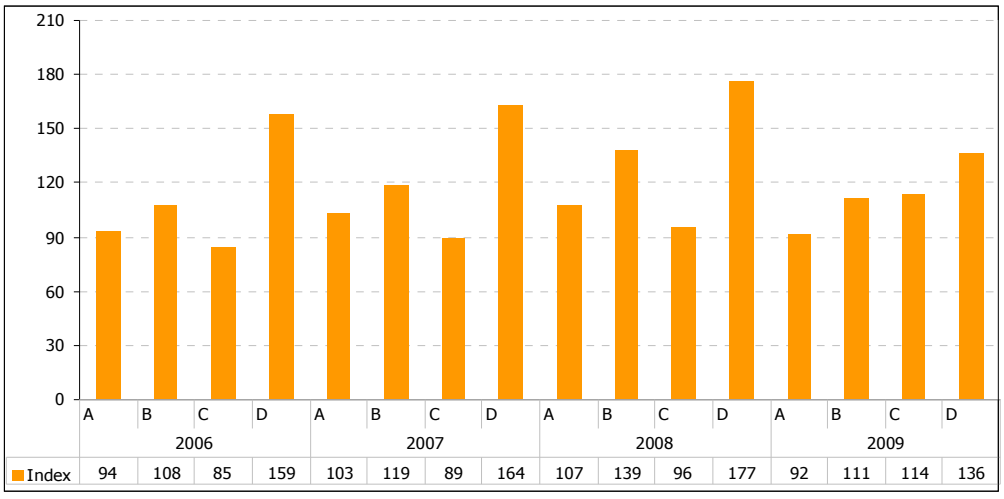
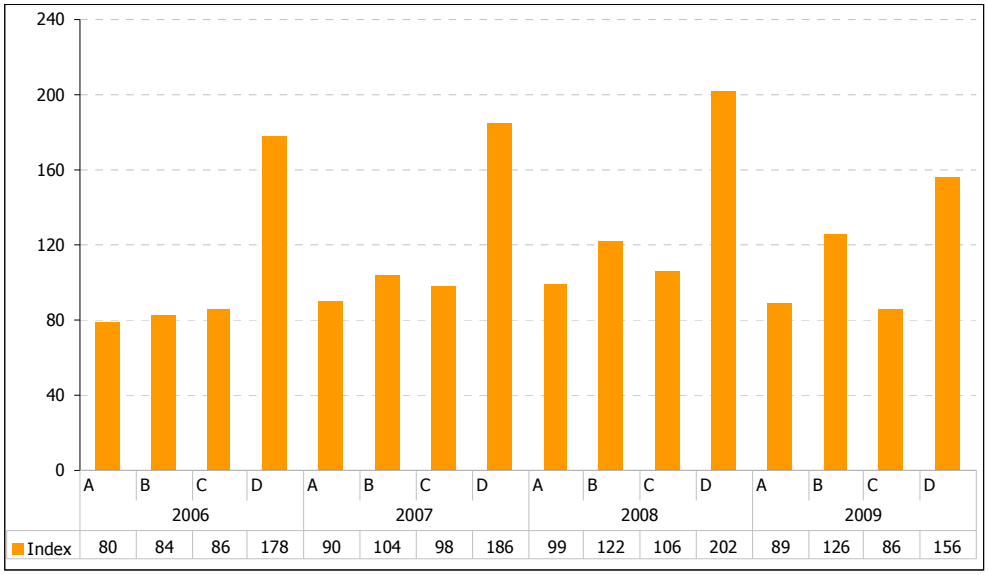


Figure 3.8
Turnover Index in Informatics Services -Sector 62- (2005 = 100)



Source: NSSG

Figure 3.9a
Turnover Index in Legal, Accounting and Consulting Services -Sectors 69 & 70.2- (2005 = 100)

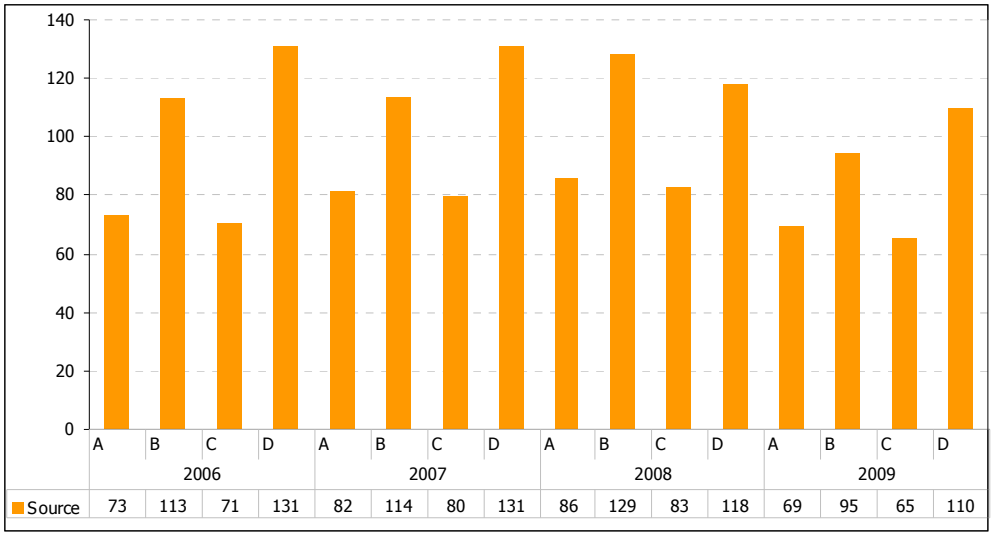


	2006				2007				2008				2009			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Index	80	84	86	178	90	104	98	186	99	122	106	202	89	126	86	156

Source: NSSG

Summing up, the majority of branch indices in 2009 moved downward, in certain branches at a fairly fast rate relative to 2008. It is indicative that the majority of indices in 2009 reached production levels that were lower than previous years. The industrial production index showed a marked decline which, in combination with the downward course seen in 2008, took it to its lowest level of the past five years.

Figure 3.9b
Turnover Index in Advertising, Market Research and Opinion Polling -Sector 73- (2005 = 100)



	2006				2007				2008				2009			
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Source	73	113	71	131	82	114	80	131	86	129	83	118	69	95	65	110

Source: NSSG

Table 3.6
Sectoral Indices Of Business Expectations in Services (1998-2006=100)

	2008	2009	P.C.(%)	Jan. '09-Feb. '09	Jan. '10-Feb.'10	P.C.(%)
Hotels - Restaurants	98,8	79,4	-19,6%	63,3	67,2	6,1%
Activities of travel agencies and tour operator, tourist assistance activities	85,7	71,1	-17,0%	58,0	72,3	24,7%
Other Services to Businesses	87,4	61,1	-30,1%	52,5	69,5%	32,4%
Intermediate Financial Organizations	84,5	72,4	-14,3%	52,2	73,4	40,6%
Informatics	92,9	65,1	-29,9%	71,8	53,1	-26,1%
Total Services	97,8	70,1	-28,3%	63,5	65,1	2,5%

Source: IOBE

The deterioration was worse with regard to the Construction index, with the economic crisis having a severe impact on the sector, which in recent years has lost much of its dynamism. In Retail Trade, most branches were negatively affected, although in essential items such as food the decline was smaller. The decrease was considerable also in the motor vehicle subbranch, although the decline moderated during the final quarter of 2009 due to the car scrappage scheme, as well as in Wholesale Trade, where the prevailing trend is linked to the course of retail trade especially during the second and third quarters of 2009. Services too were badly hit, though the change varies according to the particular branch of activity. In all cases however, business activity reached its lowest level for the period 2005-2009, vividly reflecting the decline in economic activity and the recession in which the Greek economy has found itself.

As set out above, the course of Hellenic Statistical Authority indices had become evident some time earlier in the corresponding confidence indicators compiled by IOBE. From this point of view, the fact that these indicators at the beginning of the year are at a better point relative to the previous year in Industry, Retail Trade and to a lesser extent in Services, may presage more positive developments in the coming period and an easing of the recession. In this context, the fact that the decline in industrial production moderated at the beginning of 2010, while in some branches output even grew, may be assessed as an optimistic message, given also that domestic industry always appears to react faster to changes in economic activity.

3.3 Export Performance of the Greek Economy

The economic crisis hit exports of Greek goods in 2009, halting the upward course that had been observed from 2003 onwards. Exports fell by 17.5% relative to 2008, compared to an increase of 1.3% in the previous year, with the result that they fell to their lowest level of the past five years. Relative to exports however, the decline in imports of goods was even greater (-21.1% against an increase of 9.4% in 2008), the value of which was lower than the level recorded in 2006. This development resulted in a narrowing of the trade deficit – for the first time dur-

ing the decade – by 22.6% compared to an increase of 13.1% in 2008[34]. Despite the significant decline however, the percentage by which exports cover imports rose by only 1 percentage point relative to in 2008 (29%).

The decline in Greek exports is attributed mainly to the drop in exports of industrial products, which account for the highest percentage (58.7% in 2009, against 61.1% in 2008). The total decrease was -20.6%, compared to increases of 2.6% in 2008 and 2.9% in 2007. Among the various products of the sector, exports of 'industrial goods classified by raw material', which have the highest share, fell by -28.6% (the second biggest decline among all categories of goods) and their value totaling € 2.82 billion, while exports of 'chemical and related products' fell by -9.5%.

The smallest decline (-1.9%) was seen in agricultural products, compared to an increase of 8.3% in 2008. This development resulted in a 4 percentage point rise in their share of total exports, representing one quarter of the value of total goods exported in 2009. Among agricultural products, the biggest decline (-15.4%) was registered by exports of 'animal and vegetable oils and fats', while the decrease was insignificant with regard to exports of 'food and live animals' (-0.9%), which accounts for the majority of exports in this category. In contrast, the negative impact of the global economic recession does not appear to have affected the branch of 'beverages - tobacco', as it is the only category to show an increase in exports (1.7%) in 2009.

In the other branches, the value of fuel exports continued the downward course that began in 2007, registering a decline of -28.4%. Exports of 'raw materials' also decreased, by -8.2%, although their share did not change, while exports of 'products and transactions not classified elsewhere' registered the highest percentage decline of any category (-40%), although their share of the total is small (1.9%).

In terms of geographical distribution, Greek exports to the market of EU-27 In 2009 fell by -19.6% relative to 2008, while those to the Balkan countries – which absorb a sizeable proportion of Greek products – fell by -19.5%. Exports to the Eurozone decreased by -17.4%, and to non-Eurozone countries by -24.3%. It is indicative that there was a drop in exports to all EU-27 countries, with the exception of Belgium, ranging from -2.6% in the case of Austria to -73% to Latvia. As for Greece's main trading partners, namely Italy and Germany, the decline stood at -21.4% and -13.5% respectively relative to 2008.

[34] Estimates are based on the analysis of the Panhellenic Exporters Association and the Exports Research Center, using provisional data of the Hellenic Statistical Authority.

Table 3.7
Exports (millions of €)

Annual data							
	Value		Percentage Change (%)		Structure Change (%)		
	2008*	**2009***	**08/07***	**09/08***	**2007**	**2008***	**2009***
Agricultural Products	**3.656,5**	**3.588,8**	**8,3%**	**-1,9%**	**19,6%**	**21,0%**	**24,9%**
Food and live animals	2.742,0	2.716,1	8,7%	-0,9%	14,6%	15,7%	18,9%
Beverages & Tobacco	579,9	589,5	15,4%	1,7%	2,9%	3,3%	4,1%
Animal, Vegetable oils and fats	334,6	283,2	-4,7%	-15,4%	2%	1,9%	2,0%
Raw Materials	**775,7**	**711,9**	**-0,2%**	**-8,2%**	**4,5%**	**4,4%**	**4,9%**
Crude materials inedible, except fuels	775,7	711,9	-0,2%	-8,2%	4,5%	4,4%	4,9%
Fuels	**1.903,3**	**1.362,5**	**-9,5%**	**-28,4%**	**12,2%**	**10,9%**	**9,5%**
Mineral fuels, lubricants, etc.	1.903,3	1.362,5	-9,5%	-28,4%	12,2%	10,9%	9,5%
Industrial products	**10.647,2**	**8.455,5**	**2,6%**	**-20,6%**	**60,2%**	**61,1%**	**58,7%**
Chemicals and related products	2.312,7	2.093,1	-2,6%	-9,5%	13,8%	13,3%	14,5%
Manufactured goods classified chiefly b raw material	3.961,0	2.827,8	5,9%	-28,6%	21,7%	22,7%	19,6%
Machinery and transport equipment	2.445,6	1.954,8	5,4%	-20,1%	13,5%	14,0%	13,4%
Miscellaneous manufactured articles	1927,9	1.579,8	-0,7%	-18,1%	11,3%	11,1%	11,0%
Other	**457,1**	**274,2**	**-22,5%**	**-40,0%**	**3,4%**	**2,6%**	**1,9%**
Commodities and transactions not classified by category	457,1	274,2	-22,5%	-40,0%	3,4%	2,6%	1,9%
Total exports	**17.439,9**	**14.392,9**	**1,3%**	**-17,5%**	**100%**	**100%**	**100%**

* Provisional data
Source: PEA-ERC-NSSG

Table 3.8
Exports per destination (millions of €)

	Value		Percentage Change (%) 09/08*	Structure Change (%)	
	2008*	**2009***		**2008***	**2009***
OECD (29 countries)	9.782,0	8.152,0	-16,7%	56,1%	56,6%
EU-27	11.207,3	9.010,9	-19,6%	64,3%	62,6%
Euro area-16	7.591,8	6.273,1	-17,4%	43,5%	43,6%
North America	994,5	823,5	-17,2%	5,7%	5,7%
Other Developed Countries	115,0	104,1	-9,5%	0,7%	0,7%
Rest OECD (excl. S. Korea)	933,7	930,4	-0,4%	5,4%	6,5%
Balkans	3.311,3	2.665,1	-19,5%	19,0%	18,5%
Commonwealth of Independent States (CIS)	590,2	394,3	-33,2%	3,4%	2,7%
Middle East and N. Africa	950,6	975,6	2,6%	5,5%	6,8%
African Countries (excl. S. Africa)	157,2	138,7	-11,8%	0,9%	1,0%
S. E. Asia	165,8	139,5	-15,9%	1,0%	1,0%
Latin America	108,3	65,2	-39,8%	0,6%	0,5%
China	940,9	671,5	-28,6%	5,4%	4,7%

* Provisional data
Source: NSSG-ERC

Exports to OECD countries, which account for 56% of Greece's total exports, fell by an estimated -16.7% in 2009. In the Balkans, the biggest decline was recorded in exports to Croatia (-56.8%). On the basis of their relative share, the drop in exports to Bulgaria was -22.6% and to Romania -28.9%. In contrast, exports to Albania rose (3%), reaching € 389.6 million in value, as well as to Bosnia-Herzegovina (15.9%). The decline in exports to Turkey also moderated (-2.3%).

Exports to North America fell by -17.2%, though their share in total Greek exports remained unchanged relative to 2008. Regarding the Middle East region, the increase recorded was mainly the result of a sharp rise in exports to Libya, Egypt, Tunisia and Algeria. Lastly, the proportion of Greek exports to China and India remains low, although exports to India rose by 53.7% in 2009. The value of goods sold in the two most highly populated countries of the world accounts for just 0.6% and 0.4% respectively of the total value of Greek exports in 2009.

Overall, it should be noted that the low rate of penetration of Greek goods in markets abroad is the result of the low competitiveness of the goods produced, the majority of which are products with low and medium value added. Although the course of exports has been upward in recent years, at least up to 2008, no structural changes have been made in the export mix. However, given the fact that the strongly negative impacts of the global economic recession have begun to gradually wane, exports of Greek goods ***in 2010 are expected to grow by around 3.8% to reach approximately € 15 billion****. Moreover, it is considered that the gradual recovery since late 2009 of the economies of Germany, Italy, France and the USA – countries that absorb almost one-third of Greek exports – will have a positive impact especially regarding exports of industrial products. At the same time, exports of food and beverages showed considerable resilience in 2009, despite the slump in demand. This fact illustrates the positive prospects for export trade branches, as well as the greater penetration that can be achieved in other countries apart from the Balkans.*

3.4 Employment – Unemployment

The economic recession had a serious impact on the domestic labor market in 2009. The unemployment rate stood at 9.5%, which represents its highest level of the past four years, having risen by 1.9 percentage points relative to 2008. Thus, the total number of unemployed in 2009 (471,100) rose by 93,200 relative to 2008, while between the final quarters of 2009 and 2008 the increase was 121,700 (+31%). The growth of unemployment was higher from mid-2009 onwards, with the number of unemployed rising by 71,800. The main reason for this development, apart from job losses in the private sector, the non-renewal of employment contracts in the framework of an EU-funded apprenticeship program (STAGE) and other works contracts which had been in force in this period. This development resulted in the unemployment rate in the final quarter of 2009 rising to its highest level (10.3%) since the first quarter of 2005. At the same time, the jobless rate in

Greece in 2009 was one of the highest in EU-27 (8.9%) and the Eurozone (9.4%), in 9th and 3rd place respectively.

The number of employed (4,508,700) stood at a similar level to 2007, registering a drop of -1.1% relative to 2008, though a greater decline was recorded in the Eurozone and EU-27 of 1.9 and 1.8 percentage points respectively. On the other hand, the employment participation rate, i.e. the labor force as a percentage of the population, rose marginally to 53.8% from 53.5% in 2008, a performance that is the highest recorded since 1998. This development is attributed to the greater increase in the labor force as a percentage of the population relative to the previous year.

As for the component parts of the labor force, unemployment among women in 2009 rose to 13.2% from 11.4% in 2008, remaining at double the rate for men (6.9% from 5.1%). Furthermore, unemployment rose among all age groups in 2009. Among young people aged 15-29, which generally has the greatest difficulty in accessing the labor market, the jobless rate in 2009 rose by 3 percentage points relative to 2008 (18.8%). In the context of the two genders, the corresponding rate for females stood at 24.1%, registering an increase of 3.2 percentage points relative to 2008, with a similar rise for young males, for whom the jobless rate grew to 14.6%.

Regarding the 'new unemployed', i.e. those entering the labor market for the first time who are unable to find a job, the jobless rate in 2009 stood at 28.1%, down from 35.2% in 2008. This suggests that the economic crisis acted as a deterrent to job seeking, since the number of new unemployed remained at roughly the same level as in 2008. In addition, the percentage of long-term unemployed fell to 42.8% from 49.6%, due to the rise in the number of persons who lost their job during 2009. On the other hand, foreign nationals are now facing greater obstacles in accessing the labor market, with the unemployment rate among this group at a higher level than the national average (10.5% against 9.5%), in contrast with the previous year when unemployment among foreign nationals was lower relative to the total (6.7% against 7.6%).

An important factor in job seeking is educational level. In 2009 the highest rate of unemployment (14.3%, as well as the biggest increase relative to 2008 (3.4%) was registered among persons who have not attended school at all. In contrast, the lowest jobless rate (6.6%) was among university graduates, although unemployment in this category rose sharply by almost 2 percentage points relative to 2008. Unemployment among graduates of tertiary technical education (11%) and those who have completed secondary education (10.5%) was higher than the national average, although a high unemployment rate has steadily been recorded over time among these specific segments of the population. In contrast, the negative impacts of the economic crisis on the labor market were not as strong in the case of primary school graduates (8%) and those who have completed only some years of primary school (9%), as well as holders of doctorates or post-graduate diplomas (7.3%), in contrast however with 2008,

when this group had registered the lowest unemployment rate (5.4%).

At a regional level, unemployment moved upward, with the exception of Western Greece and Western Macedonia, where the jobless rate remained unchanged, albeit at high levels. Western Macedonia continues to be the region of the country with the highest unemployment rate (12.5%) since 1999. A notable rise in unemployment of 3.9% was seen in the Southern Aegean, a development that resulted in this region registering the second highest jobless rate (12.1%) in 2009. This development is directly linked to the negative impacts of the recession on tourism, given that unemployment in the region had remained moderate for the past five years. Regarding the other regions, rates of unemployment higher than the national average were recorded in Epirus (11.2%), Eastern Macedonia-Thrace (10.9%), Central Greece (10.5%), Central Macedonia (9.9%) and the Ionian Islands (9.8%). In contrast, the rate was lower in Thessaly (9.2%), Attica and Crete (8.9%), the Peloponnese (8%) and the Northern Aegean, which registered the lowest jobless rate (6%) as in 2008 also.

Table 3.9
Population (in thousands) of 15 years old and over by employment status
(2008-2009, Quarterly data)

Quarter/year	Grand Total	Labor Force					
		Total	*% population*	*Employed*	*% labor force*	*Unemployed*	*% labor force*
1998	8.680,4	4.525,8	52,1	4.017,9	88,8	507,9	11,2
1999	8.764,5	4.586,1	52,3	4.031,4	87,9	554,7	12,1
2000	8.839,8	4.611,9	52,2	4.088,5	88,6	523,5	11,4
2001	8.906,4	4.580,3	51,4	4.086,3	89,2	493,9	10,8
2002	8.964,3	4.656,0	51,9	4.175,8	89,7	480,2	10,3
2003	9.014,9	4.734,4	52,5	4.274,5	90,3	460,0	9,7
2004	9.063,5	4.818,8	53,2	4.313,2	89,5	505,7	10,5
2005	9.108,1	4.846,5	53,2	4.369,0	90,1	477,5	9,9
2006	9.157,4	4.886,4	53,4	4.452,3	91,1	434,5	8,9
2007	9.207,4	4.916,8	53,4	4.509,9	91,7	406,9	8,3
a' quart. 2008	9.222,7	4.918,2	53,3	4.511,6	91,7	406,5	8,3
b' quart. 2008	9.230,1	4.939,7	53,5	4.582,5	92,8	357,1	7,2
c' quart. 2008	9.237.8	4.944,9	53.5	4.589,8	92,8	355,1	7,2
d' quart. 2008	9.245,8	4.946,3	53,5	4.553,6	92,1	392,7	7,9
2008	**9.234,1**	**4.937,3**	**53,5**	**4.559,4**	**92,4**	**377,9**	**7,6**
a' quart. 2009	9.252,7	4.948,1	53,5	4.485,8	90,7	462,3	9,3
b' quart. 2009	9.262,4	4.974,5	53,7	4.531,9	91,1	442,6	8,9
c' quart. 2009	9.272,3	5.005,3	54,0	4540,1	90,7	465,1	9,3
d' quart. 2009	9.282,4	4.991,2	53,8	4.476,8	89,7	514,4	10,3
2009	**9.267,5**	**4.979,8**	**53,8**	**4.508,7**	**90,6**	**471,1**	**9,5**

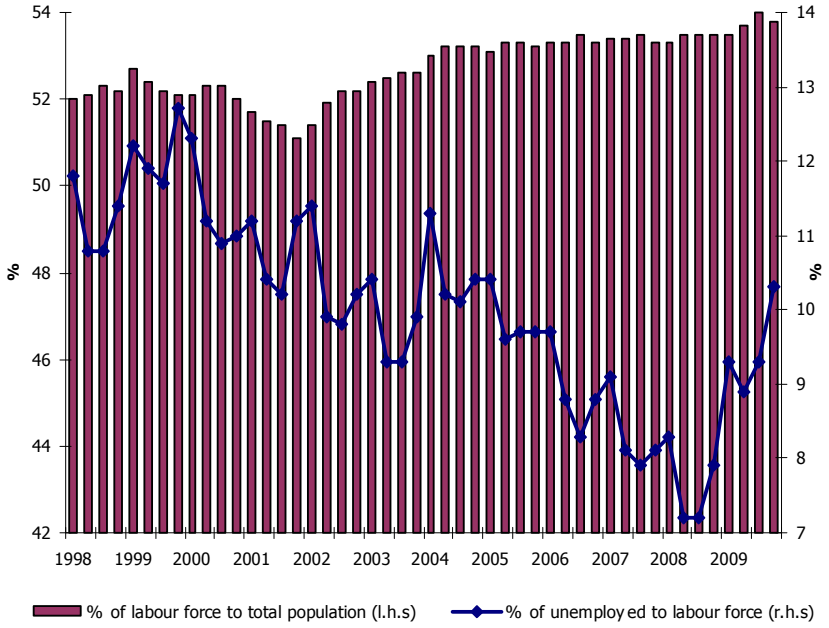
Source: NSSG, Labor Force Survey

As for the sectors of economic activity, the growth of employment since 2007 continued in the primary sector, resulting in the employment rate rising to 11.9% in 2009 from 11.3% in 2008. In contrast, the downward course of employment in the secondary sector gathered pace, resulting it its decline to 21.2% from 22.3% in 2008. Lastly, in the tertiary sector the employment rate in 2009 stood at 66.9%, with the number of employed falling slightly by 0.3% relative to 2008. In the branches with the highest employment, increases relative to 2008 were recorded in Education (1.3%) and Transport-Storage (1.2%). In contrast, the drop in the number of employed in the secondary sector by 60,800 was the result of the decline in employment in Construction (-6.6%), the highest at a branch level, but also in Manufacturing (-4.7%). There was a smaller decrease in employment (-1.5%) in Wholesale-Retail Trade and Repair of Motor Vehicles and Motorcycles, where almost two-fifths of workers are employed, while in Accommodation-Catering services the decline was marginal (-0.3%) despite the sharp drop in tourism.

On the basis of employment status, the characteristics of the labor market in Greece have not shown significant changes over the past six years. The percentage of salaried employees in the total employed in 2009 stood at 64.3%, which is the lowest among the countries of EU-27, while the self-employed, including those assisting in family businesses, accounted for 35.7%. It is characteristic, moreover, that in 'agriculture-stockbreeding', where the number of employed in 2009 was higher than the corresponding level recorded in 2004, the main form of employment is self-employment (91%), as also in the branches of 'real estate management' (82.2%), 'scientific and technical activities' (54.4%), 'wholesale-retail trade' (46.7%) and 'accommodation and catering services' (40.4%).

The rise in unemployment in 2009 was the result of the decline in employment by 50,700 persons relative to 2008. Given the further contraction of the country's domestic product, this trend will continue in 2010, with the drop in employment expected to be around -1% to -1.2%. If the labor force grows at 2009 levels, the unemployment rate in Greece is projected to reach around 11%, perhaps higher, i.e. about 540,000 to 550,000 unemployed. The fact that a large proportion of employment in Greece is in the public sector, as well as the high rates of self-employment, have limited the repercussions of the recession and are preventing a huge surge in unemployment.

Figure 3.10
Labor force (%proportion as to population of 15 years old and over) and unemployed (%proportion as to labor force)



Source: NSSG, data processing IOBE

Additional data on the short-term outlook for employment are provided by the Business Surveys conducted by IOBE.

In the first two months of 2010, employment expectations deteriorated further, although not with the same intensity in all sectors. Relative to the corresponding period of the previous year, the relevant expectations showed an improvement only in Industry, whilst employment expectations in the Construction sector continue to be worst hit. A deterioration has also been seen in Services, indeed since November 2009, while in Retail Trade, despite the recovery in December, expectations in the last two months have weakened, although the overall balance remains positive, as it was during 2009 as a whole, a fact that illustrates the strong resilience of the sector, even in difficult economic periods such as the present one. In greater detail:

In **Industry**, employment expectations deteriorated markedly in December of the previous year, following a two-month period in which they had stabilized at the least negative levels of 2009, while in the period January-February 2010 they continued to weaken. The relevant balance has thus remained firmly negative, even deteriorating further in the past three months. The index of employment expectations stood at -21 on average in the first two months of the year, which is significantly higher relative to the corresponding period of 2009, when in the midst of the economic crisis the relevant index stood at -37. The percentage of businesses expecting employment to grow in the coming period remains on the whole very low, at an average of 2%, while one in four com-

panies anticipate a decline in the coming months and the vast majority (74%) expect no change.

The outlook in terms of job losses is extremely poor in the **Construction** sector, where the constant deterioration of expectations that had begun in November 2008 escalated in February this year, with the relevant index slumping to its lowest level since March 2009. On average in the first two months of the 2010, employment expectations fell to -43, which is lower than the level recorded in the corresponding period of the previous year (-31). This development is indicative of the very negative situation in the sector and the deep crisis that it has been experiencing for the past 18 months. On average in the first two months of 2010, just 5% of businesses expect an increase in employment in the sector, when in the corresponding period of 2009 this percentage was almost three times higher. Nearly half the businesses in this period anticipate a further decline in employment, while the picture for the first two months was slightly worse in Public Works as opposed to Private Construction.

In the **Services** sector, the deterioration of employment expectations continued for the fourth month in February, following a period of eight months in which expectations in the sector had been relatively stable, albeit in negative territory. Thus, in the first two months of 2010, expectations of new jobs declined and the relevant balance fell to -23, slightly lower than the corresponding level of the previous year (-20). Only 9% of businesses express optimism about employment in the sector, while almost one in three expect a further decrease in the labor force. Of the individual branches under examination in the two-month period January-February, the least negative employment expectations were recorded in Miscellaneous Business Activities, while the most pessimistic were in Information Technology.

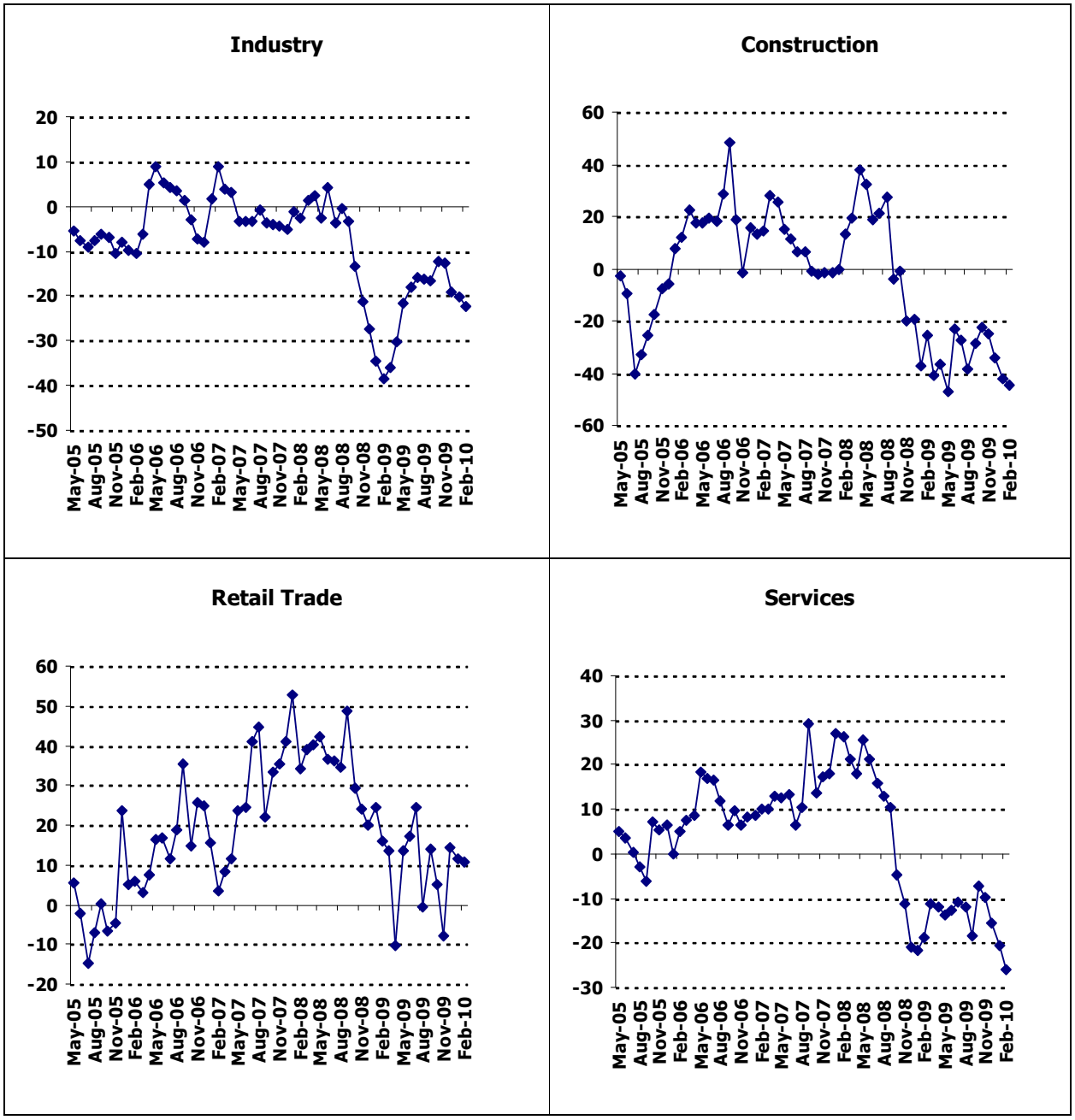
In **Retail Trade**, employment expectations were negative only by way of exception in 2009, a fact that illustrates the robustness of the sector with respect to the creation of new jobs, even in difficult periods. Thus, this year too, while the other sectors display sluggishness with regard to any pick-up in employment in the recent period, commercial enterprises have maintained their positive balance from December onwards, though registering a marginal decline in the first two months of 2010. On average in the period January-February, expectations stood at +11, although this is lower than the corresponding level recorded in the previous year (+20). As for the various branches, the lowest (negative) expectations were recorded in Vehicles-Spare Parts, while in contrast the most positive were in Food-Beverages-Tobacco.

Overall in the first two months of 2010, the expectations expressed by businesses about the course of employment showed a deteriorating trend, which appears to have begun in November-December and escalated in February. Only the Retail Trade sector still creates new jobs, although this trend too has weakened significantly relative to the corresponding period of the previous year. The picture of stabilization in employment expectations that was seen

in the last months of 2009 already appears to have been overturned in the current period, a fact however that is directly linked to the difficult economic situation in which the country has found itself due also to the pressing need for fiscal adjustment.

Figure 3.11

Employment Expectations (% difference between positive – negative answers)



Source: IOBE

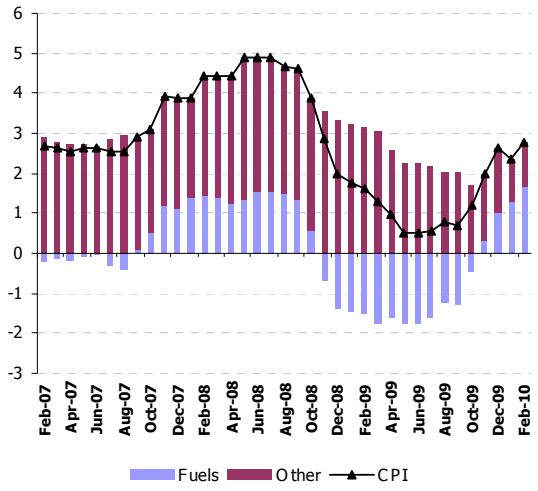
3.5 Consumer Prices

Recent developments

In 2009, inflation on the basis of the overall Consumer Price Index (CPI) was running at 1.2%, compared to 4.2% in 2008, which represents the lowest rate since the 1960s. The significant slowing of the CPI n 2009 is attributed to a large extent to the course of the fuel index, which declined by 15.1%, compared to an increase of 15.7% in 2008. During 2009, however, there appear to have been two opposing trends at play. From the beginning of the year and up to and including July, the rate of price increases continued on the downward trajectory that had begun at the end of 2008. Indeed, the inflation rate in July 2009 (0.6%) was the lowest from 1968 onwards, on a month-to-month basis. From August 2009, however, inflation rose, reaching its highest level in December (2.6%). This particular development is mainly the result of the gradual increase in fuel prices, which in the last four months of 2009 stood at higher levels relative to the corresponding period of 2008. In the two-month period January-February 2010, the CPI stood at 2.6% (January 2.4% and February 2.8%) compared to 1.7% in the corresponding two-month period of 2009.

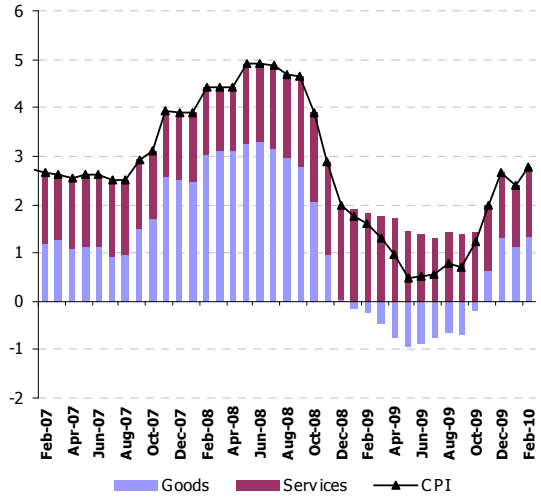
On the other hand, core inflation in 2009 was running quite higher at 2.4%, compared to 3.4% in 2008, which again represents the lowest rate of the decade. However, despite the decline of the index, the fact that it remained at a higher level than the CPI illustrates the distortions in competition with respect to certain goods and services in the domestic market. Since December 2009 however, this trend has been reversed with the result that core inflation in the period January-February slowed to 1.6% from 3.3% in the corresponding period of the previous year. Indeed, the rate recorded in February (1.5%) is the lowest since September 2000.

Figure 3.12
Contribution of the change of Fuel prices to Inflation (annual % change)



Source: Calculations based on original NSSG data

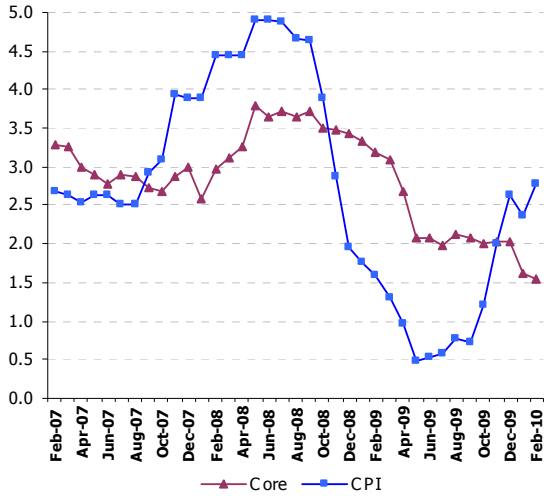
Figure 3.13
Inflation (annual % change)



Source: Calculations based on original NSSG data

As for individual indices, the rate of increase of fruit and vegetable prices was around 5.5% in 2009, 1 percentage point higher than in 2008. However, in the first two months of 2010, a significant decline of -10.4% was recorded, compared to an increase of 7.9% last year. In the main categories of consumption, the effect of lower fuel and energy prices in 2009 led to a decline in the relevant index of 0.5%, compared to an increase of 4.4% in 2008. In contrast, the services index remained at a similar level to 2008 (3.6% against 3.9% respectively). Consequently, the slowing of inflation in 2009 was the result of price reductions of goods as opposed to services, prices of which have risen significantly. A similar trend was seen in the first two months of 2010, with the price index for goods rising at a rate of 2.2% (0.3% in 2009), against 3.1% (4.4% in 2009) in services.

Figure 3.14
Core Inflation (annual % change)



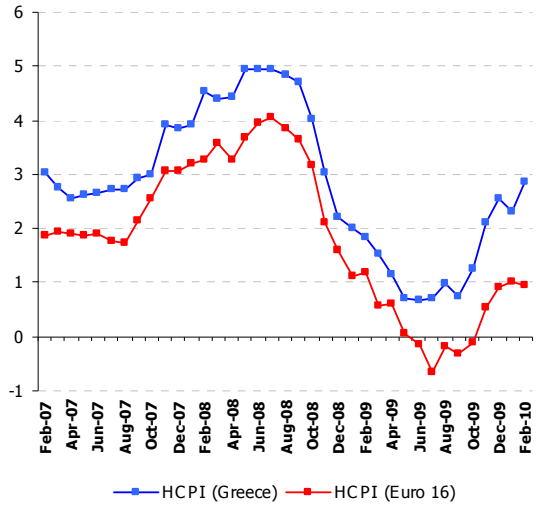
Source: Calculations based on original NSSG data

Like the CPI in 2009, the harmonized index also moved downward, falling to 1.4% from 4.2% in 2008. This rate ranked Greece 11th highest among the member states of the European Union (EU-27) and 3rd highest in EA-16. In EU-27, the countries with a (harmonized) rate of inflation higher than Greece were mostly new members (Romania, Lithuania, Hungary, Poland, Latvia, Bulgaria and Malta), and among the older members the United Kingdom, Sweden and Finland. What characterized 2009 however was the appearance of negative inflation rates in Ireland (-1.7%), Portugal (-0.9%) and Spain (-0.3%), while inflation was zero in Luxembourg and Belgium. The average rate in EU-27 was 1%, down from 3.7% in 2008, while for EA-16 it was 0.3% (from 3.3%) in 2008. In the two-month period January-February 2010 the harmonized inflation rate in Greece stood at 2.6%, compared to 1% in the Eurozone.

At a branch level, increases were recorded in the majority (10 out of 12 categories of the CPI in total) in 2009, ranging from 0.5% to 5.2%. The highest increases were recorded in *Alcoholic Beverages-Tobacco* (5.2% against 1.8% in 2008) and *Education* (4.1% and 4.7% in 2008). These are followed by *Clothing & Footwear* and *Health* (3% against 2.7% and 3.6% respectively) and *Hotels, Cafes & Restaurants* (2.7% against 5% in 2008). The only branches to record a decrease in 2009 were *Housing* (-2.6% against 9.5% in 2008) and *Transport* (-2.4% against an increase of 4.6% in 2008). However, in the two-month period January-February 2010 a rise of 10.2% (-3.4% in 2009) was recorded in *Transport*, due to increases in road tax, gasoline and spare parts, which burdened the CPI with 1.2 percentage points. An increase was also seen in *Hous-*

ing of 4.9%, mainly due to increases in heating oil and rents. In the same period, the other branches also moved upward, with the exception of Food & Non-Alcoholic Beverages and Clothing & Footwear (-1.8% and 0.7% respectively).

Figure 3.15
Harmonized Index of Consumer Prices – Greece & Euro Area (annual % change)



Source: Calculations based on original NSSG data

It should be noted that the decline in production costs in Industry also contributed to the fall in price levels in 2009. Producer prices in domestic industry fell by 2.4% compared to an increase of 8.3% in 2008. The biggest drop, as a result of the reduction in the price of oil, was recorded in *electrical equipment* (-15.8%) and *coke and refinery products* (-10.9%), while in the branch of energy goods excluding electricity the decline was around 9.7%. In January 2010, the index of producer prices rose by 5.3% relative to January 2009, and by 1% relative to December 2009, a development that indicates a strengthening of inflationary pressures in the current year.

Medium-term outlook

After a year of low inflationary pressures partly due to the maintenance of crude oil prices below $ 65 per barrel and the weakening of consumption, due to the economic recession, the rate of change of prices in 2010 will move upward. However, the size of the change will depend on the pressures that will be exerted on prices from two opposing directions.

On the one hand, the further increase in the special consumption tax along with VAT and indirect tax hikes, within the framework of fiscal adjustment, will put upward pressure on the general level of prices. The retail sale price of fuels is expected to reach or even surpass the level of prices recorded in the country in mid-2008 due to the rapid increase in the price of Brent. In view of the country's high energy dependence on oil (approximately 60% of primary energy consumption, compared to an average of 40% in EU-27), particularly in the transport sector, where pressures from competitive products remain lower, the fuel index is expected to rise and have a negative effect on the overall CPI. It is indicative that in the two-month period January-February 2010 the fuel and energy indexes increased by 28.5% and 21.1% respectively, compared to decreases of -22.5% and -16.6% in the corresponding period of 2009. The pressures, however, from oil price changes in international markets are expected to be more moderate, with estimates for 2010 ranging between $ 75 and $ 80 per barrel.

On the other hand, the loss of income entailed by the increases in taxation combined with the salary cuts in the public sector and public utility organizations (DEKO), as well as very small (if not zero) pay rises will have a negative effect on consumption. Other factors that are dampening consumer spending are the prevailing economic uncertainty, the growth of unemployment and the slowing of credit expansion to households and the banking sector. In January 2010, the rate of growth of loans to households (home, consumer and other loans) declined on a year-to-year basis to 2.9% from 3.1% in December 2009, while consumer loans alone fell by 1.6% from 2% in the respective months. As a result of the above developments, the rate of inflation in 2010 is expected to be around 3%, compared to 1.2% in 2009.

The anticipated decline of domestic demand, as well as the slower rate of increase of labor costs, are expected to have a positive effect on core inflation. The decline of the index relative to the overall CPI in the first months of the year is attributed to the effect of fuel prices, despite the elimination of distortions in goods and services markets that are crucial for inflation. These distortions, which have resulted in inflation in Greece running at one of the highest levels in the Eurozone, could be remedied to a considerable degree by the deregulation of 'closed' professions and the smoother operation of competition, which would also contribute toward the expansion of the economy.

Moreover, while there appears to have been a normalization of bank financing in Europe, the European Central Bank (ECB) in March 2010 kept its key interest rate at 1% for the 10^{th} successive month. However, it is quite likely that the recovery of activity will lead to an increase in interest rates which will affect Greece, despite the weakening of demand which acts in the opposite direction.

Important information on the course of prices in the coming period is also provided by the results of IOBE's monthly business surveys, which serve as leading indicators of price developments on the supply side.

The markedly deflationary expectations of price levels in all economic sectors in 2009, which mainly reflected the reduced demand of the previous period, were replaced in the first months of 2010 by a price rise trend. Thus, with the exception of Construction, where expectations indicated a sharp decrease in prices, as a result of the decline in companies' work schedules, there was a change in the trend in the other sectors and an increase in inflationary expectations, despite the fact that forecasts of a reduction in prices outweigh expectations of increases in most sectors. The upward trend was strongest in Industry, where the balance of prices was marginally positive in the two-month period January-February, while in Retail Trade and Services a relative stabilization was seen with just a slight uptrend. It is, in any case, clear that the increase in prices due to the rise in VAT and in indirect taxation in general has been taken into consideration by businesses,

irrespective of the trend toward companies declaring their intention to absorb this increase themselves. More specifically:

- In **Industry**, the prevailing expectations of price decreases in the final quarter of the 2009 gave way in the first two months of 2010 to slight strengthening of inflationary expectations. Thus, in the period January-February 2010, the index tracking expectations of prices in the sector was in positive territory, albeit marginally, at +1, indicating a slight predominance of expectations of price increases in the sector, in contrast with the corresponding period of the previous year, when the index stood at -13 and 22% of businesses were anticipating a decline. This percentage in the two-month period January-February 2010 was reduced to 12%, while the vast majority of businesses (75%) are expecting stabilization of prices in the near term.

- In **Retail Trade**, the strongly downward movement of price expectations has eased since December, when the percentage of businesses anticipating price increases in the coming period doubled to 14%. In January, there was no change in the relevant index as it remained at -6, while in February it registered a new rise, to -3, which represents the highest value since December 2008 and leaves behind the strongly deflationary expectations recorded in 2009. Among the various branches of the sector, strong inflationary expectations were seen in the first two months of 2010 in Department Stores, while price rise trends prevailed also in Food-Beverages-Tobacco. In contrast, expectations of a decrease shaped the clear trend in Household Appliances and Fabrics-Clothing-Footwear.

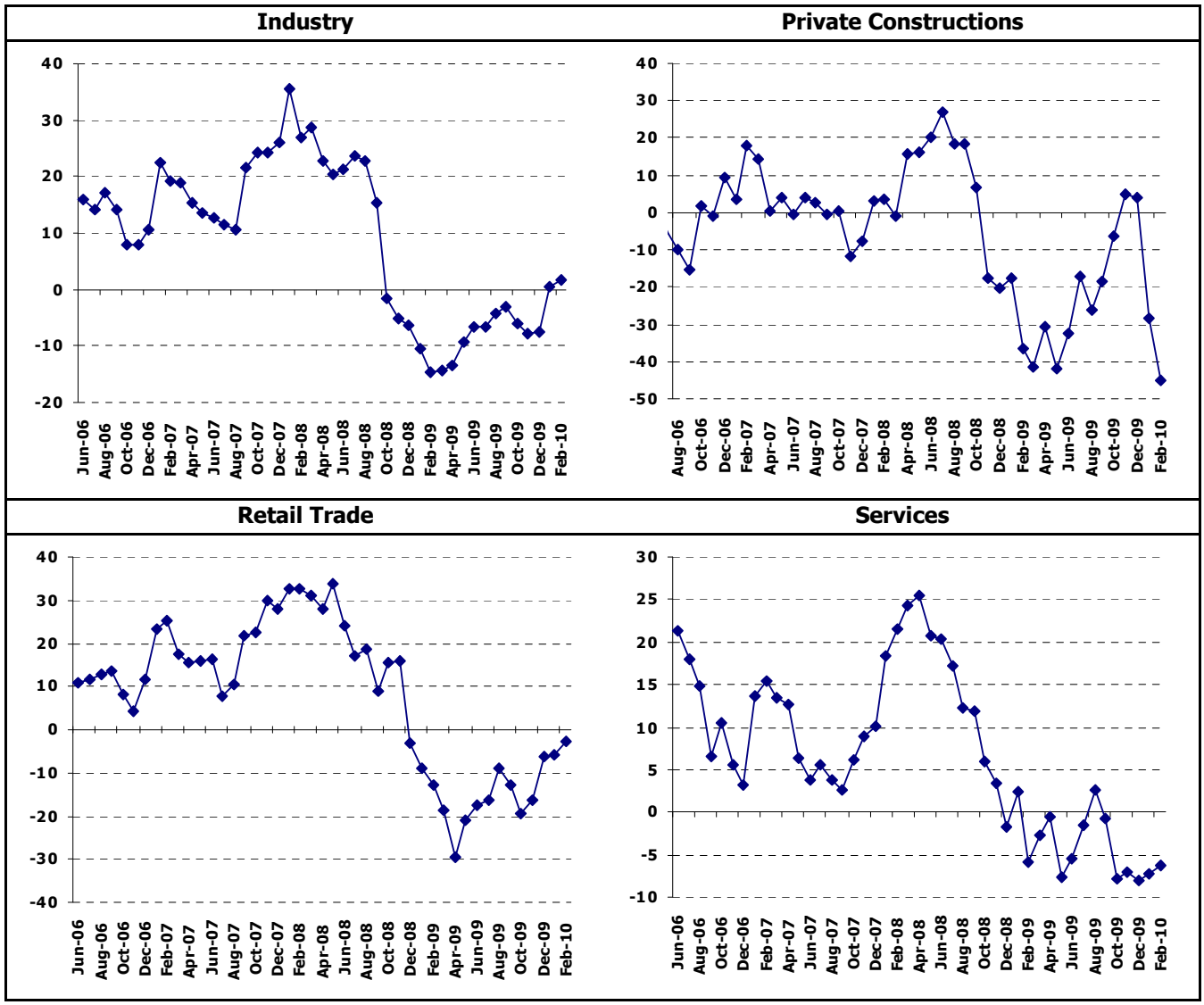
- In **Services**, the downward trend of prices was more moderate relative to the other sectors throughout the previous year, while in the last five months (October 2009 – February 2010) the relevant index has stabilized at -6 to -8. Thus, for the first two months of 2010 relative to the corresponding period of the previous year, price expectations declined only slightly, with eight in 10 businesses anticipating stability and just 6% expecting an increase. Regarding the various branches under examination, expectations in Financial Intermediaries were strongly inflationary in the two-month period January-February, while in contrast the strongest expectations of a decrease were recorded in Hotels-Restaurants.

- Lastly, in **Private Construction**, the downward movement of price expectations in 2009 was more pronounced than in any other sector. Despite this however, in the last quarter of the year the relevant index registered a significant trend change and stood at +1 on average. But in the first two months of 2010 the trend again shifted and strongly deflationary expectations returned to the fore, with the relevant balance falling to -37, which is 10 points lower than the corresponding level recorded last year. This sharply

downward direction of price expectations in the last two months is however linked to the overall climate of pessimism in the sector and the sharp decline not only in current estimates of companies' business operations, but also unfavorable projections regarding their course in the near term, which is pushing prices down in the sector.

Figure 3.16

Price Expectations (% difference between positive – negative answers)



Source:IOBE

3.6 Balance of Payments

Current Account Balance

In 2009, the current account deficit narrowed by 23.3% compared to an increase of 6.7% in 2008 to stand at € -26 billion[35]. In absolute figures, this reduction in 2009 is equivalent to € 8 billion. This development was the result of the 30.2% decline in the trade deficit, accompanied by decreases in the services surplus (-26.7%), the current transfers surplus (-53%) and the capital transfers surplus (-50.7%). Thus, although the trade deficit narrowed by € 13 billion, at the same time the surpluses of the aforesaid three balances were trimmed by € 8.1 billion.

The significant contraction of the **trade deficit** by 30.2% (-€ 13.3 billion) was due to the reduction of the trade deficit of goods excluding oil and ships by 27.2% (€ 7.4 billion), of net payments for oil imports by 37.5% (-€ 4.5 billion) and the decrease in net payments for the purchase of ships by (-€ 1.3 billion). The result of the above developments was the reduction of imports by 27.8% (-€ 17.8 billion), while exports declined by 22.7% (€ 4.5 billion).

The **services surplus**, which acts as a counterbalance to the trade deficit in Greece, declined by 26.7% in 2009 (-€ 4.6 billion). Inflows fell by 20.9% or € 7.1 billion, while outflows fell by 15% or € 2.5 billion. The decline in inflows was due to the 30% decrease (-€ 5.6 billion) in receipts from transport services, mainly those provided by the merchant marine, while the drop in tourism receipts was proportionately less, -10% (€ 1.2 billion). A similar picture can be seen in services balance payments, which in transport services fell by 24.1% (-€ 2.2 billion), while in tourism they declined by 8%.

The **income account** deficit narrowed by 7.9% (€ 840 million) and reverted to more or less the levels recorded in 2007. Net payments for interest, dividends and profits fell at a greater rate (14.5% or € 2.3 billion) relative to receipts which declined by € 1.5 billion as a result of adverse developments in international money and capital markets.

The **current transfers** balance also reverted to 2007 levels, as its surplus fell by 53% (€ 1.4 billion). This decline was mainly due to the significant drop in EU transfers to general government of € 1.5 billion in 2009, while payments remained virtually unchanged (-1%).

Capital Transfers Balance

A similar picture to the current transfers balance was seen also in the **capital transfers balance**, whose surplus in 2009 was halved (by € 2 billion). Thus the balance stood at € 2 billion, as transfers from the EU to general government plummeted in 2009 by 49.8% (€ 2.3 billion), whilst payments showed a very large percentage drop (43.2%) but this translated into a loss of just € 236 million.

[35] The differences between the data of the Bank of Greece and those of the National Statistical Service of Greece, as far as trade in goods is concerned, are due – to a large extent – to the fact that the data of the Bank of Greece relate to receipts and payments, primarily via the domestic banking system, while those of NSSG are based on the one hand on customs data pertaining to transactions with EU countries and, on the other, on tax data (INTRASTAT) for transactions outside the EU.

Lastly, the deficit of the **Current Account and Capital Transfers Balance**, which reflects the economy's external borrowing requirements, stood at € 24.7 billion in 2009, which marks a drop of 20% or € 6 billion relative to 2008.

Financial Account Balance

The **financial account** surplus declined sharply in 2009, by 19% (-€ 5.7 billion), compared to an increase of 8.5% in 2008. However, the decline moderated slightly toward the end of the year relative to the first nine months (-21%).

At the level of the separate accounts, **direct investment** showed a net inflow of € 1.1 billion in 2009, which marks a decrease of 23.2% relative to 2008 but remains in positive territory following the negative value in 2007 . Net outflows of residents' funds for direct investment abroad fell by 19.8% to reach € 1.3 billion, while net inflows of non-residents' funds for direct investment in Greece decreased by 21.4% and totaled € 2.4 billion.

A net inflow of € 27.1 billion was recorded under **portfolio investment** in 2009**.** Inflows of non-residents' funds for investment in Greek government bonds and Treasury bills totaled € 31.6 billion, an increase of 89.5%, while at the same time there was a spectacular increase (+1.585%) in investments by residents in bonds, Treasury bills and shares abroad which totaled € 4.5 billion. In the category **'other' investment**, after two consecutive years with a net inflow of approximately € 12.5 billion, in 2009 the balance closed with a net outflow of € 3.6 billion. Receivables (investments abroad by domestic credit institutions) fell by 14.2%, while liabilities (loans to general government) decreased by 49%. Lastly, the country's **reserve assets** at the end of December stood at € 3.8 billion.

The contraction seen in the external sector is the result of the financial crisis and the recession in which the Greek economy has found itself especially after the second half of the year, since imports in particular registered a relatively greater decline.

Although the financial crisis affected a number of aggregates of the Greek economy, as in other countries, it also highlighted its longstanding structural problems and lack of an outward-looking orientation. As pointed out in previous studies conducted by IOBE as well as in its quarterly reports, the current account deficit, in conjunction with the low competitiveness of domestic products, constitute permanent structural problems of the Greek economy.

Thus, the improvement in 2009 is the result precisely of this crisis and is due to the decline in demand rather than a change in the degree of Greece's outward-looking orientation, as shown in Figure 3.17.

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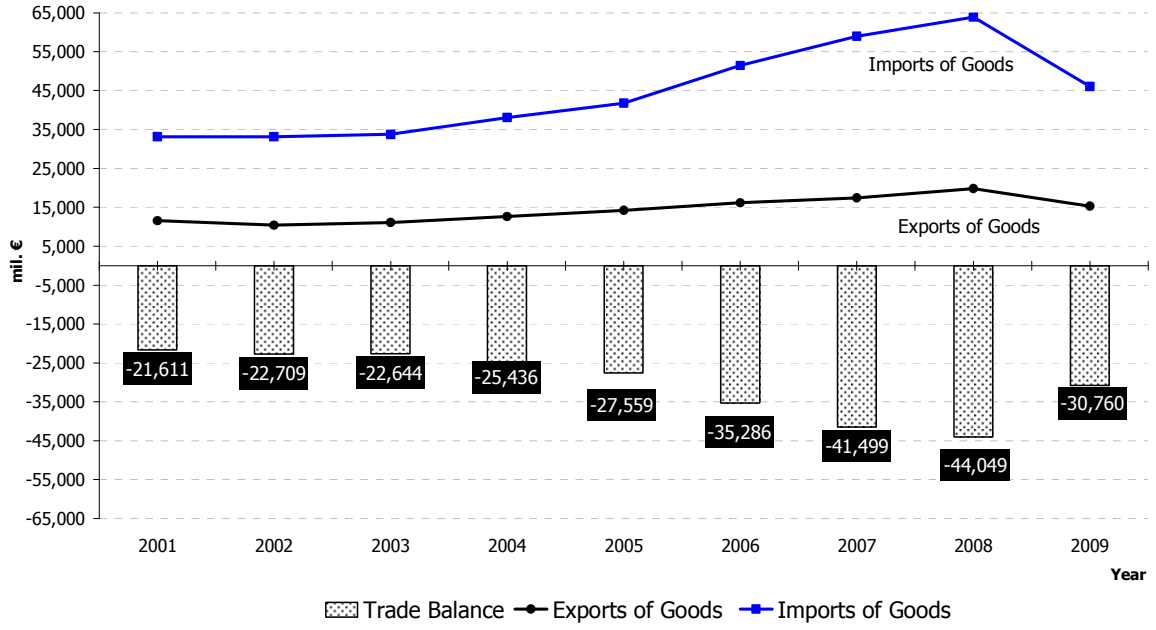
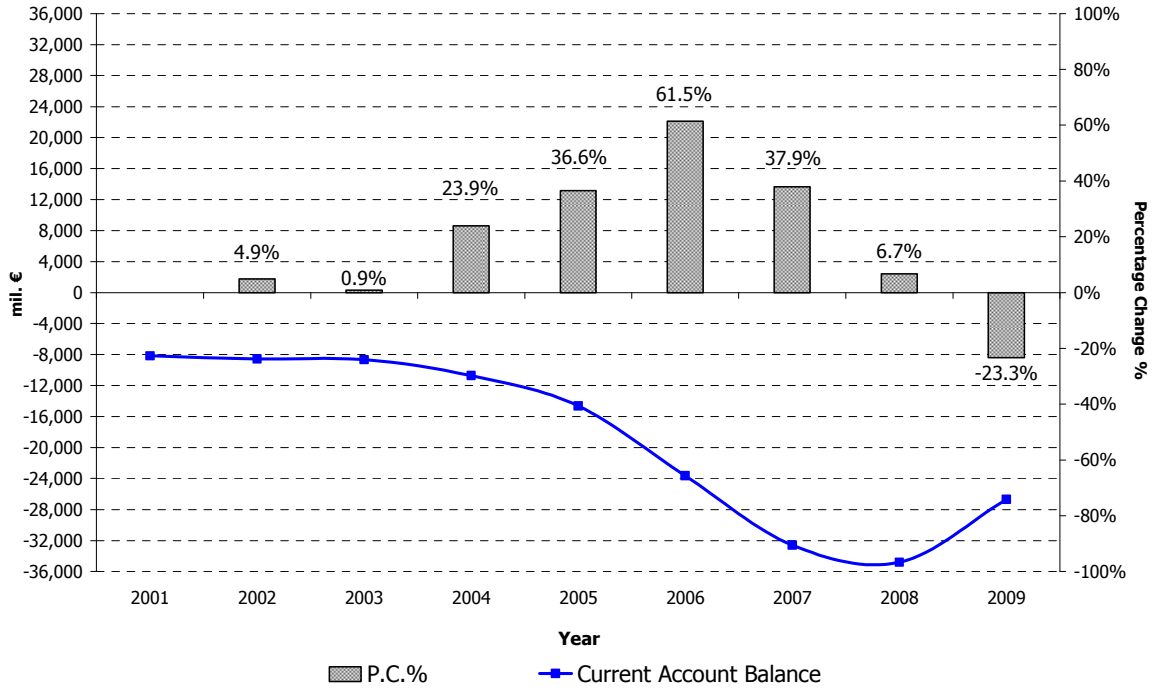
Figure 3.17
Imports 2001-2009 (January-December)



Source: Calculations based on Bank of Greece data

Figure 3.18
Current Account Balance 2001-2009 (January-December)



Source: Calculations based on Bank of Greece data

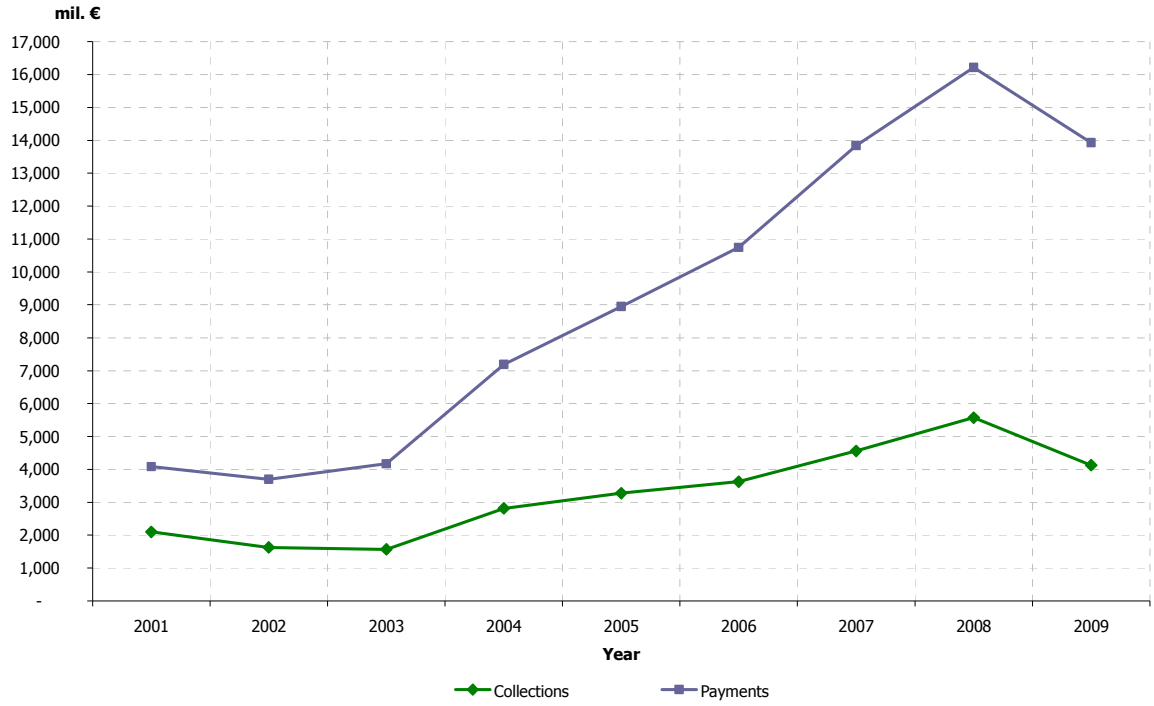
The rapid developments in the world economic environment over the past 15 years have changed the export orientation of many states, as large countries such as Brazil, Russia, India and above all China (BRIC) have penetrated the global production of goods to a considerable extent. The low costs and geographical position of these countries, and/or others with the same characteristics (e.g. close to emerging economies) have turned them into 'champions' of the global economy. The Greek economy is dogged by various structural problems and in recent years has not managed to adapt its economic activity to these new developments. Thus, the products that were primarily exported by Greece (textiles, etc.) are now produced by countries at a much lower cost, with which a country such as Greece cannot possibly compete. At the same time, the needs of the new era in terms of innovative products have turned many economies toward the manufacture of goods with high value added and an export advantage. Production activity in Greece in recent years has not adapted to the manufacture of such goods, resulting in production and export debility.

At the same time, the Current Account deficit feels the negative impact from the Income Account deficit, due to the increase in the share of the public debt held by foreign investors and higher interest payments abroad. In this respect the figure below is quite indicative, since it shows that apart from 2001 and the last year when a decline in payments was recorded, in previous years they had risen constantly and significantly at an average annual rate of 17%.

Moreover, the liabilities under Portfolio Investment (Financial Account) rose at an average annual rate of around 16%. This has resulted in the relevant amounts multiplying fivefold and fourfold respectively relative to 2001. Therefore, exports will have to grow at a much higher rate than imports in order to achieve a substantial reduction in the balance of payments deficit, a fact which highlights the need to carry out major structural changes in the Greek economy and strengthen the country's export orientation.

Figure 3.19

Collections-Payments* of Income Balance 2001-2009 (January-December)



Source: Calculations based on Bank of Greece data

* Collections/Payments from/for remunerations, salaries, interests, dividends and profits

Table 3.10

Provisionary Balance of External Payments (January-December) in mil.€

		January - December			December		
		2007	2008	2009	2007	2008	2009
I	**CURRENT ACCOUNT (I.A+I.B+I.C+I.D)**	**-32,602.2**	**-34,797.6**	**-26,703.9**	**-4,957.3**	**-3,132.8**	**-3,164.0**
I.A	**GOODS (I.A.1-I.A.2)**	**-41,499.2**	**-44,048.8**	**-30,760.3**	**-4,172.2**	**-3,057.5**	**-2,772.6**
	Oil balance	-9,219.6	-12,154.6	-7,596.5	-1,132.6	-570.2	-621.0
	Trade Balance excluding oil	-32,279.6	-31,894.3	-23,163.8	-3,039.6	-2,487.3	-2,151.6
	Ship's Balance	-5,520.3	-4,705.0	-3,356.9	-655.2	-266.6	-333.9
	Trade Balance excluding oil and ships	-26,759.3	-27,189.3	-19,806.9	-2,384.4	-2,220.7	-1,817.7
I.A.1	**Exports**	**17,445.5**	**19,812.9**	**15,318.0**	**1,458.5**	**1,456.7**	**1,469.2**
	Oil	3,037.3	4,254.5	3,063.2	298.7	267.3	370.0
	Ships	2,275.4	1,582.0	771.7	118.5	85.7	11.0
	Other goods	12,132.8	13,976.5	11,483.1	1,041.3	1,103.7	1,088.2
I.A.2	**Imports**	**58,944.8**	**63,861.7**	**46,078.3**	**5,630.7**	**4,514.2**	**4,241.8**
	Oil	12,256.9	16,409.0	10,659.8	1,431.3	837.5	991.0
	Ships	7,795.7	6,286.9	4,128.6	773.7	352.3	344.9
	Other goods	38,892.2	41,165.8	31,289.9	3,425.7	3,324.4	2,905.9
I.B	**SERVICES (I.B.1-I.B.2)**	**16,591.7**	**17,135.6**	**12,567.2**	**573.8**	**505.1**	**421.8**
I.B.1	**Receipts**	**31,337.3**	**34,066.2**	**26,952.2**	**2,051.4**	**1,899.3**	**1,791.3**
	Travel	11,319.2	11,635.9	10,369.1	210.8	207.0	180.1
	Transportation	16,939.3	19,188.3	13,552.2	1,551.4	1,365.4	1,258.0
	Other services	3,078.9	3,242.0	3,030.9	289.2	326.9	353.2
I.B.2	**Payments**	**14,745.6**	**16,930.6**	**14,384.9**	**1,477.6**	**1,394.2**	**1,369.5**
	Travel	2,485.7	2,679.1	2,466.4	296.9	284.5	231.9
	Transportation	7,771.3	9,316.0	7,073.4	749.6	653.9	657.9
	Other services	4,488.6	4,935.5	4,845.1	431.1	455.8	479.7
I.C	**INCOME (I.C.1-I.C.2)**	**-9,285.8**	**-10,643.0**	**-9,803.5**	**-944.1**	**-890.6**	**-902.6**
I.C.1	**Receipts**	**4,558.5**	**5,573.2**	**4,124.9**	**395.3**	**486.0**	**317.9**
	Compensation of employees	366.9	344.7	294.6	31.7	28.2	24.0
	Investment income	4,191.7	5,228.5	3,830.3	363.6	457.8	293.9
I.C.2	**Payments**	**13,844.3**	**16,216.2**	**13,928.4**	**1,339.3**	**1,376.6**	**1,220.5**
	Compensation of employees	332.6	410.1	411.9	33.4	45.1	41.1
	Investment income	13,511.7	15,806.1	13,516.4	1,305.9	1,331.5	1,179.4
I.D	**CURRENT TRANSFERS (I.D.1-I.D.2)**	**1,591.1**	**2,758.6**	**1,292.6**	**-414.9**	**310.2**	**89.4**
I.D.1	**Receipts**	**6,608.1**	**6,882.7**	**5,380.7**	**966.8**	**763.4**	**329.6**
	General Government (mainly transfers from EU)	4,361.2	4,678.8	3,527.9	780.7	608.0	190.7
	Other sectors	2,246.9	2,203.9	1,852.8	186.0	155.5	138.9
I.D.2	**Payments**	**5,017.0**	**4,124.1**	**4,088.1**	**1,381.6**	**453.3**	**240.2**
	General Government (mainly transfers to EU)	3,825.4	2,717.6	2,679.6	1,294.8	350.9	122.3
	Other sectors	1,191.6	1,406.4	1,408.5	86.9	102.4	117.9
II	**CAPITAL TRANSFERS (II.1-II.2)**	**4,332.3**	**4,090.8**	**2,017.4**	**1,349.2**	**143.1**	**53.6**
II.1	**Receipts**	**4,673.9**	**4,637.8**	**2,328.1**	**1,378.9**	**185.5**	**84.4**
	General Government (mainly transfers from EU)	4,401.4	4,241.9	2,133.2	1,339.8	174.2	65.6
	Other sectors	272.4	395.9	194.9	39.2	11.3	18.8
II.2	**Payments**	**341.6**	**547.0**	**310.7**	**29.8**	**42.4**	**30.8**
	General Government (mainly transfers to EU)	27.1	192.0	14.4	1.0	1.5	1.5
	Other sectors	314.5	354.9	296.3	28.7	40.9	29.2
III	**CURRENT ACCOUNT AND CAPITAL TRANSFERS (I+II)**	**-28,269.9**	**-30,706.8**	**-24,686.4**	**-3,608.2**	**-2,989.7**	**-3,110.4**
IV	**FINANCIAL ACCOUNT (IV.A+IV.B+IV.C+IV.D)**	**27,570.2**	**29,914.2**	**24,225.6**	**3,417.9**	**2,754.9**	**2,453.5**
IV.A	**DIRECT INVESTMENT***	**-2,290.2**	**1,420.7**	**1,091.7**	**-92.2**	**354.7**	**-243.7**
	Abroad	-3,832.9	-1,650.4	-1,323.3	-513.3	235.5	-318.0
	Home	1,542.7	3,071.1	2,415.0	421.0	119.2	74.3
IV.B	**PORTFOLIO INVESTMENT***	**17,441.7**	**16,428.0**	**27,103.8**	**4,046.5**	**659.2**	**-5,070.2**
	Assets	-16,351.1	-268.9	-4,533.0	2,250.9	4,593.0	-753.7
	Liabilities	33,792.8	16,696.9	31,636.8	1,795.6	-3,933.8	-4,316.5
IV.C	**OTHER INVESTMENT***	**12,740.6**	**12,094.6**	**-3,636.9**	**-395.3**	**1,766.9**	**7,819.4**
	Assets	-16,266.1	-27,823.3	-23,875.7	-3,213.6	-5,491.9	270.2
	Liabilities	29,006.8	39,917.8	20,238.8	2,818.4	7,258.8	7,549.2
	(Loans of General Government)	-2,341.7	-572.7	-2,335.0	-80.0	-78.0	-133.2
IV.D	**CHANGE IN RESERVE ASSETS****	**-322.0**	**-29.0**	**-333.0**	**-141.0**	**-26.0**	**-52.0**
V	**BALANCE ITEM (I+II+III+IV)**	**699.7**	**792.6**	**460.8**	**190.2**	**234.8**	**656.9**
	RESERVE ASSETS (STOCK) (end period)***				**2,491.0**	**2,521.0**	**3,857.0**

* (+) net inflow (-) net outflow

* * (+) increase (-) decrease

*** * *** reserve assets , as defined by the ECB, only include monetary gold, the reserve position at the IMF, Special Drawing Rights and the Bank of Greece's claims in foreign currency on residents of countries outside the euro area. Conversely, reserve assets do not include claims in euro on residents of countries outside the euro area, claims in foreign currency and in euro on residents of euro area countries, and the Bank of Greece's participation in the capital and the reserve assets of the ECB.

Source: Bank of Greece

4. THE MACROECONOMIC IMPACTS OF STRUCTURAL POLICIES TO BOOST THE COMPETITIVENESS OF NON-MARKET GOODS & SERVICES: CERTAIN PRELIMINARY ESTIMATES FOR THE GREEK ECONOMY[36]

1. The macroeconomic environment and the need for structural reform

The Greek economy has found itself in dire straits following the fiscal derailment in 2008 and 2009 and the resulting downgrading of the country's credit standing by international rating agencies. These developments led to a surge in the borrowing cost for the state and the country's consequent inability to meet its borrowing requirements at an interest rate that could support GDP growth rates in line with the medium-term potential expansion of the economy. The international financial upheaval which in effect began to be felt in Greece from the second half of 2008, initially with a slowing of the growth rate of domestic product and subsequently, in 2009, with strongly negative rates of change, brought to the surface pre-existing structural problems of the Greek economy, which the rapid growth fuelled by robust consumption had partly concealed. Despite the fact that high growth rates were achieved for a relatively long period, efforts to remedy certain structural weaknesses of the economy (including the fiscal problem) were limited.

Moreover, the country's economic growth model itself created a new major problem of a structural nature, relating to the extremely low household saving rate. More specifically, in Greece in the period 2000-2008, the average participation of private consumption in GDP continued to exceed 71 percentage points, when the corresponding average for the Euro-zone countries was approximately 60 percentage points. At the same time however, a gradual decline was observed in the share of household saving in net disposable income, since in the recent period it had stood at around zero, with the result that there were no longer any domestic resources and, taking into consideration also the public deficits, the country had to rely solely on international borrowing[37].

The absolutely necessary markedly restrictive fiscal policy that is now being implemented, in combination with the also necessary immediate need to gradually restore private savings, as well as the longstanding structural weaknesses of the Greek economy which impede growth, leave little room for optimism about the chances of the Greek economy recovering in the very near term.

[36] This section constitutes an initial presentation of the study titled 'Macroeconomic impacts of strengthening competition' currently being carried out at IOBE by the foundation's associate Mr. N. Zonzilos. The study is currently in progress.

[37] In effect, in this period consumers were in a state of euphoria (created also due to massive credit expansion) and took for granted anticipated rising future incomes, with the result that permanent income exceeded current income. Naturally, the rate of saving declined.

Taking into account the de facto binding nature of the restrictive macroeconomic policy that must be followed, the question that automatically arises is what additional measures and policies must be taken to bolster the existing mix of policy interventions in order to boost productivity in the short and medium term, and to moderate the adverse impacts of the stabilization policy on output and employment.

The deepening and acceleration of the structural reforms appears as an appropriate, attainable and strong solution. Recent theoretical and empirical papers [Blanchard and Giavassi (2003), Bayoumy T., Laxton D. and Pesenti, P. (2004), F. D'Auria et al. (2009), Forni et al. (2009)] highlight the implementation of structural reforms in product and labor markets as a key factor for the significant, permanent, medium-term strengthening of output, investment and employment levels as well as the prosperity of citizens. Similar conclusions are contained in the OECD's recent report '*Greece at a glance*' (2010), which stresses the need for immediate rapid implementation of a broad spectrum of structural reforms in Greece as the only solution for boosting productiveness, sustainable growth and the permanent improvement of structural imbalances. The necessity of structural reforms that strengthen competition and the need to change the growth model of the Greek economy has also been underlined in other recent publications and collective volumes[38] as well as in the reports of the Bank of Greece as structural interventions that lead to the Greek economy's faster real convergence with European average GDP per capita. It should be noted that both in the international bibliography and in current policy discussions in the framework of international organizations, a clear turn in perceptions is evident and it is now acknowledged that the differences in GDP per capita, as well as in growth rates from economy to economy, are due more to weaknesses and holdups of a structural nature rather than differences at the level of technological progress, which until recently was considered the main factor for countries in the catching up process. Furthermore, the implementation of structural reforms in the Greek economy will also have the collateral benefit of strengthening the beneficial effects of the Community interventions via the National Strategic Reference Framework, but also of the effectiveness of the common European monetary policy being exercised.

This chapter focuses attention on a category of structural reforms that are aimed at boosting competition in non-market goods and services and endeavors to quantitatively evaluate the impacts of these reforms on key macroeconomic indicators of the Greek economy (output, prices, deficits as percentage of GDP, etc.). Non-market goods and services were chosen to study the interventions because they relate primarily to the services sector which, apart from the fact that it is the broadest and constantly expanding sector of the Greek economy, is characterized by severe rigidities and structural weaknesses.

[38] IOBE, as well as most banks, have made their position known on their publications and studies.

According to the available structural indicators as well as the competitiveness indices compiled by the OECD and the World Bank[39], the Greek economy occupies an extremely low position in the hierarchy of countries, not only with regard to direct indicators but also in terms of the enforcement of competition laws and the relevant checks, rights and import barriers in sectors. Consequently, the margin for strengthening competition conditions in the Greek economy are quite considerable. The impacts of such a strengthening are quantitatively assessed in the following sections.

2. The Global Integrated Monetary and Fiscal Model (GIMF) and its calibration for the particularities of the Greek economy

A study is currently under way at IOBE which aims to make an empirical analysis of macroeconomic and structural policy, so that specific proposals, as quantified as possible, may be submitted to the public dialogue. The main analytical tool that will help shape the policy proposals is a two-region (Greece and Eurozone) version of the Global Integrated Monetary and Fiscal Model (GIMF) that was recently developed at the IMF (M. Kumhof and D. Laxton, 2009)[40]. The GIMF is a neo-Keynesian dynamic stochastic general equilibrium (DSGE) model, sufficiently detailed to allow a broad range of policy questions to be submitted and answered. The model has quite a number of real and nominal rigidities, which extend across sectors, while the labor and goods market is characterized by forms of monopolistic competition. The existence of adjustment cost (investments, imports) as well as the shaping of exogenous consumer traits, along with the other characteristics noted previously, endow the model with a realistic short-term dynamic response to exogenous turbulence. A characteristic feature of the model is that its structure allows the creation of strong fiscal impacts in the case of simulations with changes in taxation or government spending. This gives the GIMF an important comparative in comparison with the other neo-Keynesian DSGE used by international organizations and central banks, in which fiscal policy is almost neutral.

The version of the GIMF developed at IOBE consists in two structurally identical models for Greece and the Eurozone, which are linked chiefly by international trade variables but are differentiated by the values taken by their main parameters during the process of calibration.

On the basis of Greek national accounting data as well as the results of various empirical surveys of the Greek economy, a calibration was achieved which satisfactorily represents the main characteristics of the Greek economy in steady state[41] for the base year. For the Euro-

[39] For example the working papers of the OECD's WP1, the papers of Hoj (2007) as well as of Jean and Nicoletti (2002), also prepared within the framework of the OECD. The World Bank publication 'Doing Business' contains many useful statistics of a structural nature for a large number of countries.
[40] The GIMF belongs to the latest generation of dynamic stochastic general equilibrium (DSGE) models, oriented toward policy analysis and is the result of a process of development which began at the IMF 20 years ago with the Multimod series of models. In 2004, when Ken Rogoff was economic counselor at the IMF, the first multi-region DSGE was presented, known as the Global Economy Model (GEM). The GIMF evolved from the GEM.
[41] National accounting aggregates were calibrated on average for the period 2000-2007 and in some cases value adjustments were also made.

zone economy, parameter values were used from the dynamic general equilibrium model of the ECB [Coenen et al. (2007) and Christoffel et al. (2008)].

As noted previously, the model assumes imperfect competition in the product and labor market, which is expressed with the existence of mark-ups not only in prices of goods and services but also their marginal cost. The strengthening of competition is equivalent to a reduction of these mark-ups or to increased diversification of products and the labor supplied.

In other words, the question that is being asked may be put as follows: if a program of structural reforms is implemented in the Greek economy and the non-market goods and services become more or less as flexible as their counterparts in the Eurozone, what would be the impacts on output, employment, prices, etc? The answer to this question is given via the formulation and comparative evaluation of alternative scenarios designed with the use of the GIMF model.

3. Scenarios and initial results

For this purpose, a scenario was first designed for a steady state for a long period, in which the mark-ups for non-market goods and services in Greece are higher than the corresponding mark-ups in the Eurozone, precisely as in the base year of the initial calibration. This is called the 'reference scenario prior to structural reforms'. The model is then simulated, whilst at the same time the mark-ups for non-market goods and services are adjusted so that gradually, over a period of four years, they decline by 15% relative to their original values, to approximate the corresponding values in the Eurozone. This decline reflects the impact of the mark-ups of the structural reforms on non-market goods and services, which in this model are assumed to be implemented gradually. However, it should be noted that this study does not examine which particular structural reforms are capable of bringing about the aforesaid reduction of mark-ups. By way of indication, the reforms may be similar to those proposed for Greece by the OECD ('*Greece at a glance*', 2010) or by IOBE (Quarterly Report, December 2009). It should also be noted that the simulations are conducted on the assumption of full knowledge of future turbulence and are consequently factored in by the economic units during the dynamic solution of the model (perfect foresight forward solution).

Table 4.1 presents the long-term impacts of the application of turbulence in the mark-up of non-market goods and services on certain key macroeconomic variables.

Table 4.1

% divergence from pre-reforms simulation

	Overall Effect
GDP	13,2
Private Consumption	15,5
Investment	11,3
Real wage	10,8
Employment (hours)	0,6
General Government Deficit	-0,1

The results show the extremely positive long-term impact on key macroeconomic variables from the implementation of reforms in non-market goods and services. Output, consumption and investment, as well as real wages in the new balance, stand at significantly higher levels than the equilibrium levels prior to the reforms. The effect on employment is relatively weak, mainly due to the increase in real wages. The fiscal deficit as a percentage of GDP and the current account balance are not particularly affected in the long term by the reforms, although the cumulative short-term effect is significant and positive. Of particular interest is the short-term dynamic of the transition from the first, pre-reform, equilibrium to the new one. This issue is analyzed and presented in Table 4.2. Data pertaining to domestic demand follow an almost parallel course, approximating the equilibrium values at the new higher levels. Employment moves upward in the medium term but the final percentage of deviation over the long term is markedly smaller than the corresponding percentage for output and demand, whilst for a very short period of time a marginal decline can be seen below the reference level. This must be attributed in part to the significant increase in real wages, which in turn is due to the decrease in prices as well as the increase in productivity. The fiscal deficits (primary and general government) as a percentage of GDP initially show a marked improvement but then gradually revert to the values of long-term equilibrium. The current account deficit as a percentage of GDP is not particularly affected, although it improves in the medium term before reverting to reference values.

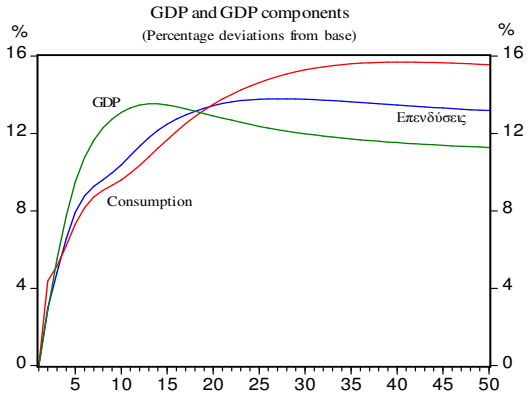
4. Results in summary

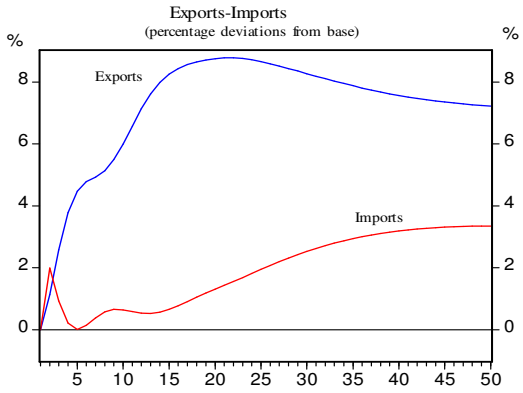
The first preliminary conclusions that may be drawn from this study may be summarized as follows: Structural reforms in non-market goods and services have very strong, long-term positive effects on key macroeconomic variables of the Greek economy. As expected, the effect on inflation is negative. In general, the results are logical and in line, from the viewpoint of the magnitude of impacts, with the results of other studies of the same type to which reference was made at the beginning of the text. The implementation of a program of structural reforms in the Greek economy and the gradual convergence of flexibility in non-market goods and (especially) services to more or less the conditions prevailing in other Eurozone countries is clearly quite beneficial . The immediate implementation of such reforms would mitigate the negative impacts of the stabilization policy being followed, boosting economic activity, while in addition, as shown by the simulation results, it would have direct impacts on efforts to reduce the fiscal deficit.

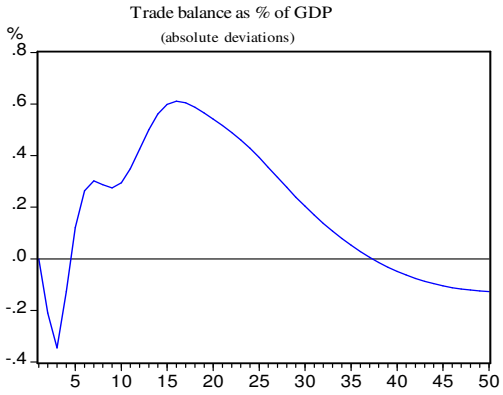
However, it should be stressed that since this study is still in progress, a more detailed calibration is required (particularly with regard to adjustment costs), which may affect the dynamic course of variables in the new equilibrium. A systematic analysis of sensitivity must also be conducted in order to study the dependence of results on the specific parameters that have been set, as well as the stabilizing power of the fiscal framework. The planning of new, more sophisticated simulations, will be the subject of a future study at IOBE.

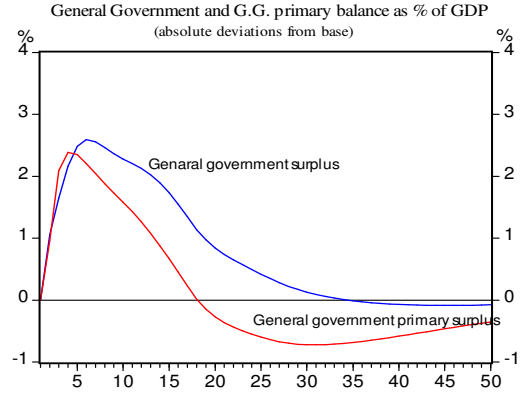
Table 4.2

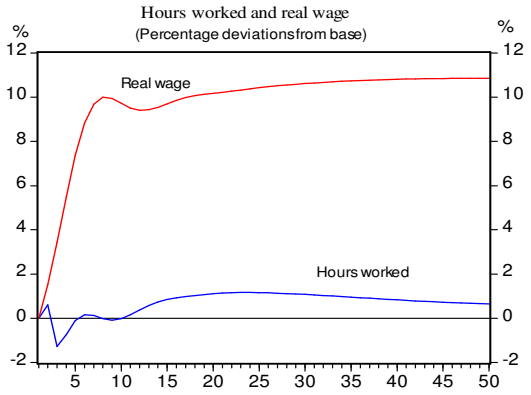
Effect of reforms to key figures of the Greek economy

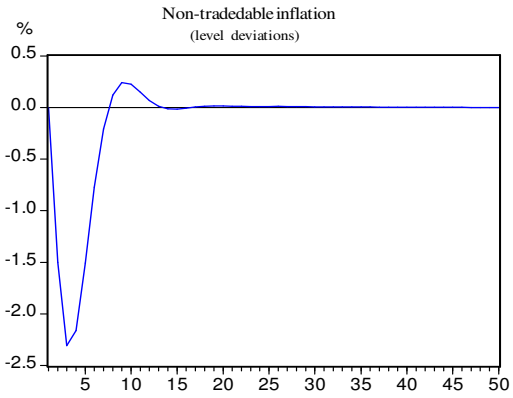












5. APPENDIX: STRUCTURAL INDICATORS

The following appendix is divided into two parts, so that beginning with the present IOBE report, it incorporates the model now being followed in the framework of the monitoring of the Lisbon Strategy:

A) Part A includes the performances of the EU-25 member states in the 14 structural indicators which comprise the short list of indicators now used by the European Commission to monitor implementation of the Lisbon objectives by each member state and the progress of structural changes in the respective economies. The composition of the short list will remain unchanged until 2007.

B) Part B presents a selection from the other indicators which were adopted by the European Commission in 2000 in an effort to provide national governments with a set of clear, distinct and easily measurable indicators which convey the degree of structural adjustment of each member state. These indicators thus comprise (together with the above 14 indicators) the long list of indicators which Eurostat systematically monitors and harmonizes for EU-25.

The main aim of the entire set of structural indicators is to record the progress that has been made in five key policy domains, which relate to employment, innovation and research, changes in the structure of the economy, social cohesion and the environment. At the same time, a number of main economic indicators are additionally monitored which present a picture of the general economic environment in which the structural changes are being made.

Each of the indicators presented below is represented graphically for all 27 countries (wherever data are available) whilst Greece's performance compared to the averages of EU-27, EU-25, EU-15 and the Eurozone (latest revision by Eurostat, August 2007) is presented in tabular form.

EU27	European Union (In January 2007 Bulgaria and Romania became EU- member)
EU25	European Union
EA13	Eurozone (In January 2007 Slovenia became Euroarea - member)
BE	Belgium
CZ	Czech republic
DK	Denmark
DE	Germany
EE	Estonia
EL	Greece
ES	Spain
FR	France
IE	Ireland
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	United Kingdom

PART A

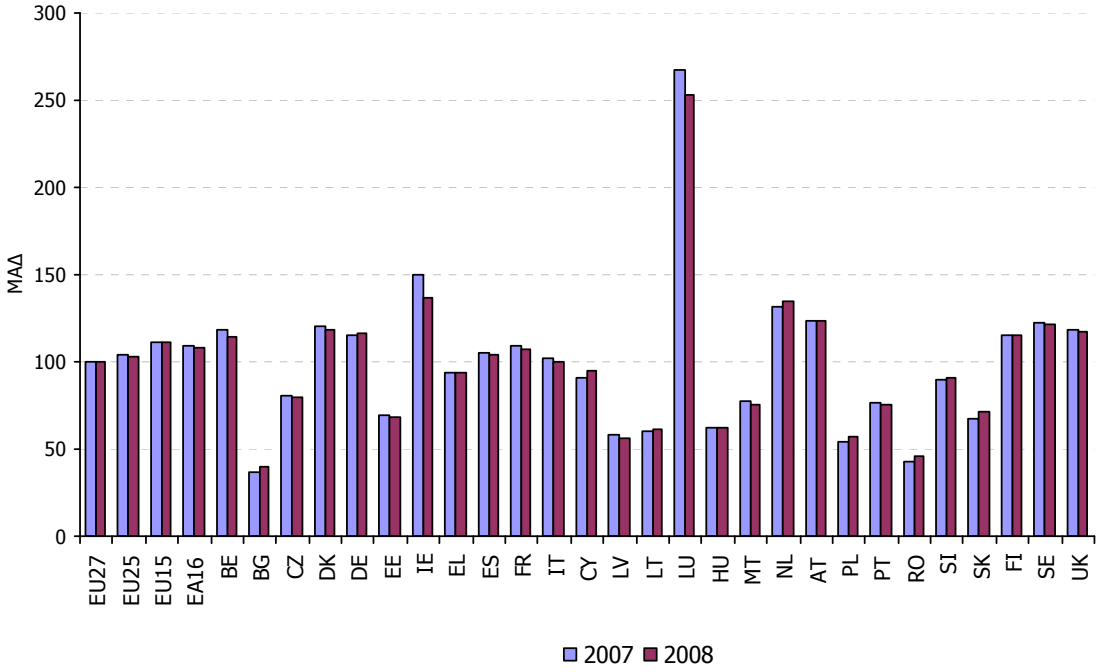
(SHORT - LIST)

I-A. GENERAL ECONOMIC BACKGROUND

I-1a. GDP per capita

(Purchasing Power Standards, PPS, EU-27=100)

Purchasing Power Standards (PPS) are indicators of the average price ratios between different countries. Use of them makes it possible to compare the volume of GDP per capita, of different countries



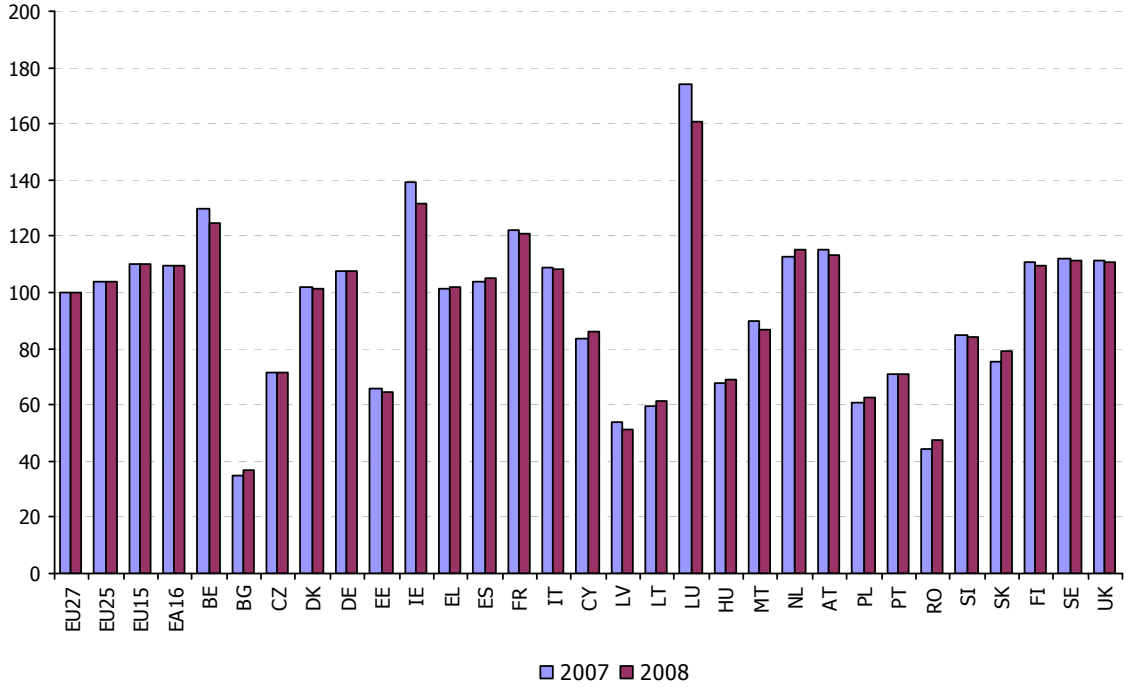
	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EU25	105.0	104.8	104.6	104.4	104.2	104.1	103.9	103.7	103.5
EU15	115.3	114.9	114.3	113.7	113.2	112.8	112.2	111.7	110.8
EA16	112.5	112.1	111.3	110.5	109.4	109.6	109.2	108.9	108.3
EL	84.1	86.5	90.2	92.6	94.0	91.8	92.9	94.1	93.8

Source: Eurostat

I-2a. Labour productivity per person employed

(GDP in PPS per person employed EU-27=100)

Persons employed cover employees and self employed. Employees include persons engaged by an employer under a contract of employment, civil servants, armed forces and owners of corporations. Persons temporarily not at work because of illness, injury, holidays or vacations, strike or training leave are also considered as employed. The definitions used are consistent with International Labour Organization (ILO) definitions



	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EU25	104.8	104.6	104.5	104.4	104.2	104.0	103.9	103.7	103.5
EU15	113.3	112.7	112.0	111.6	111.1	110.9	110.6	110.4	110.0
EA16	112.8	112.0	111.2	110.5	109.5	109.8	109.5	109.4	109.1
EL	93.7	97.3	99.6	101.3	101.2	98.8	99.5	101.3	101.8

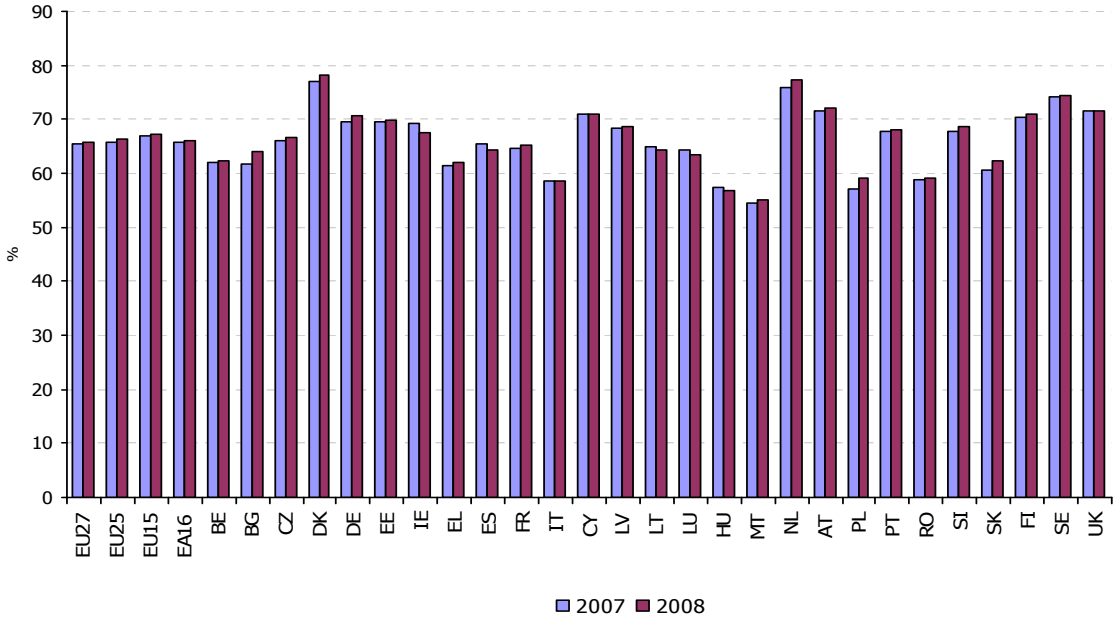
Source: Eurostat

II-A. EMPLOYMENT

II-1a. Total employment rate

(Employed persons aged 15-64 as a share of the total population of the same age group)

The employment population consists of those persons who during the reference week did any work for pay or profit for at least one hour or were not working but had jobs from which there were temporarily absent. The survey covers persons aged 15 years and over, living in private households. Persons living in collective households (halls of residence, medical care establishments, religious institutions, collective worker's accommodations, hostels e.t.c) and persons carrying out obligatory military service are no included.

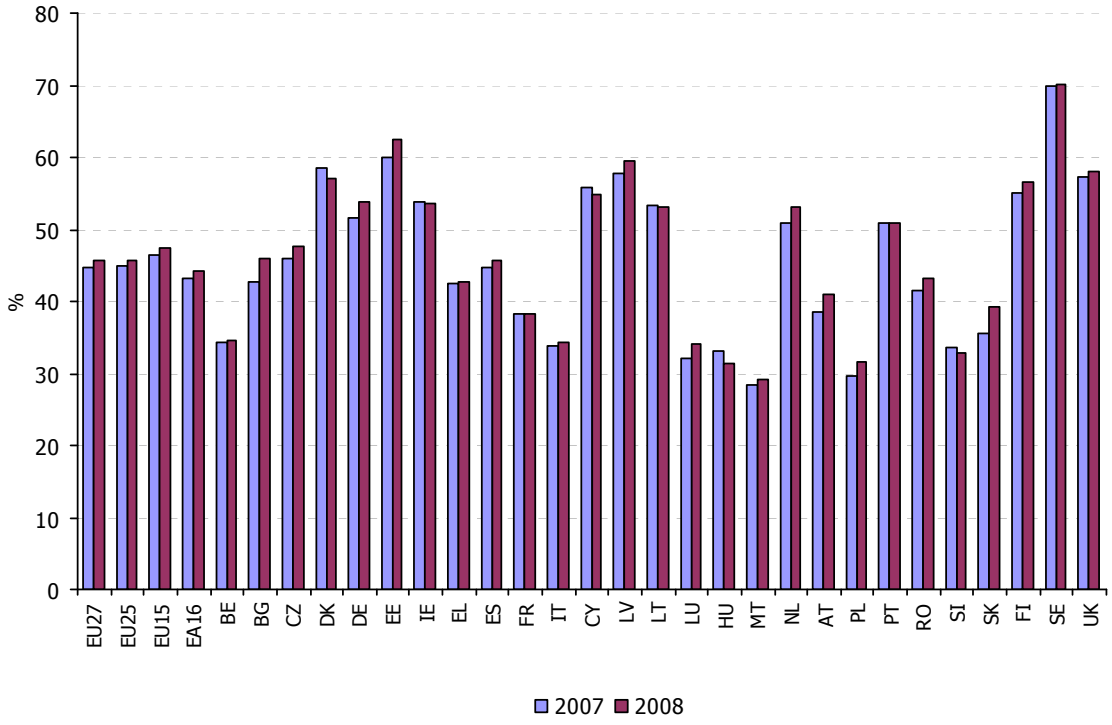


	2001	2002	2003	2004	2005	2006	2007	2008
EU27	62,6	62,4	62,6	63	63,6	64,5	65,4	65,9
EU25	62,8	62,8	63	63,4	64	64,9	65,8	66,3
EU15	64,1	64,2	64,5	64,8	65,4	66,2	67	67,3
EA16	62,2	62,4	62,7	63,2	63,8	64,8	65,7	66,0
EL	56,3	57,5	58,7	59,4	60,1	61	61,4	61,1
Males								
EU27	70,9	70,4	70,3	70,4	70,8	71,7	72,5	72,8
EU25	71,4	71	70,9	71	71,4	72,1	73	73,2
EU15	73,1	72,8	72,7	72,7	73	73,6	74,2	74,2
EA16	71.8	71,6	71,5	71,5	71,8	72,6	73,3	73,3
EL	71,4	72,2	73,4	73,7	74,2	74,6	74,9	75
Females								
EU27	54,3	54,4	54,9	55,5	56,3	57,3	58,3	59,1
EU25	54,3	54,7	55,2	55,8	56,6	57,6	58,6	59,4
EU16	55	55,6	56,2	57	57,8	58,8	59,7	60,4
EA13	52,4	53,1	53,8	54,6	55,6	56,7	57.9	58,8
EL	41,5	42,9	44,3	45,2	46,1	47,4	47,9	48,7

Source: Eurostat

II-2a. Total employment rate of older workers

(Employed persons aged 55-64 as a share of the total population of the same age group)



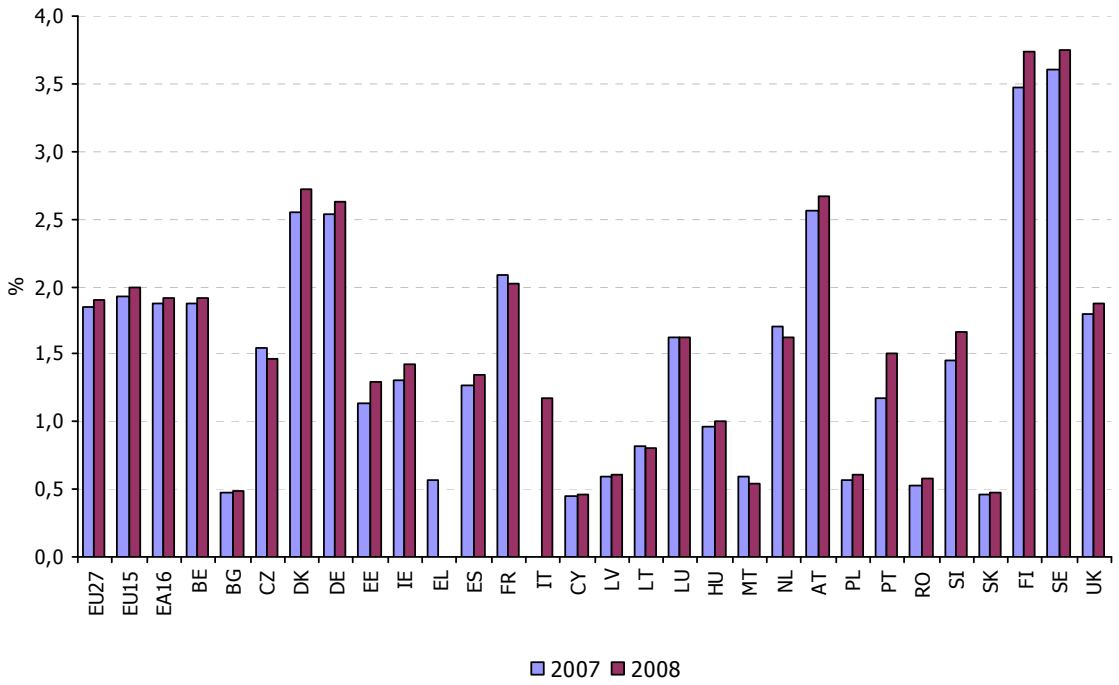
	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	36,9	37,7	38,5	40,0	40,7	42,3	43,5	44,7	45,6
EU25	36,6	37,5	38,7	40,3	41,0	42,6	43,7	44,9	45,7
EU15	37,8	38,8	40,2	41,7	42,5	44,2	45,3	46,5	47,4
EA16	34,2	35	36,2	37,7	38,5	40,4	41,7	43,2	44,2
EL	39,0	38,2	39,2	41,3	39,4	41,6	42,3	42,4	42,8
Males									
EU27	47,1	47,7	48,4	49,9	50,3	51,6	52,7	53,9	55,0
EU25	46,9	47,7	48,8	50,3	50,8	51,9	52,8	54,1	55,0
EU15	48,0	48,9	50,1	51,6	52,2	53,3	54,1	55,3	56,2
EA16	44,8	45,5	46,6	48,0	48,6	49,8	50,9	52,4	53,3
EL	55,2	55,3	55,9	58,7	56,4	58,8	59,2	59,1	59,1
Females									
EU27	27,4	28,2	29,1	30,7	31,6	33,6	34,9	36,0	36,9
EU25	26,9	27,8	29,2	30,8	31,7	33,8	35,0	36,1	37,0
EU15	28,0	29,1	30,7	32,2	33,2	35,5	36,9	38,1	39,0
EA16	24,1	24,9	26,3	27,7	28,7	31,3	32,8	34,5	35,7
EL	24,3	22,9	24,0	25,5	24,0	25,8	26,6	26,9	27,5

Source: Eurostat

III-A. INNOVATION & RESEARCH

III-1a. Gross domestic expenditure on R&D

(as a percentage of GDP)



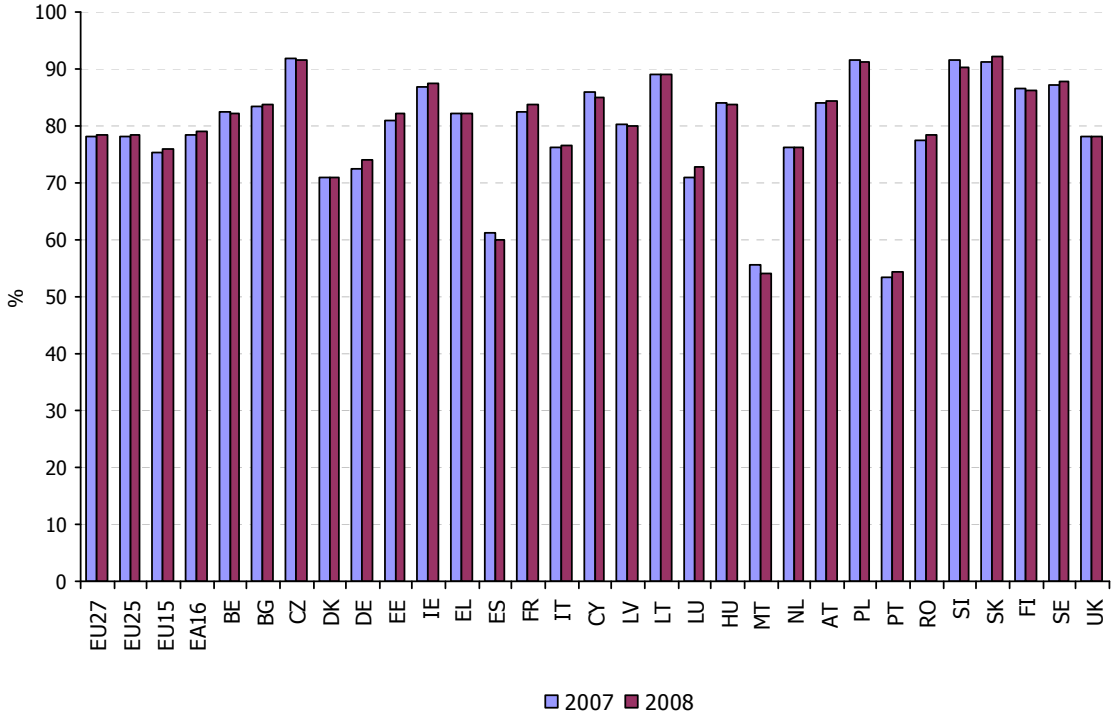
	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	1.85(s)	1.86(s)	1.87(s)	1.86(s)	1.82(s)	1.82(s)	1.85(s)	1.85(s)	1.9(s)
EU25	:	:	:	:	:	:	:	:	
EU15	1.91(s)	1.92(s)	1.93(s)	1.92(s)	1.89(s)	1.88(s)	1.92(s)	1.93(s)	1.99(s)
EA16	1.84(s)	1.85(s)	1.87(s)	1.86(s)	1.84(s)	1.83(s)	1.86(s)	1.87(s)	1.91(s)
EL	:	0.58	:	0.57	0.55(e)	0.58	0.57(e)	0.57(e)	

(s): Eurostat estimation, (e): estimation

Source: Eurostat

III-2a. Youth education attainment level

(% of the population aged 20 to 24 having completed at least upper secondary education)



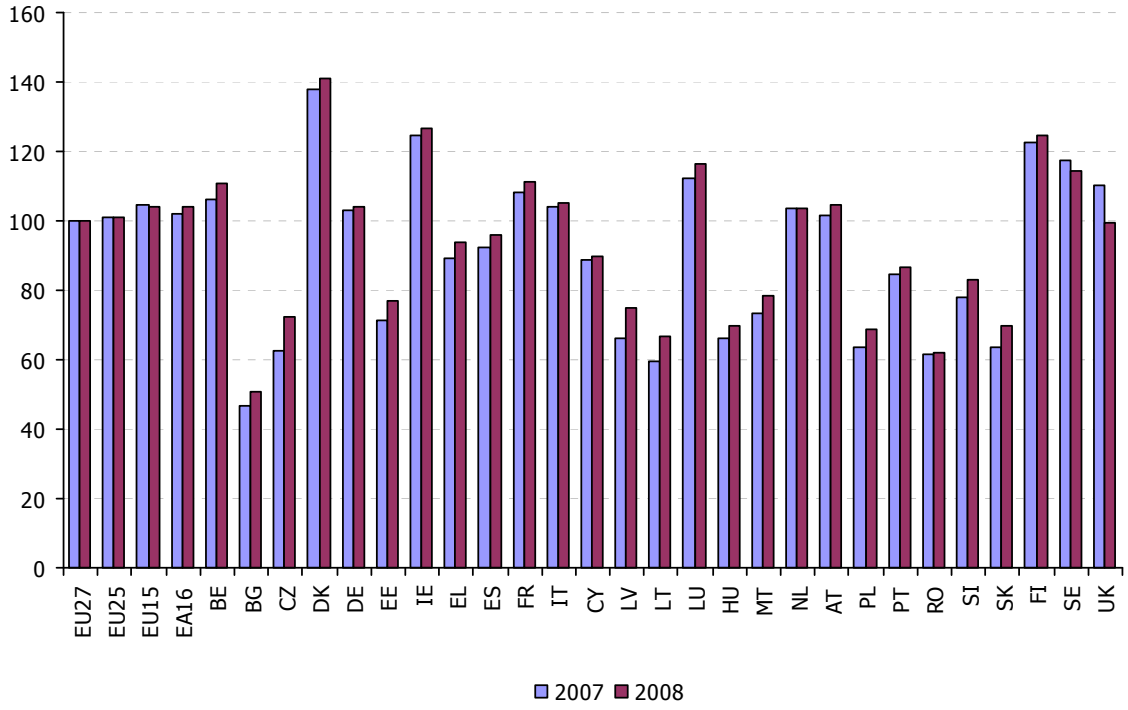
	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	76,6	76,6	76,7	76,9	77,1	77,5	77,9	78,1	78,5
EU25	76,6	76,5	76,7	77	77,3	77,6	77,9	78	78,4
EU15	73,7	73,6	73,7	74	74,4	74,7	75	75,2	75,8
EA16	73,6	73,2	73,4	73,4	74,0	74.2	74.4	74,9	75,5
EL	79,2	80,2	81,1	81,7	83	84,1	81	82,1	82,1
Males									
EU27	73,8	74	74	74,4	74,4	74,9	75	75,5	75,6
EU25	73,7	73,7	74	74,4	74,4	74,8	74,9	75,2	75,4
EU15	70,7	70,5	70,9	71,3	71,2	71,8	71,8	72,2	72,6
EA16	70,2	69,9	70,1	70,2	70,5	70,9	70,9	71,5	72,0
EL	73,6	75,3	76,1	76,6	79,2	79,7	75,5	77,5	78
Females									
EU27	79,3	79,2	79,3	79,4	79,9	80,2	80,8	80,8	81,3
EU25	79,5	79,3	79,4	79,6	80,2	80,4	81	80,9	81,5
EU15	76,8	76,6	76,6	76,8	77,5	77,7	78,4	78,3	79,1
EA16	76,9	76,4	76,6	76,7	77,6	77,7	78,1	78,3	79
EL	84,6	84,8	86	86,8	86,8	88,5	86,6	87	86,6

Source: Eurostat

IV-A. ECONOMIC REFORM

IV-1a.Comparative price levels

(comparative price levels of final consumption by private households including indirect taxes, EU-25=100)

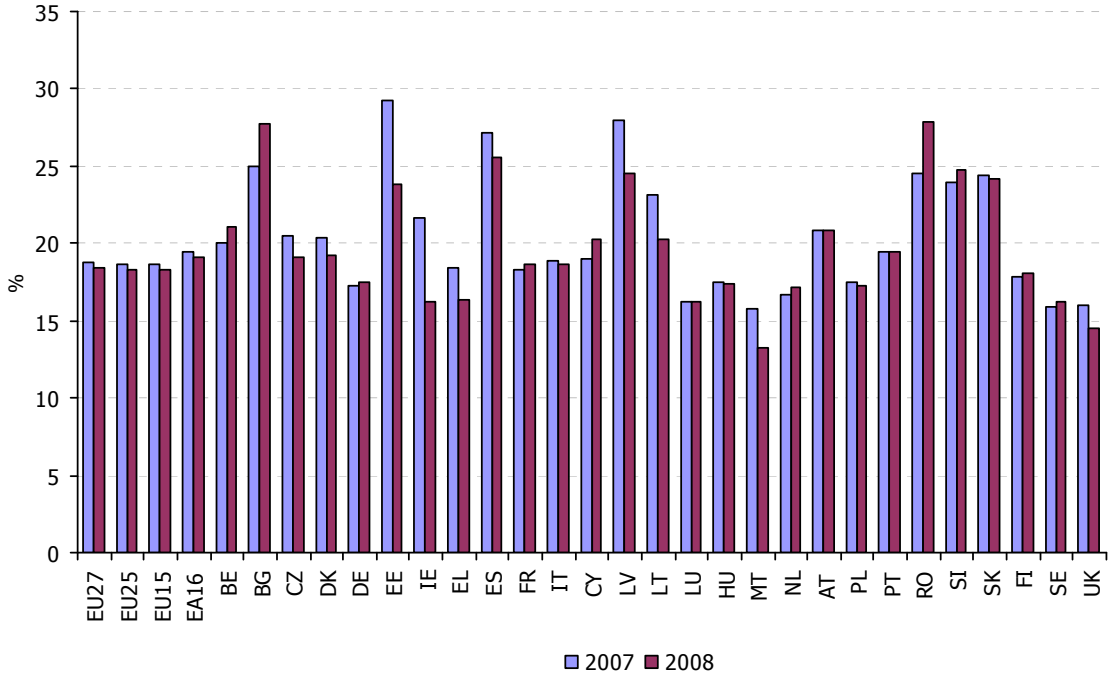


	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
EU25	101	101,1	101,1	101,1	101,2	101,1	101,1	101,1	101,1
EU15	104,9	104,7	104,8	105,2	105,4	104,8	104,9	104,7	104,3
EA16	100,2	100,5	100,5	103,0	103,1	102,1	102,1	102,0	104,1
EL	84,8	82,3	80,2	85,9	87,6	88,2	88,8	89,4	94,1

Source: Eurostat

IV-2a. Business investment

(Gross fixed capital formation by the private sector as a percentage of GDP)



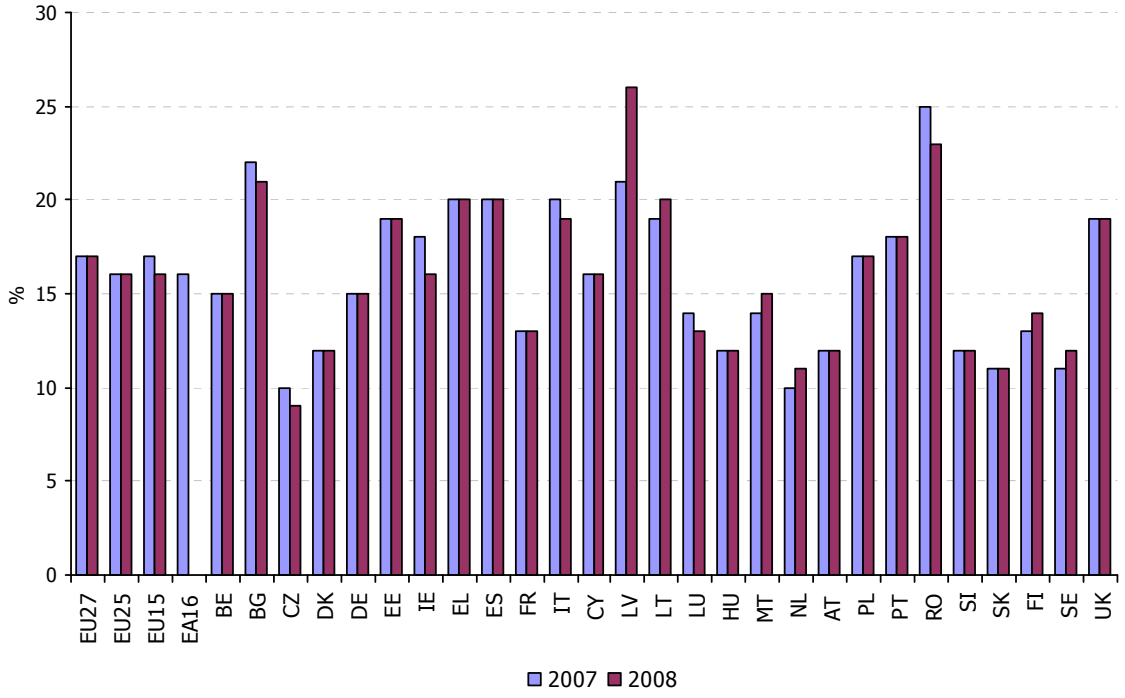
	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	18,4	17,8	17,3	17	17,2	17,7	18,2	18,8	18,4
EU25	18,4	17,8	17,3	17	17,2	17,7	18,2	18,7	18,3
EU15	18,2	17,7	17,2	17	17,2	17,7	18,2	18,6	18,3
EA16	18,9	18,4	17,8	17,6	17,8	18,2	18,9	19,4	19,1
EL	17,9	18,1	19,1	19,7	18,5	17,6	18,4	18,4	16,4

Source: Eurostat

V-A. SOCIAL COHESION

V-1a. At-risk-of-poverty rate

(share of persons with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income)



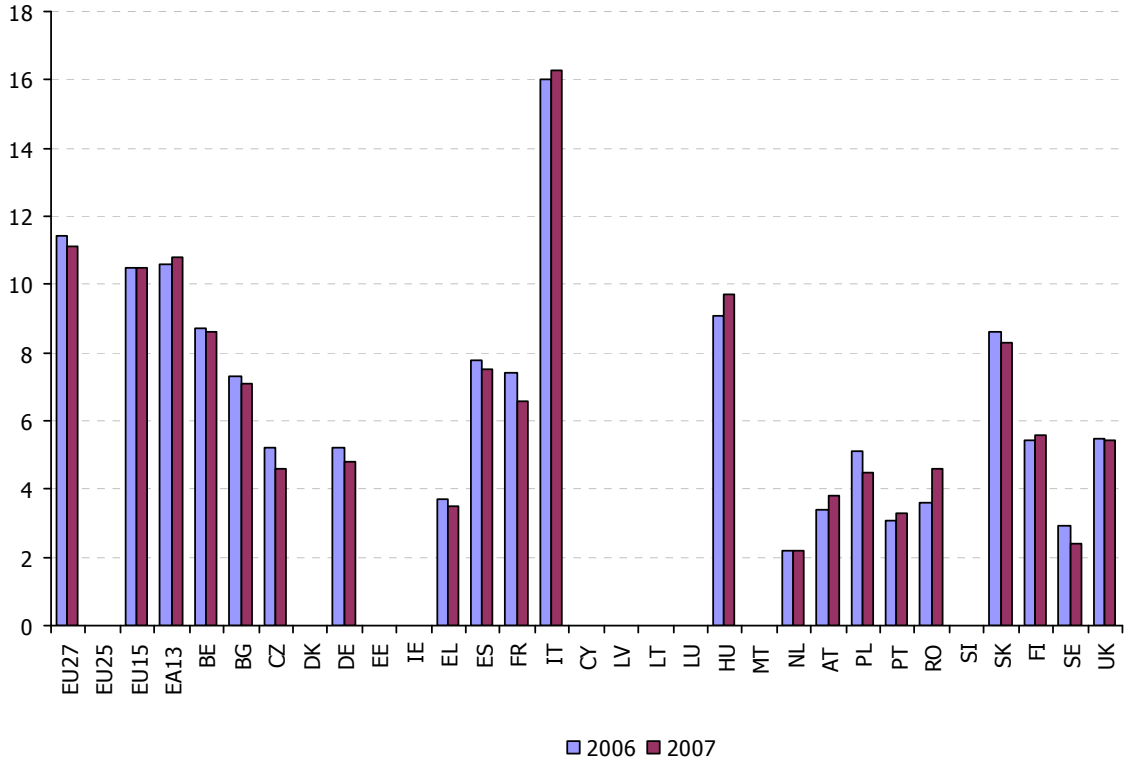
	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	:	:	:	:	:	16 (s)	16 (s)	17	17
EU25	16 (s)	16 (s)	:	15 (s)	16 (s)	16	16	16	16
EU15	15 (s)	15 (s)	:	15 (s)	17 (s)	16	16	17	16
EA16	:	:	:	:	:	15	16	16	:
EL	20	20	:	21 (b)	20	20	21	20	20
Males									
EU27	:	:	:	:	:	15(s)	15(s)	16	16
EU25	15(s)	15(s)	:	14(s)	15(s)	15(b)	15	15	15
EU15	15(s)	:	:	14(s)	15(s)	15(b)	15	15	15
EA16	:	:	:	:	:	14	15	15	15
EL	19	19	:	20(b)	19	18	20	20	20
Females									
EU27	:	:	:	:	:	17(s)	17(s)	18	17
EU25	17(s)	17(s)	:	16(s)	17(s)	17(b)	17	17	17
EU15	16(s)	:	:	17(s)	18(s)	17(b)	17	17	17
EA16	:	:	:	:	:	16	16	17	17
EL	20	22	:	21b	21	21	21	21	21

(s): Eurostat estimation

Source: Eurostat

V-2a. Dispersion of regional employment rates

[Coefficient of variation of employment rates (of the age group 15-64) across regions (NUTS 2 level) within countries]



	1999	2000	2001	2002	2003	2004	2005	2006	2007
EU27	12,9	13	13,2	13,2	12,9	12,1	11,9	11,4	11,1
EU25	:	:	:	:	:	:	:	:	:
EU15	13,8	13,3	13,1	12,4	11,8	11	10,8	10,5	10,5
EA13*	13,3	13	12,7	12,1	11,5	10,5	10,6	10,6	10,8
EL	5,2	5,1	4,3	3,8	3,2	4,1	4,3	3,7	3,5

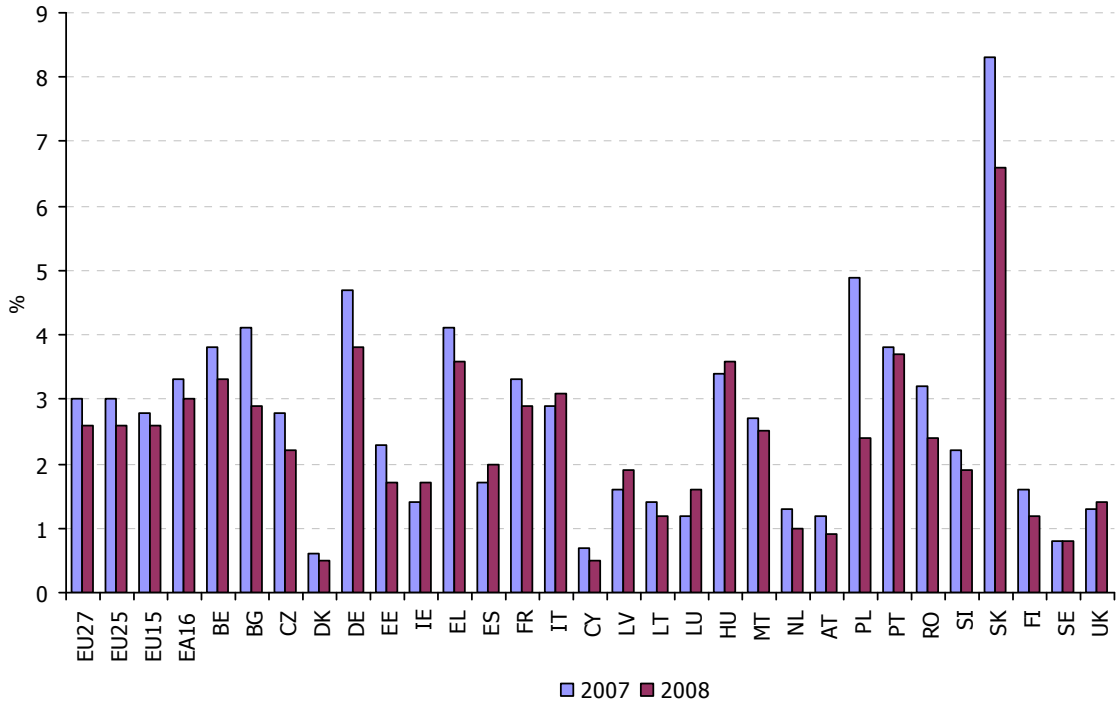
*There are no available data for the Euroarea -16

Source: Eurostat

V-3a Long-term unemployment rate

[Long-term unemployed (12 months and more) as a percentage of the total active population]

Unemployed persons are those aged at least 15 years old not living in collective households who are without work within the next two weeks or available to start work within the next two weeks and are seeking for a work. The duration of unemployed is defined as: the period of searching for a job (over 12 months).



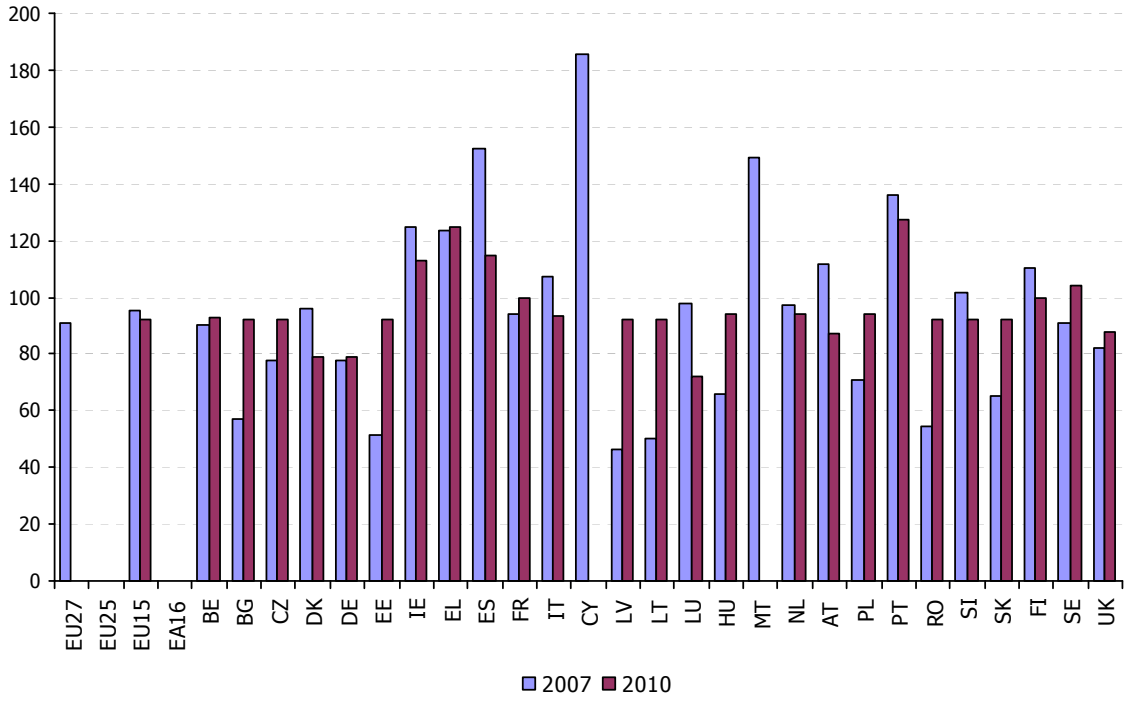
	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	4	3,9	4	4,1	4,2	:	3,7	3	2,6
EU25	3,9	3,8	3,9	4	4,1	:	3,7	3	2,6
EU15	3,4	3,1	3,1	3,3	3,4	:	3,2	2,8	2,6
EA16	4,1	3,7	3,7	4,0	4,2	4,1	3,9	3,3	3,0
EL	6,2	5,5	5,3	5,3	5,6	5,1	4,8	4,1	3,6
Males									
EU27	3,5	3,5	3,6	3,8	3,8	:	3,5	2,8	2,4
EU25	3,4	3,3	3,4	3,6	3,7	:	3,4	2,8	2,4
EU15	2,9	2,7	2,7	3	3,1	:	3	2,6	2,4
EA16	3,3	3,1	3,2	3,5	3,7	3,7	3,5	2,9	2,7
EL	3,5	3,2	3,1	3	3	2,6	2,6	2,2	2,1
Females									
EU27	4,6	4,4	4,5	4,5	4,6	:	4	3,3	2,8
EU25	4,6	4,4	4,4	4,5	4,5	:	4	3,3	2,8
EU15	4,1	3,6	3,5	3,7	3,8	:	3,5	3,1	2,8
EA16	5,0	4,5	4,4	4,6	4,8	4,6	4,3	3,8	3,3
EL	10,1	9	8,6	8,9	9,4	8,9	8,1	7	6

Source: Eurostat

VI-A. ENVIRONMENT

VI-1a.Total greenhouse gas emissions

(percentage change since base year and targets according to Kyoto Protocol/EU Council Decision for 2008-2012 - (in CO2 equivalents) indexed on actual base year = 100)

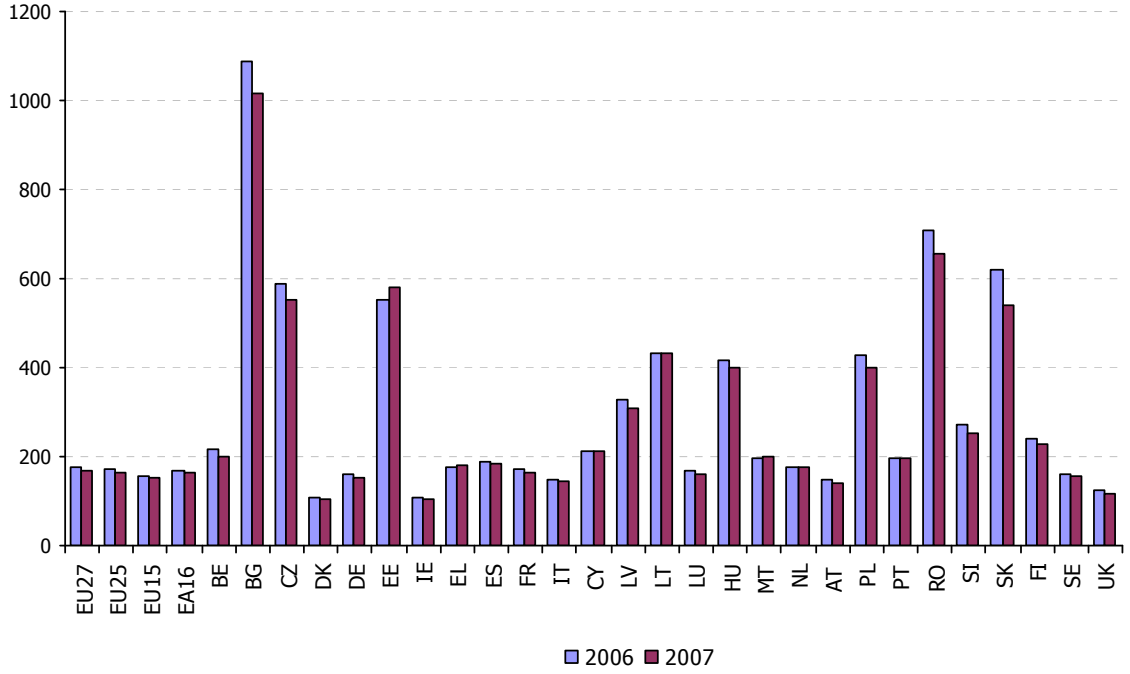


	2000	2001	2002	2003	2004	2005	2006	2007	2010
EU27	90,8	91,8	91,0	92,6	92,6	91,9	91,8	90,7	:
EU25	:	:	:	:	:	:	:	:	:
EU15	96,3	97,4	96,8	98,0	98,0	97,1	96,5	95,0	92,0
EA16	:	:	:	:	:	:	:	:	:
EL	118,8	119,8	119,4	122,7	122,8	123,2	119,7	123,2	125,0

Source: Eurostat

VI-2a. Energy intensity of the economy

[Gross inland consumption of energy divided by GDP (at constant prices, 1995=100) - kgoe (kilogram of oil equivalent) per 1000 Euro]

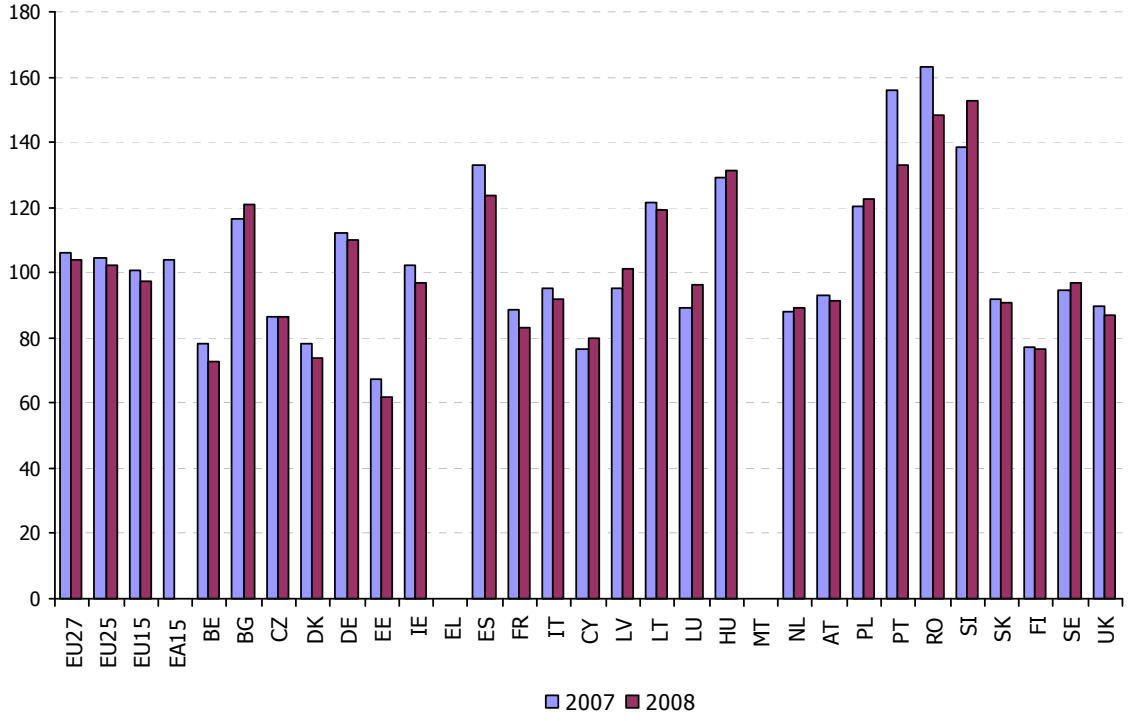


	1999	2000	2001	2002	2003	2004	2005	2006	2007
EU27	193,2	187,4	187,9	185,0	187,3	184,9	181,5	176,1	169,4
EU25	188,1	182,4	183,0	180,1	182,3	180,2	176,9	171,4	165,0
EU15	172,4	167,6	168,1	165,5	167,4	165,9	162,9	157,5	151,7
EA16	178,9	174,5	175,3	173,8	176,7	175,7	172,9	167,6	162,1
EL	203,5	204,6	202,2	200,8	193,1	186,9	185,0	178,0	181,8

Source: Eurostat

VI-3a.Volume of freight transport

[Index of inland freight transport volume relative to GDP; measured in tonne-km / GDP (in constant 2000 Euro), 2000=100]



	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	100.0	99.0(s)	100.0(s)	99.4(s)	105.5(s)	105.4(s)	106.3(s)	106.8(s)	104(s)
EU25	100.0	99.8(s)	99.5(s)	98.6(s)	104.3(s)	103.5(s)	104.4(s)	104.9(s)	102.2(s)
EU15	100.0	99.1(s)	99.4(s)	97.8(s)	103.3(s)	101.7(s)	101.6(s)	100.9(s)	97.2(s)
EA15*	100.0	99.7(s)	100.3(s)	98.7(s)	105.5(s)	104.1(s)	104.0(s)	103.8(s)	
EL	100.0	:	:	:	:	:	:	:	:

(s): Eurostat estimation

*There are no available data for the Euroarea -16

Source: Eurostat

PART B

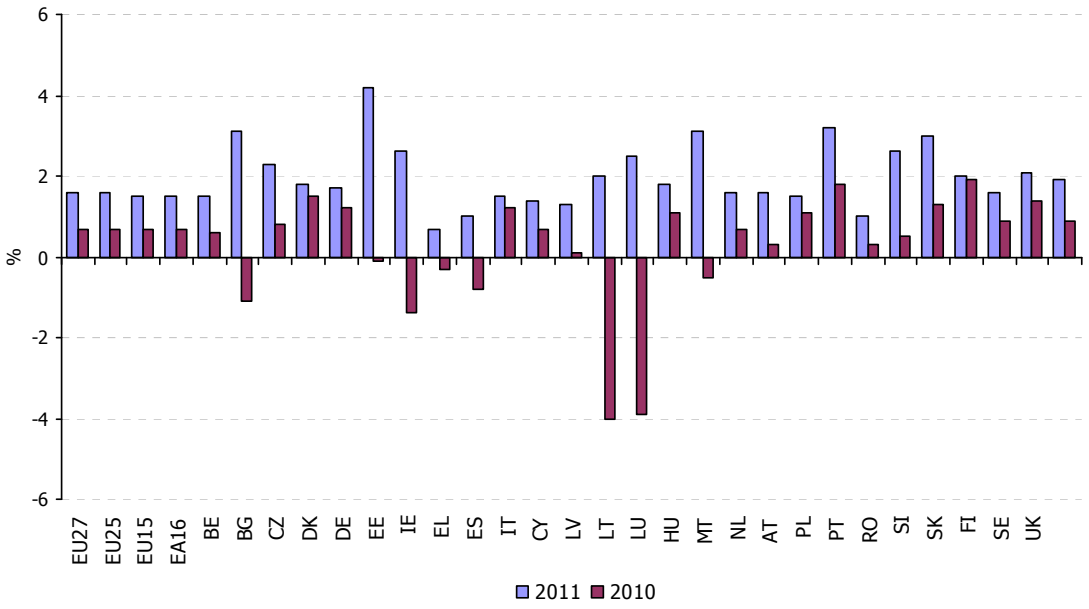
(OTHER STRUCTURAL INDICATORS)

I-B. GENERAL ECONOMIC BACKGROUND

I-1b. Real GDP growth rate

(constant prices 2000, percentage change on previous year)

GDP at constant prices is used to measure the volume growth of GDP. Changes in the price level (inflation) are illuminated.

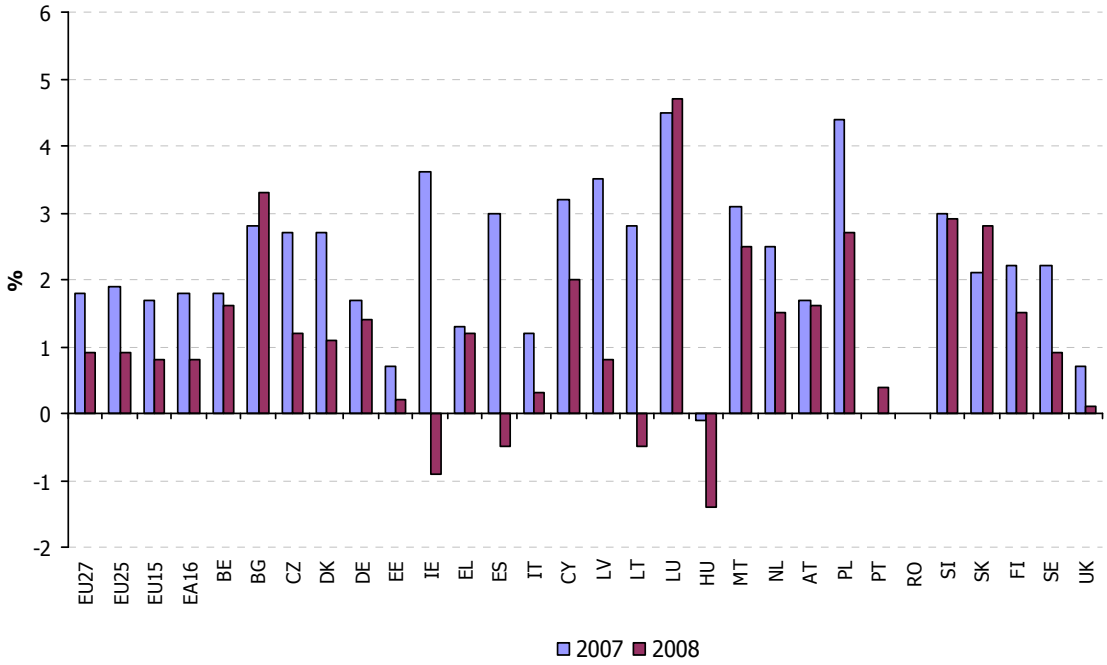


	2003	2004	2005	2006	2007	2008	2009	2010	2011
EU27	1,3	2,5	2,0	3,2	2,9	0,9	-4,2	0,7(f)	1,6(f)
EU25	1,3	2,5	2,0	3,2	2,8	0,8	-4,2	0,7(f)	1,6(f)
EU15	1,2	2,3	1,8	3,0	2,6	0,6	-4,3	0,7(f)	1,5(f)
EA16	0,8	2,2	1,7	3,0	2,7	0,7	-4,1	0,7(f)	1,5(f)
EL	5,9	4,6	2,2	4,5	4,5	2,0	-2,0	-0,3 (f)	0,7(f)

(f): forecast
Source: Eurostat

I-2b. Total employment growth

(annual percentage change in total employed population)



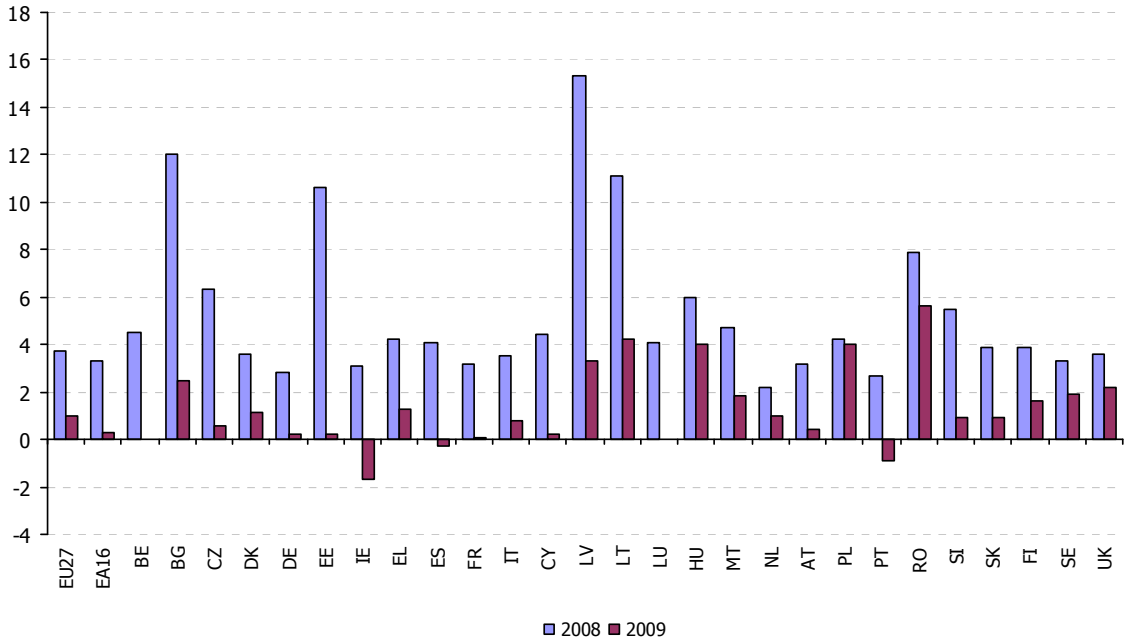
	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	1,5	1	0,4	0,4	0,7	1,0	1,6	1,8	1
EU25	1,7	1,1	0,4	0,3	0,8	1,1	1,7	1,9	1
EU15	2,2	1,4	0,7	0,5	0,8	1,0	1,5	1,7	0,7
EA16	2,4	1,5	0,7	0,4	0,8	1,0	1,6	1,8	0,8
EL	0,5	0,1	2,3	1,0	2,3	1,0	2,1	1,3	1,2
Males									
EU27	1,0	0,6	0	0,1	0,3	0,7	1,4	1,6	0,6
EU25	1,2	0,7	-0,1	0,0	0,4	0,7	1,4	1,6	0,5
EU15	1,6	1,0	0,1	0,0	0,2	0,4	1,2	1,3	0,1
EA16	1,9	1,0	0	-0,1	0,2	0,4	1,3	1,3	0,1
EL	0,1	0,2	1,6	0,5	1,7	0,6	1,3	1,2	0,7
Females									
EU27	2,2	1,5	0,8	0,7	1,2	1,3	1,9	2,1	1,5
EU25	2,4	1,6	1,1	0,8	1,3	1,5	1,9	2,2	1,6
EU15	3	2	1,5	1,0	1,5	1,6	1,9	2,1	1,4
EA16	3,0	2,2	1,6	1,2	1,6	1,7	2,1	2,4	1,6
EL	1,2	0	3,3	1,8	3,4	1,5	3,4	1,4	2,1

Source: Eurostat

I-3b. Inflation rate

[Annual average rate of change in Harmonized Indices of Consumer Prices (HICPs)]

Harmonized Consumer Price Index (HCPI) are designed for international comparisons of consumer price inflation.
Harmonized Consumer Price Index (HCPI) are used by European Central Bank (ECB) for monitoring of inflation in the EMU and the assessment of inflation convergence

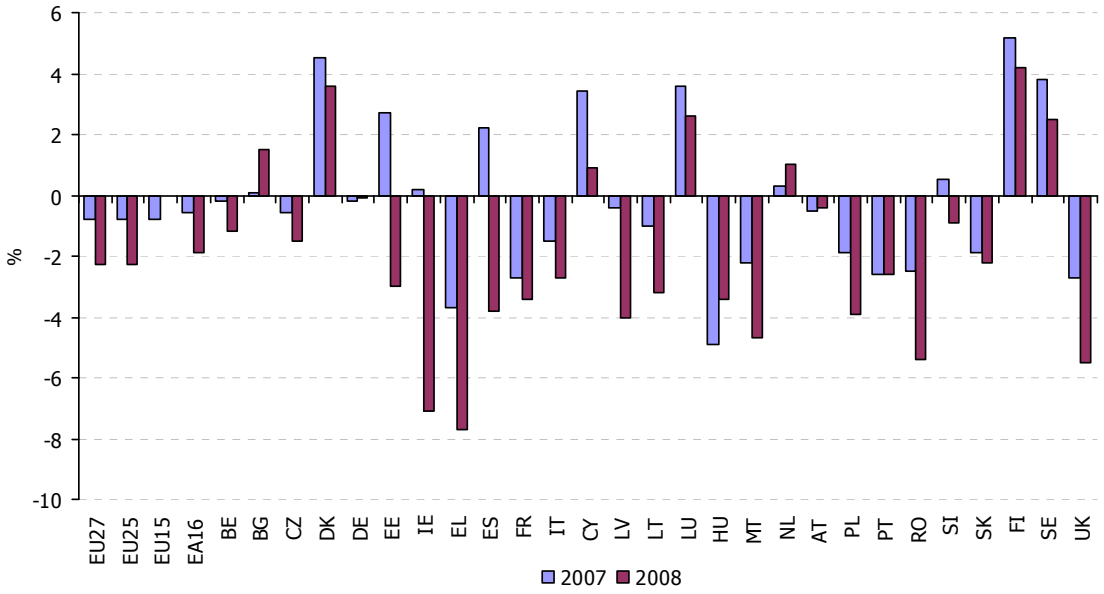


	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	:	:	:	:	2,3	2,2	2,3	3,7	1,0
EU25	:	:	:	:	:	:	:	:	:
EU15	:	:	:	:	:	:	:	:	:
EA16	2,4	2,3	2,1	2,2	2,2	2,2	2,1	3,3	0,3
EL	3,7	3,9	3,4	3,0	3,5	3,3	3,0	4,2	1,3

Source: Eurostat

I-4b. Public balance

(% of GDP)



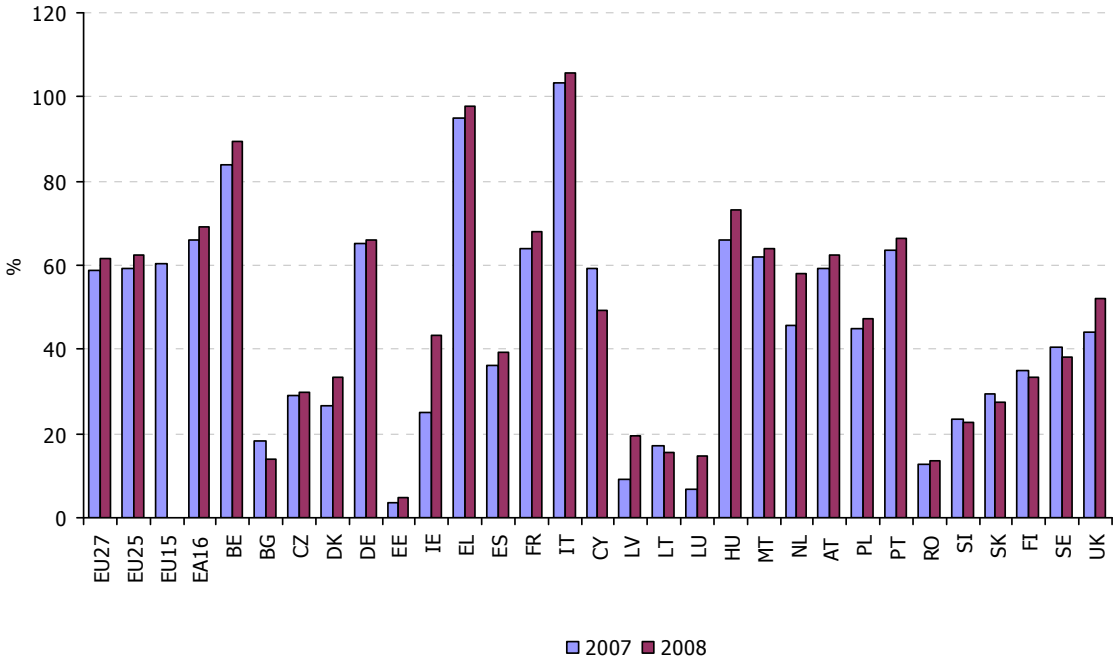
	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	0,6	-1,4	-2,5	-3,1	-2,9	-2,4	-1,4	-0,8	-2,3
EU25	0,6	-1,4	-2,5	-3,1	-2,9	-2,5	-1,4	-0,8	-2,3
EU15	0,8	-1,2	-2,3	-3	-2,8	-2,4	-1,3	-0,8	:
EA16	0,0	-1,9	-2,6	-3,1	-2,9	-2,5	-1,3	-0,6	-2,0
EL	-3,7	-4,5	-4,8	-5,6	-7,5	-5,2	-2,9	-3,7	-7,7

Source: Eurostat

I-5b. General government debt

(% of GDP)

General Government dept is defined as the stock of gross dept at end-year nominal value.



	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	61,9	61	60,3	61,8	62,2	62,7	61,3	58,7	61,5
EU25	62,0	61,1	60,5	62	62,5	63,1	61,8	59,3	62,2
EU15	63,2	62,2	61,6	63	63,3	64,1	62,8	60,4	:
EA16	69,2	68,2	68,0	69,1	69,5	70,0	68,3	66,0	69,3
EL	103,4	103,7	101,7	97,4	98,6	100	97,1	95,6	99,2

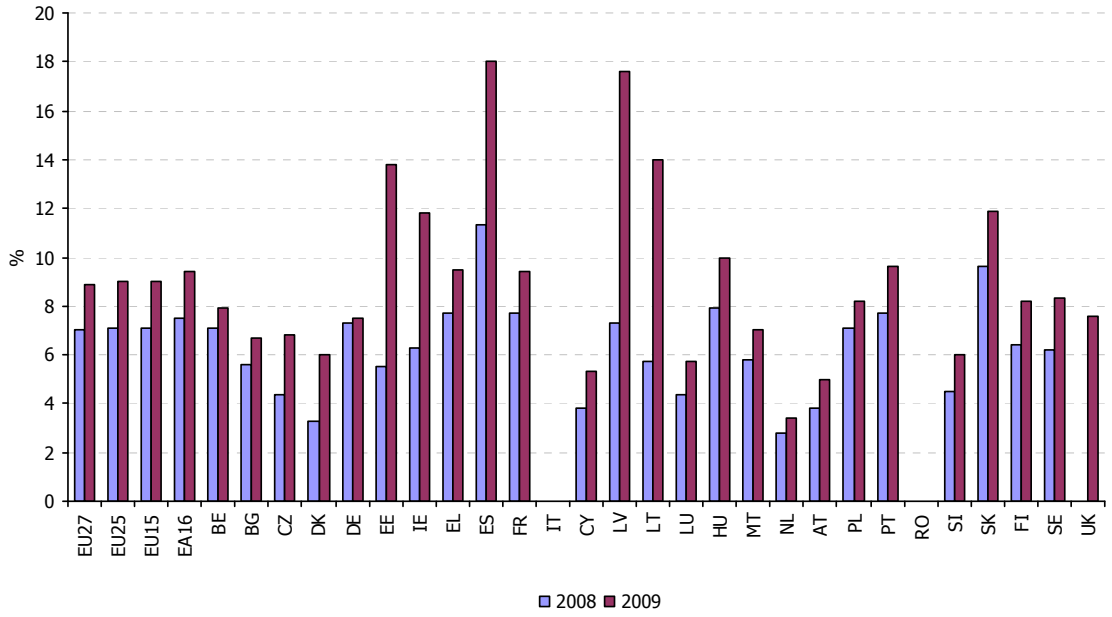
Source: Eurostat

II-B. EMPLOYMENT

II-1b. Total unemployment rate

(Unemployed persons as a share of the total active population)

Unemployed persons are those aged at least 15 years not living in collective households who are without work and available to start work within the next two weeks and are seeking for a work



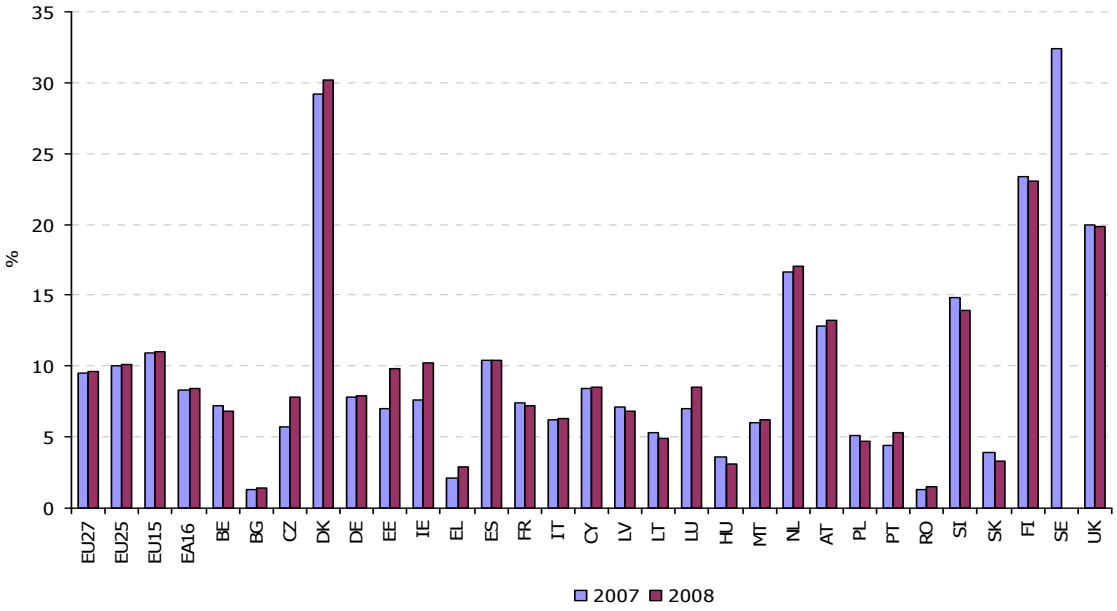
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	8,5	8,9	9,0	9,0	8,9	8,2	7,1	7	8,9
EU25	8,4	8,8	9,0	9,0	8,9	8,2	7,2	7,1	9,0
EU15	7,2	7,6	7,9	8,1	8,1	7,7	7	7,1	9,0
EA16	8,0	8,4	8,8	9,0	9,0	8,3	7,5	7,5	9,4
EL	10,7	10,3	9,7	10,5	9,9	8,9	8,3	7,7	9,5
Males									
EU27	7,7	8,3	8,4	8,5	8,3	7,6	6,6	6,6	9,0
EU25	7,6	8,1	8,3	8,4	8,3	7,5	6,6	6,6	9,1
EU15	6,4	6,9	7,3	7,4	7,5	7,1	6,4	6,7	9,1
EA16	6,9	7,4	7,9	8,1	8,2	7,5	6,7	6,9	9,2
EL	7,2	6,8	6,2	6,6	6,1	5,6	5,2	5,1	6,9
Females									
EU27	9,4	9,7	9,7	9,8	9,6	8,9	7,8	7,5	8,8
EU25	9,4	9,6	9,8	9,9	9,7	9	7,9	7,6	9,0
EU15	8,3	8,5	8,7	8,9	8,9	8,5	7,8	7,6	9,0
EA16	9,5	9,7	10,0	10,1	10,0	9,4	8,5	8,3	9,6
EL	16,1	15,7	15	16,2	15,3	13,6	12,8	11,4	13,2

Source: Eurostat

II-2b. Life-long learning

(% of the population aged 25-64 participating in education and training over the four weeks prior to the survey)

The reference period is the last four weeks preceding the survey (except for France, the Netherlands and Portugal for which information is collected only if education or training is under way on the date of the survey). Education include initial education, further training, training within the company apprenticeship, on the job training, seminars, distance learning self learning e.t.c. as well as other courses for example language art/culture, data-processing, management e.t.c. Before 1998, education was related only to educational and vocational training, which was related for the current or possible future job of the respondent.



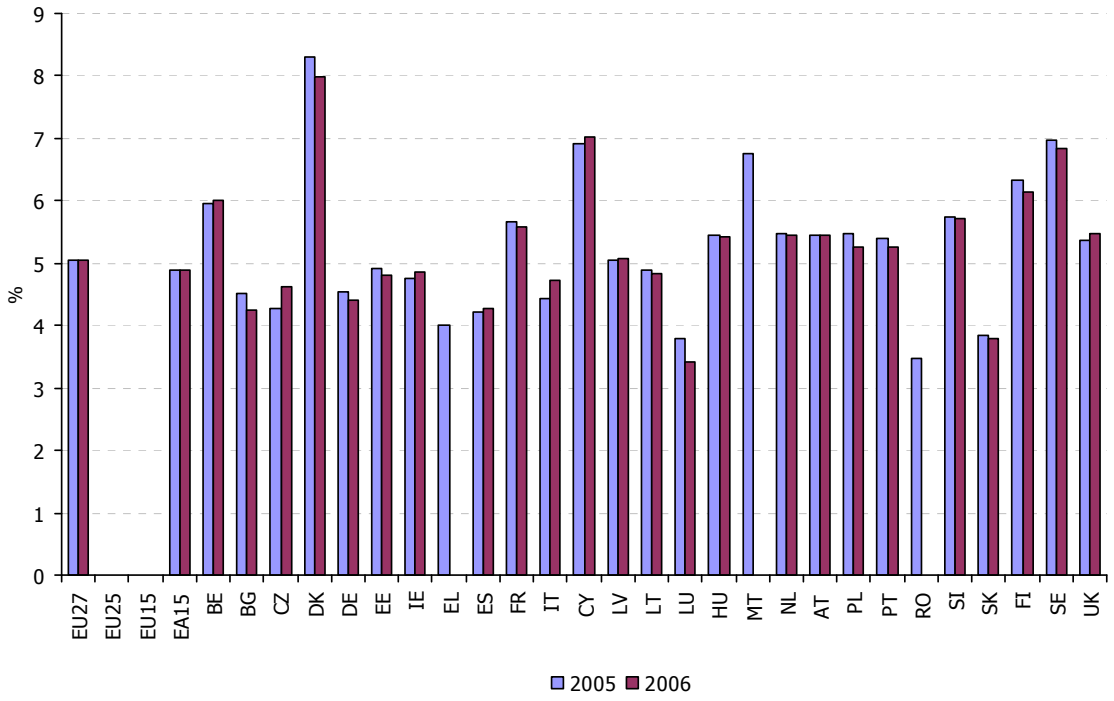
	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	7,1(e)	7,1(e)	7,2	8,5	9,3	9,8	9,7	9,5	9,5
EU25	7,5(e)	7,5(e)	7,6	9,0	9,8	10,3	10,2	10	10,1
U15	8,0(e)	8,0(e)	8,1	9,8	10,7	11,3	11,2	10,9	11,0
EA16	5,3(e)	5,3(e)	5,4	6,5	7,3	8,1	8,2	8,3	8,4
EL	1	1,2	1,1	2,6	1,8	1,9	1,9	2,1	2,9
Males									
EU27	6,7(e)	6,6(e)	6,6	7,9	8,7	9	8,8	8,6	8,7
EU25	7,1(e)	7,0(e)	7	8,4	9,1	9,5	9,3	9	9,1
EU15	7,6(e)	7,5(e)	7,5	9,1	10	10,4	10,2	9,8	10,0
EA16	5,3(e)	5,3(e)	5,3	6,3	7,2	7,9	7,8	7,9	8,0
EL	1	1,2	1,1	2,6	1,8	1,9	2	2,2	2,8
Females									
EU27	7,5(e)	7,6(e)	7,8	9,1	10	10,5	10,5	10,3	10,4
EU25	8,0(e)	8,0(e)	8,2	9,6	10,6	11,1	11,1	10,9	11,0
EU15	8,5(e)	8,5(e)	8,8	10,4	11,4	12,1	12,2	11,9	12,0
EA16	5,2(e)	5,3(e)	5,5	6,6	7,5	8,4	8,5	8,7	8,7
EL	1	1,1	1,1	2,7	1,8	1,8	1,8	2,1	3,1

(e): estimation
Source: Eurostat

III-B. INNOVATION & RESEARCH

III-1b. Public expenditure on education

(% of GDP)



	1998	1999	2000	2001	2002	2003	2004	2005	2006
EU27	:	4.86(s)	4.88(s)	4.99(s)	5.10(s)	5.14(s)	5.06(s)	5.04(s)	5.04(s)
EU25	:	:	:	:	:	:	:	:	:
EU15	:	:	:	:	:	:	:	:	:
EA15*	:	:	:	4.98(s)	5.00(s)	5.03(s)	4.95(s)	4.88(s)	4.88(s)
EL	:	3.25	3.39	3.50	3.57	3.58	3.82	4.00	:

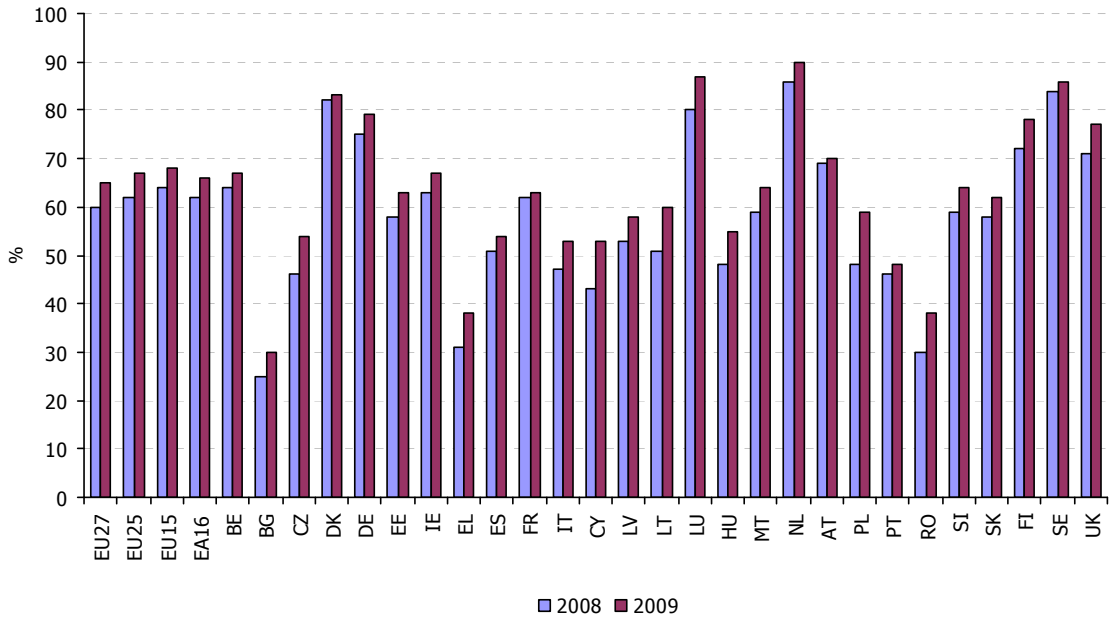
(s): Eurostat estimation

*There are no available data for the Euroarea -16

Source: Eurostat

III-2b. Level of Internet access

(% of households who have Internet access at home)



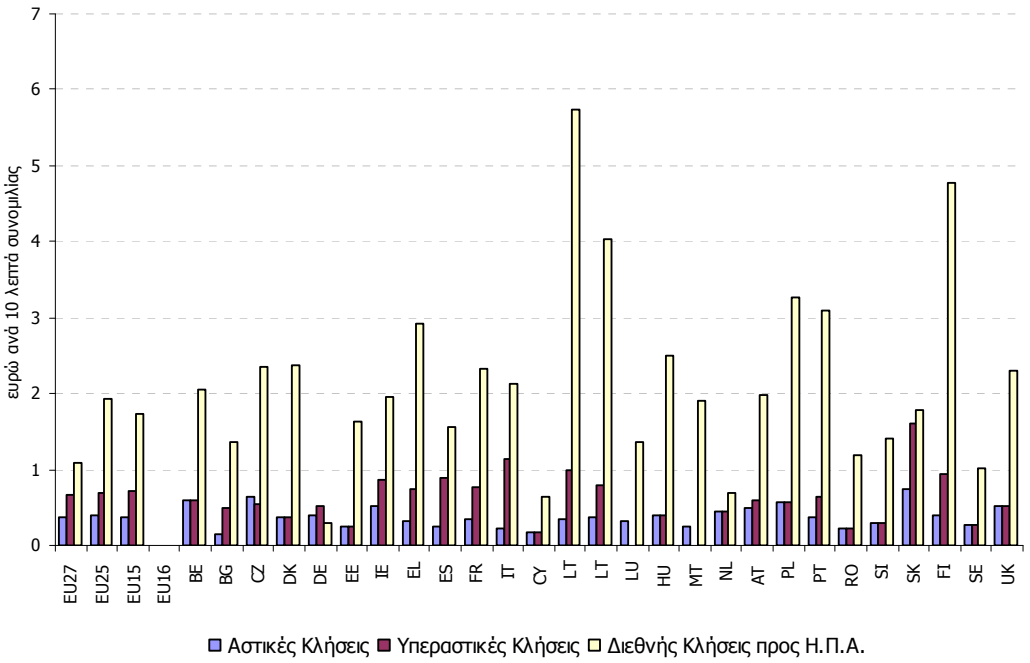
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	:	:	:	40	48	49	54	60	65
EU25	:	:	:	42	48	51	56	62	67
EU15	:	39	43	45	53	54	59	64	68
EA16	:	:	:	:	:	:	:	:	:
EL	:	12	16	17	22	23	25	31	38

Source: Eurostat

IV-B. ECONOMIC REFORM

IV-1b. Price of telecommunications, 2008

(Euro per 10 min call)

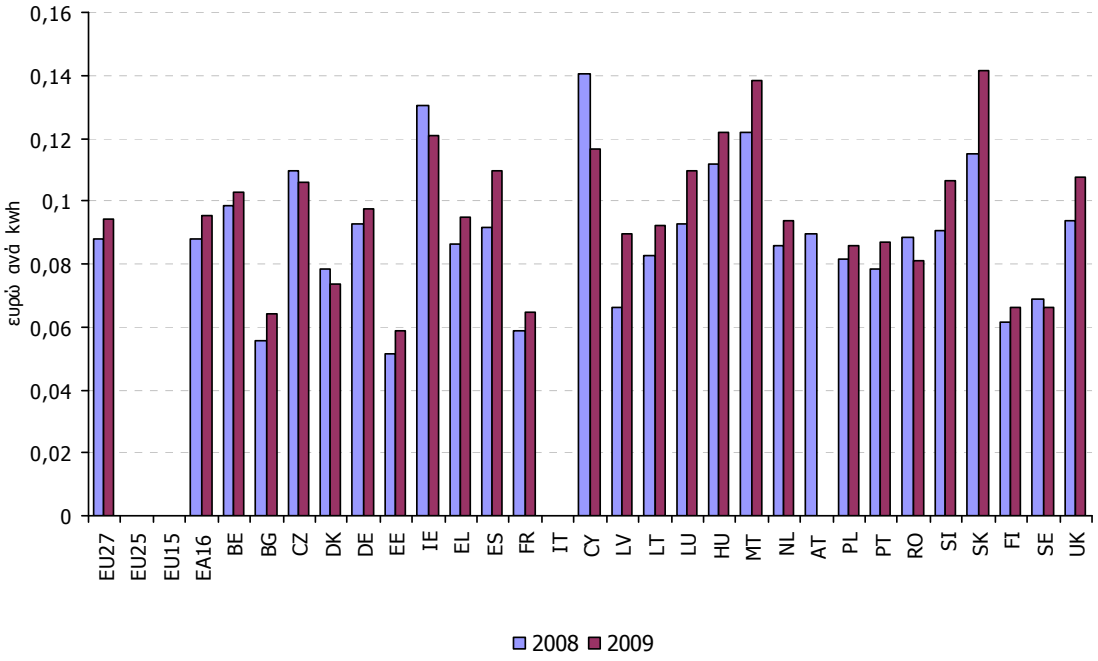


	2000	2001	2002	2003	2004	2005	2006	2007	2008
Local calls									
EU27	:	:	:	0,38	0,37	0,35	0,35	0,36	0,38
EU25	0,39	0,39	0,39	0,39	0,37	0,35	0,35	0,36	0,39
EU15	0,4	0,4	0,39	0,39	0,37	0,35	0,33	0,35	0,37
EA16	:	:	:	:	:	:	:	:	:
EL	0,31	0,36	0,31	0,31	0,31	0,31	0,31	0,31	0,31
National calls									
EU27	1,33	1,18	1,08	1,06	0,92	0,77	0,76	0,76	0,67
EU25	1,33	1,17	1,07	1,05	0,92	0,76	0,77	0,77	0,70
EU15	1,33	1,14	1,03	1,01	0,87	0,69	0,70	0,70	0,71
EA16	:	:	:	:	:	:	:	:	:
EL	1,4	0,98	0,77	0,77	0,73	0,74	0,74	0,74	0,74
Calls to USA									
EU27	:	:	:	3,16	2,21	2,14	2,13	2,07	1,88
EU25	:	:	3,08	2,98	2,13	2,11	2,11	2,12	1,92
EU15	3,03	2,57	2,16	2,07	1,83	1,84	1,86	1,89	1,73
EA16	:	:	:	:	:	:	:	:	:
EL	3,26	2,91	2,95	2,95	2,91	2,93	2,93	2,93	2,93

Source: Eurostat

IV-2b. Electricity prices - Industrial users

(Euro per kWh)

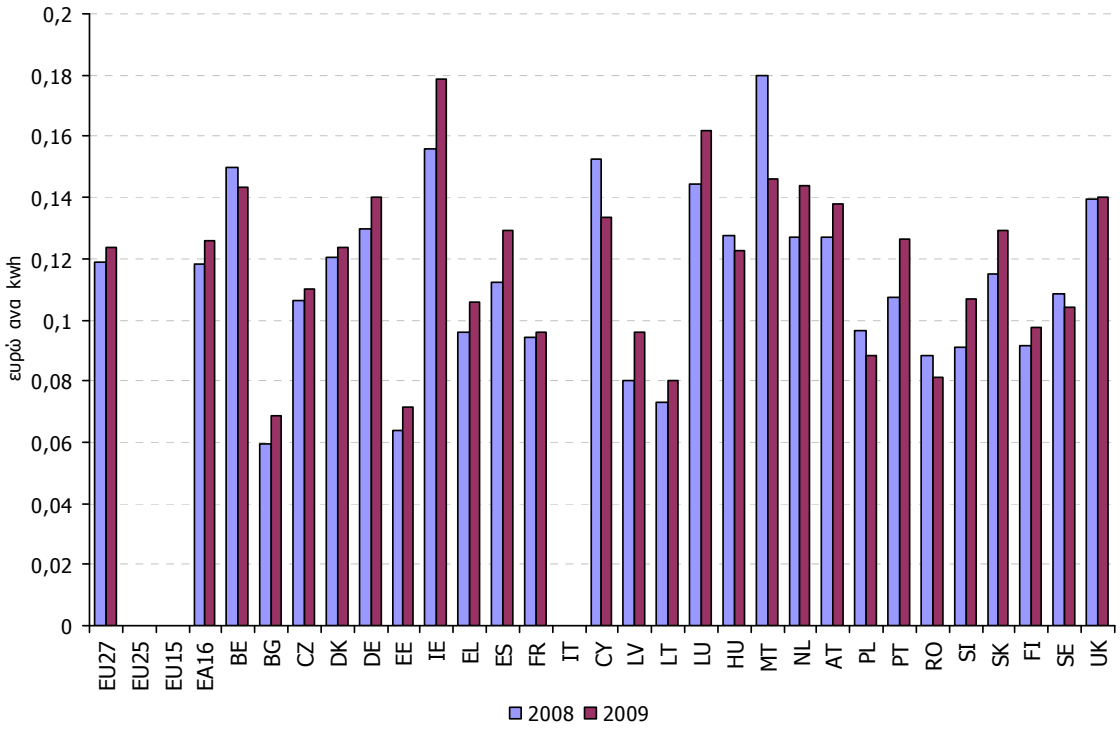


	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	:	:	:	:	0,0672	0,0752	0,0820	0,0878	0,0941
EU25	:	:	:	0,0623	0,0672	0,0755	0,0825	:	:
EU15	0,0644	0,0620	0,0648	0,0634	0,0682	0,0766	0,0837	:	:
EA16	:	:	:	0,0667	0,0713	0,0774	0,0837	0,0880	0,0951
EL	0,0571	0,059	0,0614	0,063	0,0645	0,0668	0,0698	0,0861	0,0948

Source: Eurostat

IV-3b. Electricity prices – Households

(Euro per kWh)

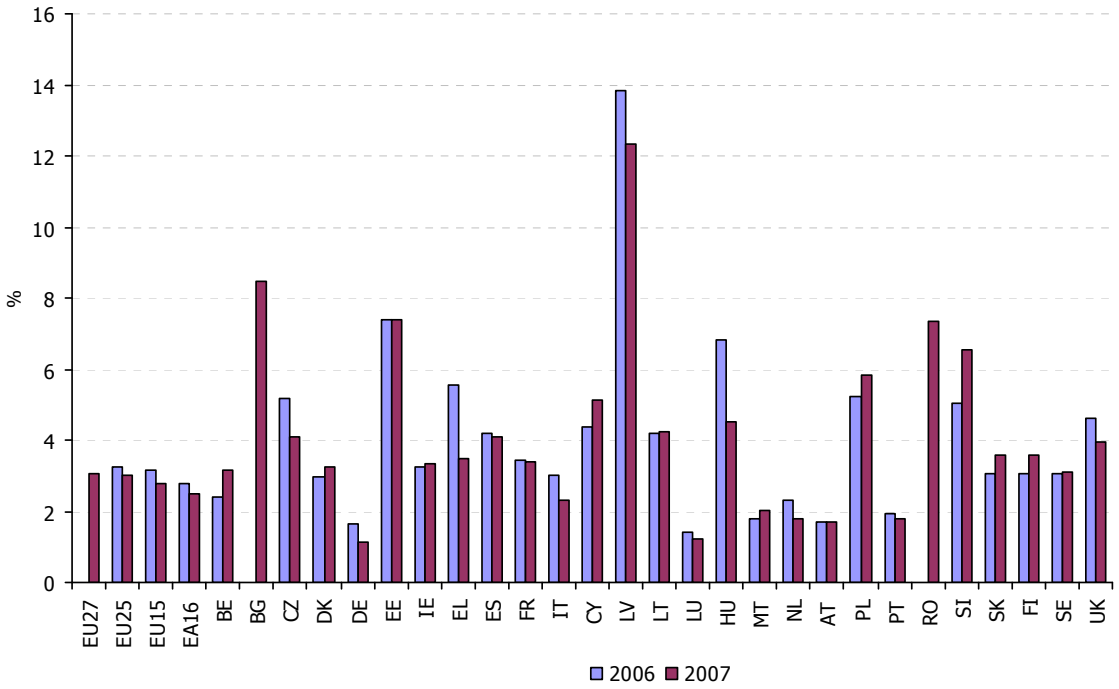


	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	:	:	:	:	0,1013	0,1068	0,1173	0,1187	0,1236
EU25	:	:	:	0,1002	0,1023	0,1077	0,1183	:	:
EU15	0,1027	0,1032	0,1036	0,1027	0,1042	0,1094	0,1205	:	:
EA16	:	:	:	0,108	0,1103	0,1137	0,1203	0,1184	0,1259
EL	0,0564	0,058	0,0606	0,0621	0,0637	0,0643	0,0661	0,0957	0,1055

Source: Eurostat

IV-4b. Value of public procurement which is openly advertised

(% of GDP)

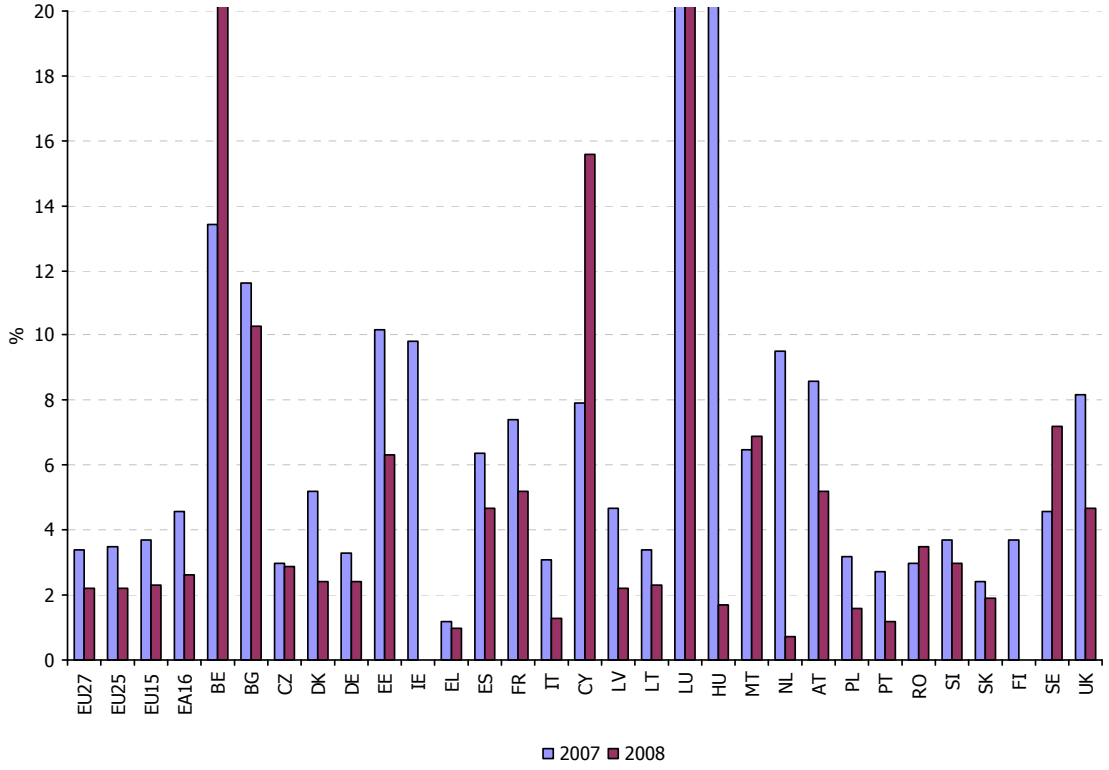


	1999	2000	2001	2002	2003	2004	2005	2006	2007
EU27	:	:	:	:	:	:	:	:	3,05
EU25	:	:	:	:	:	2,65	2,92	3,26	2,99
EU15	1,77	2,34	2,42	2,6	3,47	2,69	2,75	3,14	2,77
EA16	1,48	1,91	2,03	2,25	2,68	2,24	2,57	2,80	2,48
EL	4,52	3,85	4,1	5,21	4,44	3,71	4,8	5,54	3,5

Source: Eurostat

IV-5b. Foreign Direct Investment intensity

(average value of inward and outward Foreign Direct Investment flows divided by GDP, multiplied by 100)



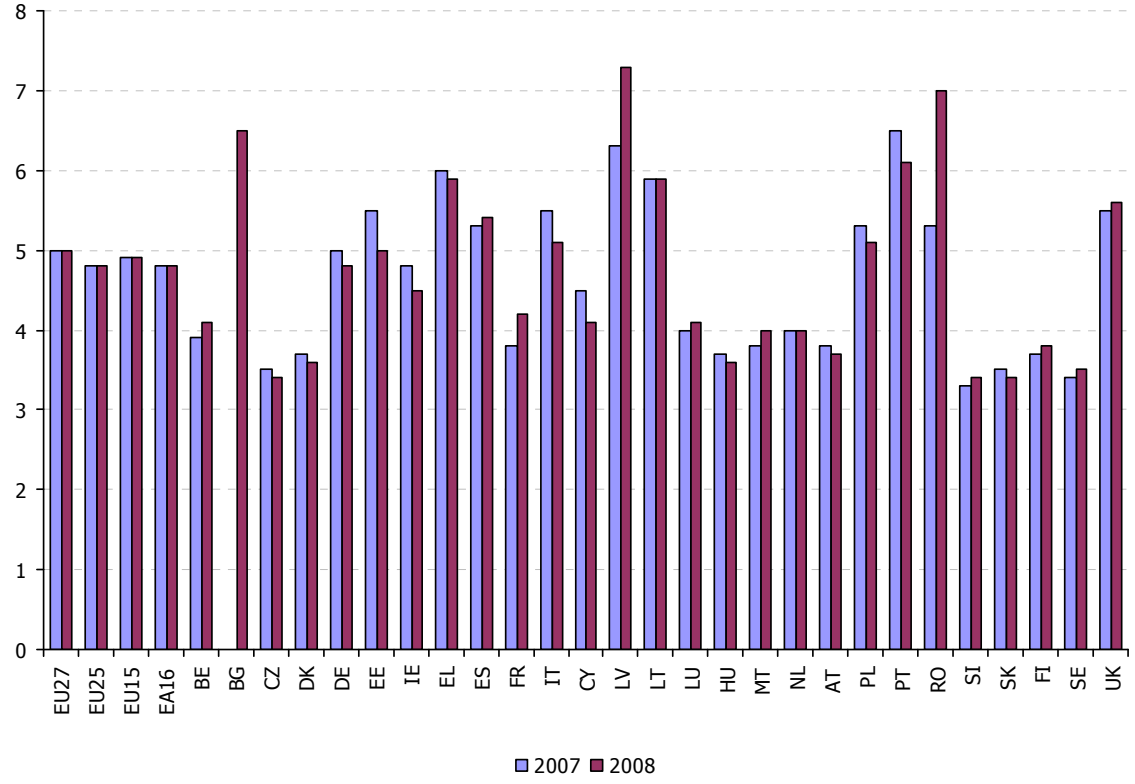
	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	:	:	:	:	0,9	1,7	2,2	3,4	2,2
EU25	:	2,4	1,3	1,3	1	1,7	2,3	3,5	2,2
EU15	3,6	2,6	1,4	1,4	1,1	2	2,5	3,7	2,3
EA16	:	:	:	:	:	:	:	4,6	2,6
EL	1,3	0,8	:	:	0,7	0,4	1,8	1,2	1

Source: Eurostat

V-B. SOCIAL COHESION

V-1b. Inequality of income distribution

[The ratio of total income received by the 20% of the population with the highest income (top quintile) to that received by the 20% of the population with the lowest income (lowest quintile)]

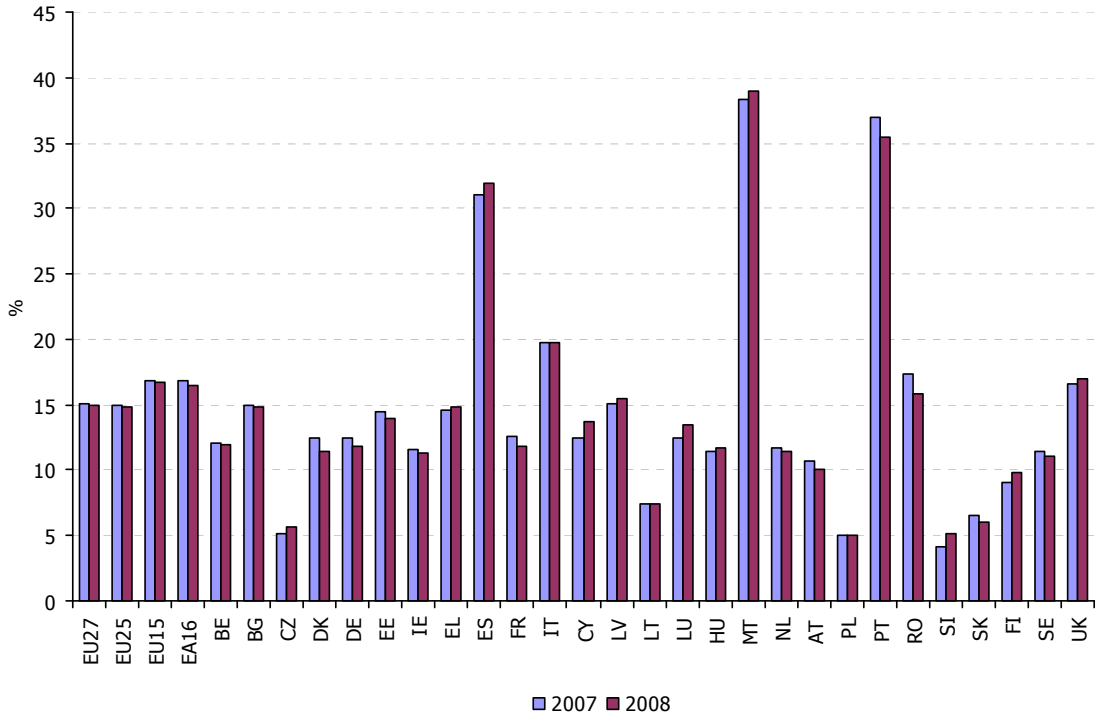


	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	:	:	:	:	:	4,9(s)	4,8(s)	5(s)	5(p)
EU25	4,5(s)	4,5(s)	:	4,6(s)	4,8(s)	4,9	4,8	4,8	4,8
EU15	4,5(s)	4,5(s)	:	4,6(s)	4,8(s)	4,8	4,7	4,9	4,9
EA16	:	:	:	:	:	4,6	4,6	4,8	4,8
EL	5,8	5,7	:	6,4	5,9	5,8	6,1	6,0	5,9

(s): Eurostat estimation
Source: Eurostat

V-2b. Early school-leavers

(% of the population aged 18-24 with at most lower secondary education and not in further education or training)



	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	17,6	17,3	17,1	16,3	15,8	15,5	15,2	15,2	14,9
EU25	17,3	17,0	16,7	15,8	15,2	15,1	15,0	15,0	14,8
EU15	19,5	19,0	18,7	17,9	17,2	17,1	16,8	16,9	16,7
EA16	20,2	19,7	19,3	19.1	18,4	18.1	17,8	17,2	16,5
EL	18,2	17,3	16,7	15,5	14,9	13,3	15,9	14,7	14,8
Males									
EU27	19,7	19,4	19,3	18,3	18,1	17,4	17,3	17,2	16,9
EU25	19,5	19,2	18,9	17,8	17,6	17,2	17,2	17,1	17
EU15	21,8	21,3	21,1	20,1	19,8	19,4	19,2	19,2	19
EA16	22,7	22,3	22,0	21,6	21,3	20,6	20,3	19,7	19,1
EL	22,9	21,3	20,7	19,9	18,3	17,5	20,7	18,6	18,5
Females									
EU27	15,6	15,2	14,9	14,3	13,5	13,5	13,1	13,2	12,9
EU25	15,2	14,8	14,4	13,7	12,8	13,1	12,7	12,8	12,6
EU15	17,2	16,6	16,2	15,6	14,7	14,8	14,4	14,5	14,3
EA16	17,6	17,1	16,6	16,5	15,4	15,6	15,2	14,7	13,9
EL	13,6	13,4	12,6	11,0	11,6	9,2	11,0	10,7	10,9

Source: Eurostat