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Editorial Policy

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IOBE

The Foundation of Economic and Industrial Research (IOBE) 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

This is the third report on the Greek economy that IOBE is publishing in 2010, as part of its periodic reviews. Its publication takes place in a critical period for the Greek economy, which is in the midst of a recession, while a range of fiscal and structural reforms are being carried out to meet the obligations of IMF-ECB-EU stand-by arrangement and to make its directions more specific. The report contains **four sections** and an **appendix** of structural indicators that track the progress toward the attainment of the Lisbon Strategy's objectives. More specifically:

In general the report refers to and is supported by data which were available up to 22/09/2010. However, in quite a few cases newer data were also taken into account. The **first section** contains a **brief overview** of the report, presenting its main points, which are subsequently analysed in detail in the main text. The **second section** examines the more general economic environment and includes: a) an analysis of the **global economic environment** based on the latest reports of the European Commission, OECD and IMF, b) a presentation of the **economic climate** in Greece, as outlined in IOBE's business surveys, and c) an analysis of the **economic policy** challenges (problems, threats and opportunities) in short and medium / long term. The emphasis in this report is placed on the fiscal outlook, which largely determines the key parameters of the economic policy applied in Greece today.

The **third section** focuses on the performance of the Greek economy. It contains an analysis of the **current macroeconomic environment** and its medium-term prospects, the **developments** in **key sectors of the economy**, the **export performance** of the Greek economy in 2010, the developments in the labour market (**employment** and **unemployment**), the course and the factors that shape **inflation** and, finally, the developments regarding the **balance of payments**.

Lastly, the **fourth** section of the report presents the initial findings of a sectoral study carried out by IOBE concerning the **management of solid waste** in Greece.

IOBE's next quarterly report on the Greek economy will be published by the end of this year.

1. BRIEF OVERVIEW

Economic developments: problems, threats and opportunities

With the policy measures that have been taken up to now, Greece has made an important step to avoid declaring debt moratorium, which would have had dismal impact on the welfare of its population. Despite the continued distrust of the global markets, the support mechanism provides a "window of opportunity" in order to: (a) fully restore the fiscal balance, the liquidity in the banking system and the normality of the credit conditions for the private sector, and (b) return the economy on a path of real conversion to the rest of the Euro area. Nevertheless, there are problems, threats and opportunities, both in the short-term and the medium / long-term that should be taken into account.

In the short-term, the immediate threats are: a) fiscal targets shortfall, b) lack of liquidity in the private sector. The low rate of revenue growth (3.3% for the first eight months of the year) compared to the annual target (13.7%) creates the threat of falling short of the fiscal targets. Part of the shortfall is due to adopting overambitious targets for the tax measures, most likely because of underestimation of the demand elasticities with respect to prices and income. However, large part is also due to innate problems of the tax collection and audit mechanisms. The recently adopted termination of unaudited tax cases against a fixed payment is a measure of last resort, which contains many dangers. If this measure is not accompanied with a systematic attempt to reorganise the audit mechanisms and to establish modern, simple, permanent and competitive tax system, its outcome in the long-term will be harmful: the inveterate tax evaders will gain once more and the tax evasion problem will aggravate.

The other threat, the liquidity insufficiency, can be alleviated if the banks raise their equity capital, following the example set by the National Bank of Greece, or take advantage of the Financial Stability Fund's €10 billion reserve. All remaining measures most likely serve other (legitimate) purposes, but not the goal of improving the liquidity conditions in the economy.

In the medium / long-term, the most important problem for Greece is that it is still enacting its old - soaked in statist philosophy - model of development. This problem gives rise to major threats to the competitiveness and the long-term sustainability of the Greek economy and, consequently, to the welfare of its people. The latest social security policy measures and the stance of the government on the issue of public-use truck licenses show that there is no lack of leadership initiatives. Nevertheless, there is a need for outlining clearly a new - market-friendly - model of development that has an emphasis on competitiveness and openness. The drivers of

growth in this model should be private investment and exports, particularly in sectors with proven competitive advantage.

The government should take up the initiative of drafting a ten-year development programme, stating clearly this change of direction. It should be reminded that the support agreement contains a much needed medium-term programme of fiscal and structural adjustment, but is not a panacea. The new model of development has the following features:

a) Establishment of stable and competitive tax framework to prevent expatriation of companies and to attract foreign capital, b) Acceleration and completion of the reforms, c) Adoption of fast-track processes for large investment projects, d) Sale and/or utilisation of state-owned real estate, e) Strengthening of the equity of the banks, either through the stock exchange or the Financial Stability Fund, f) Restoration of modern corporate governance conditions in large state-owned companies and organisations, g) Adoption of international accounting standards, information systems and modern organisation and management practices in public administration and the wider public sector, h) Setting measurable targets regarding Greece's position in the global rankings of competitiveness, transparency, corruption, educational performance, innovation activities, etc., i) Facilitation of labour mobility from branches and enterprises that approach the end of their life-cycle to those that are at the beginning of it, j) Promotion of a social model that ensures a minimum guaranteed income, facilitates adaptation and mobility in the labour market and, most importantly, provides equitable access to high-quality education and health.

Three economic scenarios

Three scenarios on the course of the Greek economy prevail:

a) The **"hope scenario"** envisages that Greece continues, in general terms, to implement the fiscal consolidation programme of the stand-by arrangement and, in parallel, the policies that primarily facilitate growth (liberalisation of markets and professions, privatisation, investment promotion, etc.). In this case, the fiscal deficit is expected to fall to levels close to 7% of GDP in 2011 and 5% in 2012, while aggregate income will continue its fall in 2011 at a smaller rate than in 2010, returning on a growth path in 2012 (between 1.5% and 2.5% annual growth).

It is possible, but not certain, that the implementation of the optimistic scenario will allow the gradual return of Greece in the global bond markets. It is not certain, because public debt will continue to rise, even under this optimistic scenario (reaching 144% of GDP in 2012 and 2013). Under these circumstances, the investors in the global markets might continue to be reluctant to buy Greek bonds, which would imply that the spreads will not fall drastically. The most probable and reasonable outcome in this case is an extension of the duration of the loan that was granted to Greece by IMF, Euro area countries and ECB. In general, the salvation of the Greek economy in this scenario is in the hands of

its donors and in particular of the German government. Thus, we hope, but we are not certain that we are going to avoid debt moratorium, as we depend on wider economic developments, but also on the political situation abroad and in Germany in particular.

b) Second is the "**catastrophe scenario**", where the fiscal consolidation is abandoned due to public outcry or continues but without structural reforms. The first case is that of "sudden death", where the granting of the remaining tranches of the loan from the stand-by arrangement is discontinued and Greece declares debt moratorium. In the second case, the "death" is slow and agonising, in the sense that the economy will react adversely to "plain" fiscal consolidation, as the lack of structural reforms will not allow the strengthening of the resilience of the economy through a boost of competitiveness and an improvement in the current account balance. In this case, the debt moratorium will be delayed but will not be avoided due to long-lasting sluggishness of GDP growth. This course of events would prove to be catastrophic for the welfare of the majority of Greek people and will threaten the stability of the monetary union.

c) The "**salvation scenario**" envisages that, in addition to the policies of the first scenario, the government adopts aggressive policy of utilisation of the state-owned real estate. The direct effect of this would be that the global financial markets would take notice of the repayment of part of the public debt. This unexpected positive development will create the expectations that, sooner or later, the debt-to-GDP ratio will fall and the catastrophic for the welfare of the Greek people debt moratorium will become much less likely to happen. In this respect, it is advisable that: First, the state-owned real estate is evaluated. Second, the means of its utilisation and the potential revenue from it are established. Third, the course of the public debt over the next ten years is estimated, taking into account this factor.

At a global level, a more modest recovery is expected amidst fiscal problems and weakened expectations

The return of the global economy on a growth path since the beginning of 2010, with accelerating speed until the middle of the second quarter, has shown signs of deceleration. The uncertainty over the sustainability of the public finances of the EU member-states (triggered by Greece) and the weakening of the expectations in the US economy (where unemployment remains high and construction – property market continue to decline) were the main factors that created doubt about the speedy recovery of the global economy. The concern for the prospects of the global economy transpired in a new turmoil in the largest stock exchanges in the beginning of the summer and a – temporary – return of the credit squeeze in the interbank markets. A counterweight to these developments came from the performance of the developing and emerging economies of Asia. Their growth during the first half of this year was stronger than anticipated, moderating the adverse con-

sequences from the new turmoil in the global financial system.

The stability of growth in the emerging and developing Asian economies is expected to continue to have positive effect for the global economy for the remaining of 2010. The developed economies are expected to lag behind, postponing their recovery for 2011.

Deepening of the recession in Greece, spreading to its core productive sectors

The GDP of the Greek economy accelerated its fall in the second quarter of the current year, reaching 3.7%, from 2.3% in the preceding quarter. Overall for the first half, the recession stood at 3.0%, from 1.4% in the corresponding period of the previous year. The decline in the first half of the year is mainly attributed to continuing contraction of investment, followed by the cuts in public consumption as part of the fiscal consolidation effort. The resilience of the private consumption that was observed in the first quarter of the year was not sustained after that, mainly due to the series of fiscal measures adopted in the second quarter. The external deficit was reduced, as the imports recorded a nearly two-digit percentage fall, which prevented a deeper GDP decline.

Similar worsening was observed in the course of the main indicators of economic activity in the second quarter, with the exception of a few indicators that concern industry. The small increase of turnover in retail trade in the beginning of the year was followed by a fall in the second quarter. Construction recorded a new large decrease, while significant reduction was also observed in tourism turnover. The more modest reduction in industrial production in the second quarter was caused by higher foreign demand, which partly moderated the consequences from the fall in domestic demand.

The fiscal consolidation effort continues, but with evident shortfalls from the targets

The execution of the state budget in the first eight months of the year had two sides. The good one concerns expenses, where the cuts have surpassed the target for 2010, set in the stand-by agreement, with the caveat that many state obligations remained unpaid. On the other side, however, revenue is lagging behind with the distance from the targets increasing over the course of the year. In addition, the aggregate for 2010 for General Government, which includes institutions outside the state budget (local authorities, social security funds), will probably be worse than expected, which is also anticipated by IMF in its updated report on the Greek economy.

Still, there are sources that might reduce the shortfall (e.g. change in the timing of tax revenues and EU transfers). Provided that these sources are utilised and taking into account smaller than anticipated reduction in nominal GDP, the fiscal deficit will stand **close to 8.1%**, i.e. within its target.

Overall, the developments are encouraging and the fiscal consolidation pro-

gramme is on a good track of implementation. The existing threats, however, should provide the impetus for the government to promptly implement the reorganisation of the tax system, the tax administration and the collecting mechanisms. Additionally, the reduction of expenditure by the households and the enterprises, which drags down the tax revenue, requires acceleration of the structural reforms in the economy, so that consumption, investment and employment recover as quickly as possible.

The recession intensifies in the second half of 2010…

The escalation of the effort to achieve the fiscal targets as we approach the end of the year, the political and social processes in connection with the reforms under implementation-deliberation in the midst of local government election campaign and, lastly, the submission of next year's budget draft to the parliament are expected to determine the economic developments until the end of 2010 and beyond. In a rapidly changing economic environment, as the one we are currently experiencing, having already passed through a sequence of shocks in the past year, the degree of sensitivity to any further adverse development is already very high. Given the unfavourable economic climate and the fact that the positive effects from the reforms have not been felt yet, as they need time to mature, the recession is expected to intensify in the current half, reaching **3.5%** in 2010.

… with increasingly larger impact on the labour market

The accelerating fall of demand and economic activity, the uncertainty over the fiscal target achievement and the – sometimes forerunning – concern about the extent and content of implemented reforms, inevitably have an adverse impact on the labour market. Despite the fact that unemployment increased only marginally in the second quarter, compared to the first, (from 11.7% to 11.8%), the year-on-year difference increased, reaching 2.9 percentage points. The increase in unemployment is due mainly to accelerating fall in employment (-2.3% year-on-year in the second quarter), as well as continued enlargement of the labour force, which has surpassed the five million mark since the beginning of 2010, increasing the instances of "new" unemployed. These discouraging trends are expected to persist for the remaining of 2010, revoking even the seasonal effects that historically have benefited employment in the second half of the year. As a result, unemployment is expected to stand at levels slightly above **12%** for 2010 and surpass 13.5% in 2011.

The inflationary pressure are neither intensifying nor subsiding for the time being

Despite the extent and the size of the increase in the tax rates that were included in the package of fiscal measures of the support agreement, inflation did not accelerate after May. It remained in the region of 5.4% during the period June – August, while for the first eight months it stood at

4.4% from 1.1% in the corresponding period of the previous year. The weakening of demand, due in part to the wage cuts in the public sector and the reduction of pensions, together with the increase in unemployment, largely explain the flattening of the inflation growth trend. There is some possibility that a partial abatement of the distortions present in the markets for certain goods and services has contributed to this development, as the low levels of the price index in the summer of 2009 was supportive of inflation acceleration. Overall, inflation is expected to decelerate to **4.6%** for 2010, as the main factors keeping inflation at bay will persist and probably strengthen in the remaining of 2010.

IOBE special study: The management of solid waste in Greece

The current situation regarding the issues of solid waste generation and treatment in Greece are examined in the second study of IOBE's series on environmental management. The composition of solid waste generation per sector (households, hospitals, excavation and construction, hazardous, etc.) is estimated based on the latest available data. In addition, the management techniques for each solid waste flow are analysed and the domestic and EU legal framework is presented, together with the extent of its implementation in Greece.

2. ECONOMIC ENVIRONMENT

2.1 The Global Economy's Trends and Prospects

The Global Economic Environment

The new turmoil in the global money markets and major stock exchanges in the period May – June seems to have subsided, without, however, the market conditions returning to their prior state. After all, quite a few of the turmoil's causes, such as the uncertainty over the fiscal stability of the EU countries, the weak expectations on economic growth in the developed countries, the sluggish political reaction to the new realities, etc., still persist, to a large extent. Despite all this, the rate of economic growth in the EU in the second quarter of 2010 was substantially higher, compared to the preceding quarter and the forecast of the international institutions for the year as a whole. The positive results of the developing and emerging economies of Asia continued to surpass expectations, preventing the spread of the adverse effects from the new turmoil in the global financial system that was triggered by the EU's fiscal crisis.

The above counterbalancing tendencies and the return of the reservations regarding the speed of recovery of the global economy are reflected in the differing evaluations conducted by international institutions and organisations. The European Commission, in its mid-term report, revised upwards its interim growth forecast for the Euro area, EU and the global economy in total.[1] In contrast, OECD revised downwards its growth forecast for the 7 most developed economies in the second half of 2010 by one percentage point from 2.5% to 1.5%.[2] Meanwhile, IMF's latest growth forecast (July) for the developed economies for the current year remained almost unchanged (USA: 3.3% against 3.1%, Euro area: unchanged at 1.0%), while the growth forecast in the emerging and developing economies was raised to 6.8% from 6.3% predicted earlier.[3]

In more detail, the concern over the sustainability of the public finances of some of the Euro area countries, which was triggered by Greece's recourse to the EC-IMF-ECB support mechanism, intensified further due to fears over having similar developments in other member-states, mainly of the European South (Spain, Portugal). This concern was augmented further by the effect from the fiscal consolidation programmes' intensification on income growth rates. These factors exerted intense pressure on the indices of the major European stock exchanges. The return of uncertainty to the interbank market intensified the credit squeeze, especially in

[1] Interim Forecast, European Commission, September 2010
[2] Interim Economic Assessment, OECD, September 2010
[3] World Economic Outlook Update, July 2010 & World Economic Outlook, April 2010, IMF

the member-states with adverse fiscal conditions.

The weakening of the expectations for a prompt return of the US economy to its pre-crisis conditions within 2010 added to the impact of the European Union's fiscal instability. Despite the relatively high rates of growth of the US economy during the first half of the year, at 2.5-3%, unemployment exhibited high degree of downward rigidity, while the markets for real estate, especially for newly-built property, continued their free-fall. The growth of the Japanese economy also slowed down significantly in the second quarter, despite the fact that it is coming out from a two-year recession.

The rapid spread of fears for fiscal instability in the Euro area in the end of May, led to the establishment of a European Financial Stability Facility by the European Commission and the IMF. This facility constitutes a mechanism to support the Euro area countries that have fiscal problems and has a reserve of €750 billion. Its establishment gradually limited the fluctuations in the major financial markets. However, as a large number of Euro area member-states have been in a state of budget surveillance by the EC, there are still concerns over the fiscal stability of the area, albeit milder compared to the spring or early summer.

Meanwhile, the developing countries of Asia continued to grow at an accelerating rate. The export boost and the strong domestic private demand - offspring of the applied economic policies and the attempt of the enterprises to increase their production capacity - supported the increase in economic activity. There are, nevertheless, significant differences between the growth rates of the countries in the region, as each of them has its own particularities. Moreover, the composite leading indicators of OECD have shown signs of slowdown in the upcoming months in the industrial production of China and India, the largest economies in the region.[4]

The mild slowdown of the recovery rate of the global economy was reflected in the course of the short-term economic indicators and the leading indicators of economic activity. Industrial production in EU-27 increased in July by 6.8% on a year-to-year basis, slower than the increase in May, when it recorded its largest increase in at least ten years (9.0%).[5] The international trade flows, which primarily benefit the developing countries, increased marginally in July (+0.6% month-on-month), which is significantly lower than the change experienced in June (+2.3%). For the whole of the second quarter of 2010, the growth rate of the international trade flows reached 3.6% form 5.7% in the preceding quarter.[6] The global Purchasing Managers' Index (PMI) for manufacturing continued to decline for a fourth consecutive month, remaining, however, above

[4] OECD Composite Leading Indicators, News Release, 13/09/2010
[5] News Release Euro Indicators, EUROSTAT, 118/2010, 12/08/2010
[6] World Trade Monitor, June 2010, CPB Netherlands Bureau for Economic Analysis

50, which indicates that the sector has kept expanding. The corresponding index in Services presented a similar pattern, standing at 53.5 from 56.8 in April.[7] The growth in economic activity in the OECD countries is expected to reach a turning point in the current half of the year, as the composite leading indicator of the economic cycle experienced a marginal fall in June and July for the first time since the autumn.

The weakening of the growth dynamic of the world economy in the past few months has reflected on the course of inflation and employment. Inflation in the OECD countries stood at about 1.5% in June-July, lower than the 2.0% level around which it fluctuated in the first half of the year. The weakening – for the time being – of the speed of recovery caused a stronger fall in the inflation rate of energy commodities, while food prices have continued to accelerate at a moderate pace. Stabilising tendencies prevailed during the summer months in inflation in the Euro area, despite previous year's low basis of comparison. In its latest report, OECD predicted a reduction in structural inflation for all economies except the developing ones, because of spare production capacity and excess supply in the labour market.

The subdued labour markets globally and the reservations about the positive prospects of the world economy have prevented unemployment to fall. Its rate in the OECD countries stood at 8.5% in July, slightly lower than its highest level for the last decade, recorded in the last quarter of 2009 (8.8%). In four of the seven most developed economies (USA, France, Japan and Canada), the falling trend was reversed (albeit at a small margin) in the period July – August.

Specifically in relation to the seven major world economies, in the first half of 2010 the **US** recorded the second largest GDP growth rate among the G7 economies (about 2.7%), close to the levels of the forerunner Germany (2.8%). This particular development was due exclusively to domestic demand factors and mainly to the consumption of non-durables and – in the second quarter – business investment. The net contribution of the external sector was negative during the first half and exacerbated intensely in the second quarter due to the sharp boost in the demand for imports. As the stimulus to the domestic demand has come from fiscal and monetary policies (e.g. tax rebates, liquidity injections from the FED, etc.), their planned gradual withdrawal is causing concern about the further course of growth of the US economy. These fears led the FED to extend the purchase of treasury bonds through the Term Asset-Backed Securities Lending Facility. Policy measures were also taken at fiscal level – a six-year infrastructure investment programme was announced and the tax burden on investment in high-tech and infrastructure was reduced.

[7] JPMorgan Global PMI in Manufacturing/Services News Release, 01/03 September 2010

Nevertheless, the extent and the targeting of the particular programme are considered limited and should be put in the perspective of the current election period (for the Senate). Moreover, the sharp increase in government deficit and debt do not leave much room for a continuation with equal strength of the policies adopted in the past year and a half. The expansion of the goods & services trade deficit, which increased by almost 80% in a year since June 2009, has revealed the inability of the external sector to support the American economy. The uncertainty that all these developments have caused, was reflected in a rebound of unemployment to 9.5% in August and in a significant fall in residence construction (-7.0%) and in newly-built and existing dwellings sales in July (-27% and -12.6% correspondingly).

The **Japanese** economy seems to have lost its first quarter dynamic, as its growth rate fell from 4.4% to 1.9% in the second quarter. The consequences of the recession in the country's domestic economy during the past two years and the accompanying deflation seem not to have fully subsided, as domestic demand - public and private - remained almost unchanged in the second quarter (+0.1%). In contrast, net exports had very positive contribution to the domestic product. The sluggish domestic demand caused new boost of the deflationary pressures in June (with inflation standing at -0.9%, from -0.7% the preceding month) and a fall in industrial production in the same month, for the first time since the beginning of 2009. As a result, despite the extensive fiscal measures (which are expected to raise the government deficit to about 9% in 2010 and 2011), the retention of the base interest rate of the central bank at 0.1% since the end of 2008 and the remaining monetary policy measures, the Japanese economy is expected to exhibit mild growth in 2010.

The economy of **China** is growing at a very rapid rate. Surpassing the forecasts from earlier this year, the domestic product increased by 11.9% in the first quarter, slowing down in the second but remaining above 10% (10.3%). Still, the recorded slowdown was expected, as the government had started gradually to withdraw the policies of fiscal and monetary stimulus, in order to prevent overheating of the economy. The credit expansion for housing purposes and local authorities has slowed down, while public investment has been reduced. The smaller increase in housing investment will contribute to an increase in the trade surplus, which was halved in 2009 compared to 2008, as a large section of the imports constitute of goods used in construction. The impact of the limitation or the halt of the expansionary policies on GDP is expected to be felt stronger in the second half of the year. Private consumption is expected to act in the opposite direction, due to the significant wage growth and persistently high consumer confidence. Under these influences, the growth rate of the domestic product is not expected to fall below 10%.

In Asia's second largest developing economy, **India**, the GDP growth remained in

the range of 8.6-8.8% in the first half of the year. The especially beneficial lending terms to the businesses and the surge in their profits in the previous year, fuelled the fast business expansion. Then again, the increase of domestic demand has increased significantly the inflationary pressures in the domestic sector, which are in part also due to the impact on food reserves of the adverse weather conditions during the winter. The price increase, together with a probable continuation of the slowdown in global trade flows will moderate the impetus on growth coming from the external sector, but not to a very large extent due to the puissant domestic economic activity.

Complete reversal of last year's recession is under way in the **states of ex USSR**. After a GDP fall of 6.6% in 2009, the growth rate in the first quarter of 2010 reached 3.5%. The preliminary results for the second quarter are indicating significant improvement of this performance, as in the largest economies in this region, such as Russia, economic growth has significantly accelerated. Still, the countries with the largest growth rates in the first quarter were those that had the lowest level of income and living standards. As the remaining – stronger – economies in the region are benefiting from the production and trade of energy commodities, it is quite possible that the growth rate of this group of countries will surpass significantly the latest forecasts, which stand at slightly above 4.0%.

The **Russian** economy, in particular, has been already growing at a rate higher than 5% (5.2% in the second quarter), double than its first quarter rate (2.5%). The international trade revival constituted the key recovery driver in this case. Private consumption and investment have started to rejuvenate and their growth is expected to accelerate in the coming months. Private consumption was supported by inflation, which stood at about 6%, its lowest level in the past 19 years. Its slowdown came largely from the appreciation of the rouble against the dollar and the euro in the beginning of 2009. Still, the impact on domestic wheat production of the August fires will abruptly revoke the disinflation trend. Moreover, the "expensive" rouble moderates the competitiveness of the Russian exports, driving in the meantime the large increase in imports that has already taken place. Regarding investment, the reduction of interest rates is expected to lead to acceleration in credit expansion, as the banks will be restoring the adequacy of their capital base, following the turmoil in the financial system of the country in late 2008. Accordingly, the growth acceleration in the second half is expected to be considerably more modest, compared to the first half of the year.

A similar picture of moderate slowdown of the global economy emerges also from the economic climate indicators of the "World Economic Survey", conducted by the German institute IFO, which fell for the first time since the first quarter of 2009.

More specifically, the world economic climate indicator for the third quarter experienced a slight drop compared to the previous quarter (Table 2.2). Still, it remains above its long-run average (96.9), while its value surpasses 100, which signifies growth of the global economy, albeit more modest, in the coming months. The evaluation of the current situation improved significantly, continuing the trends exhibited in the previous quarter. The weakening of the positive expectations for the next six months, however, had an even larger magnitude. Still, taking into account the intense improvement of expectations until the first quarter of 2010, the weakening that they have been experiencing could be considered as correction of excessive optimism.

Table 2.1

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

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

Developing Asia: China, India, Indonesia, Malaisia, Philippines, Thailand, Vietnam
ASEAN5: Indonesia, Malaysia, Philippines, Thailand, Vietnam
Middle East and North Africa: Algeria, Bahrain, Djibouti, Egypt, Jordan, Iran, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Syria, Sudan, Yemen, Tunisia, United Arab Emirates
Sub-Saharan Africa: Angola, Botswana, Camerún, Cape Verde, Chad, Cote d' Ivoire, Etiopía, Gabón, Guinea Ecuatorial, Kenya, Congo, Mauritius, Moroco, Namibia, Nigeria, Seychelles, South Africa, Swaziland, Tanzania, Tunisia, Uganda etc.
* numbers in parenteses indicate previous forecast from the IMF, World Economic Outlook, April 2010
Source: International Monetary Fund, World Economic Outlook Update, July 2010.

Table 2.2

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

Quarter/Year	**III/08**	**IV/08**	**I/09**	**II/09**	**III/09**	**IV/09**	**I/10**	**II/10**	**III/10**
Economic Climate	74,2	60,6	50,7	65,2	79,6	91,4	99,5	104,1	103,2
Current Situation	87,9	69,2	46,7	39,3	43,0	54,2	67,3	80,4	93,5
Expectations	61,4	52,6	54,4	89,5	114,0	126,3	129,8	126,3	112,3

Source: IFO, World Economic Survey, WES 03/2010

Table 2.3

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

Quarter/Year	III/08	IV/08	I/09	II/09	III/09	IV/09	I/10	II/10	III/10
North America	59,4	51,0	46,0	66,9	78,7	85,4	90,4	95,4	88,7
Western Europe	73,4	59,6	52,6	64,5	76,4	89,3	98,3	99,3	102,2
Asia	71,9	57,9	47,4	69,3	89,5	101,8	108,8	113,2	107,9

Source: IFO, World Economic Survey, WES 03/2010

Regarding the economic regions, the economic climate has been less advantageous in **North America** and **Asia**. In contrast with these two areas, the corresponding index for **Western Europe** has been on the rise for a sixth consecutive quarter. Despite the fact that in all three regions, and in Western Europe in particular, the evaluation of the current situation has improved, it is still not satisfactory. In contrast, the expectations for the next six months weakened in all three regions.

The Economies of the EU and the Euro area

The acceleration of the recovery of the Euro area and the European Union as a whole during the second quarter was curbed by the heightened uncertainty over the sustainability of the public finances of the Euro area countries near the end of the period. The initiative of the European Commission to establish a mechanism to support government and banking system liquidity in countries that would experience borrowing difficulties, limited rather quickly the turmoil that occurred in the meantime on the major stock exchanges and the interbank lending markets. Despite the adverse domestic developments, the pace of recovery of the EU economy was faster than expected, driven by the extraordinarily high mobility in international trade, which benefited mostly the countries with export-oriented industrial production. As a result, both in the Euro area and in EU-27, GDP increased year-to-year by 1.9% in the second quarter, from 0.8% and 0.7% in the preceding quarter.[8]

The weakening of the fall in **investment** was the second most important driver (after the external sector) behind the GDP growth acceleration. Fixed capital formation was lower by only 1.0% in the Euro area and 0.8% in EU-27 in the second quarter, while in the first quarter the year-on-year reduction reached 4.6% and 5.1% accordingly. As a result of the small decrease in fixed capital investment, its negative contribution to the change in GDP did not surpass 0.2% in either economic region, from about 1% in the preceding quarter. If the situation in the interbank markets and the major European exchanges remain relatively normal, the financial system will gradually end the contraction of business credit. Such a development, together with the return of the level of production capacity to 80% in the Euro area, which signifies the need for production expansion through investment in equipment, is expected to lead to an

[8] News Release Euro Indicators, EUROSTAT, 127/2010, 02/09/10, as for all the remaining national accounts figures that follow.

increase in fixed capital formation by the end of the year.

The small reinforcement of **private consumption** also contributed to the strengthening of economic growth. Consumer expenditure of the households increased by 0.8% in the Euro area and by 0.7% in EU-27 in the second quarter, which is higher by 0.5 and 0.6 percentage points than in the first quarter. To some extent its acceleration was expected, as in this particular period inflation had started to slow down, while consumer credit expansion, albeit low, had ceased to decelerate. Nevertheless, the stagnancy of unemployment in the beginning of the third quarter at the levels recorded in the beginning of the year, the inversion of the disinflationary trend since July and the concern over the fiscal prospects are expected to contain any further increase in private consumption in the medium-term.

Regarding the public finances, which remain in the spotlight, the increase in **public consumption** did not change in the second quarter, remaining at about 1.2% in the Euro area and 1.5% in EU-27 for the whole of the first half of the year. Its expansion in the Euro area is significantly smaller compared to the same period in 2009 (about 2.4%), but it does not change in EU as a whole, which implies that the consumer expenditure in the public sector of the countries outside the Euro area is accelerating. The gradual completion of the economic policy interventions for the treatment of the consequences of the financial crisis and the fiscal consolidation effort that is under way in most Euro area countries will reflect in reduction of public consumption in the remaining months of the year, moderating its increase in EU-27 as a whole. In this light, the spring forecast of the European Commission of an increase of public consumption by 0.9% in the Euro area can be considered reasonable.

The combined influence of these tendencies is expected to slow down the growth of GDP in the remaining of 2010, with more intense slowdown in the member-countries of the Euro area. Similar is the conclusion of the European Commission in its interim autumn report. Still, taking into account the low rates during the first quarter, the growth for the year total will most probably stand at levels slightly lower than 1.7% in the Euro area and 1.8% in EU-27, as predicted in the EC report, rates close to those recorded in the second quarter (1.9%). It should be reminded that the spring forecast of the European Commission did not surpass 0.9% and 1.0% accordingly.

Despite the faster than initially expected recovery, there were significant variations among the EU-27 and the Euro area countries, not only with respect to the speed of recovery, but also even regarding the phase of the business cycle in which they were in. As expected, Greece is the only country from those still in recession where the GDP decline intensified, which made it the country with the largest drop in the Euro area. The fall of GDP in Greece was marginally smaller than that of Latvia, which recorded the largest fall in the European Union overall. Slowdown of the

recovery in the second quarter of the year was recorded only in Portugal. Germany and Finland experienced the largest growth rates in the Euro area (3.7% and 3.1% respectively), while the countries with fastest growth in the EU as a whole were Slovakia and Poland (5.0% and 3.8%).

After the euphoria, recorded in the business sentiment indicators of the European Commission in the beginning of the second quarter, the public finance turmoil and the anticipated mild weakening of economic growth in the second half of the year are not expected to improve the situation in the **labour market**, at least not in the medium-term. The preliminary data on economic activity from the beginning of the third quarter are aligned with this expectation. The industrial production growth in the Euro area and EU-27 weakened for a third consecutive month in July. In addition, the year-on-year expansion of retail trade volume stabilised at about 1.5% in both economic regions in the period May-July. Lastly, the sectoral economic sentiment indicators either remained unchanged or marginally improved in July and August. The downward impact of seasonal factors is expected to have limited extent in comparison with previous years. After all, in July unemployment remained for a fifth consecutive month at 10.0% in the Euro area and at 9.6% in the European Union as a whole.[9] The low, in relation to the past, and continually falling since the second quarter of 2009, expansion of the nominal hourly labour cost could be considered as a positive development that could contribute to reduction in unemployment. In the second quarter of 2010 it did not surpass 1.6% in either the Euro area or EU.[10]

The persistence of unemployment at high levels and the modest growth in consumption in the EU, together with the slowdown in the expansion of international trade, will prevent significant acceleration of **inflation** until the end of the year. The impact on prices from the wheat harvest wipeout due to the fires in Russia is expected to be limited, as the imports from this country cover a small part of EU's needs. Since May, inflation has experienced mildly increasing – stabilising tendencies, fluctuating around 1.6% in the Euro area and 2.0% in EU-27.[11]

[9] News Release Euro Indicators, EUROSTAT, 125/2010, 31/08/10
[10] News Release Euro Indicators, EUROSTAT, 133/2010, 14/09/10
[11] News Release Euro Indicators, EUROSTAT, 135/2010, 15/09/10

Table 2.4

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

	EU-27			Euro area		
	2009	2010	2011	2009	2010	2011
GDP	-4,2	1,8*	1,7	-4,1	1,7*	1,5
Private Consumption	-1,7	0,1	1,3	-1,1	0,0	1,1
Public Consumption	2,2	1,0	0,1	2,3	0,9	0,3
Investment	-11,5	-2,2	2,5	-10,8	-2,6	1,8
Employment	-2,0	-0,9	0,3	-2,1	-1,0	0,1
Unemployment	8,9	9,8	9,7	9,4	10,3	10,4
Inflation	1,0	1,8	1,7	0,3	1,5	1,7
Exports	-13,0	4,9	5,0	-12,3	5,0	5,2
General Govern. Balance (% of GDP)	-6,8	-7,2	-6,5	-6,3	-6,6	-6,1
General Govern. Dept (% of GDP)	73,6	79,6	83,8	78,7	84,7	88,5
Current account balance (% of GDP)	-1,4	-1,4	-1,3	-0,8	-0,6	-0,5

*European Economy, Occasional Papers, no.68 European Commission, August 2010

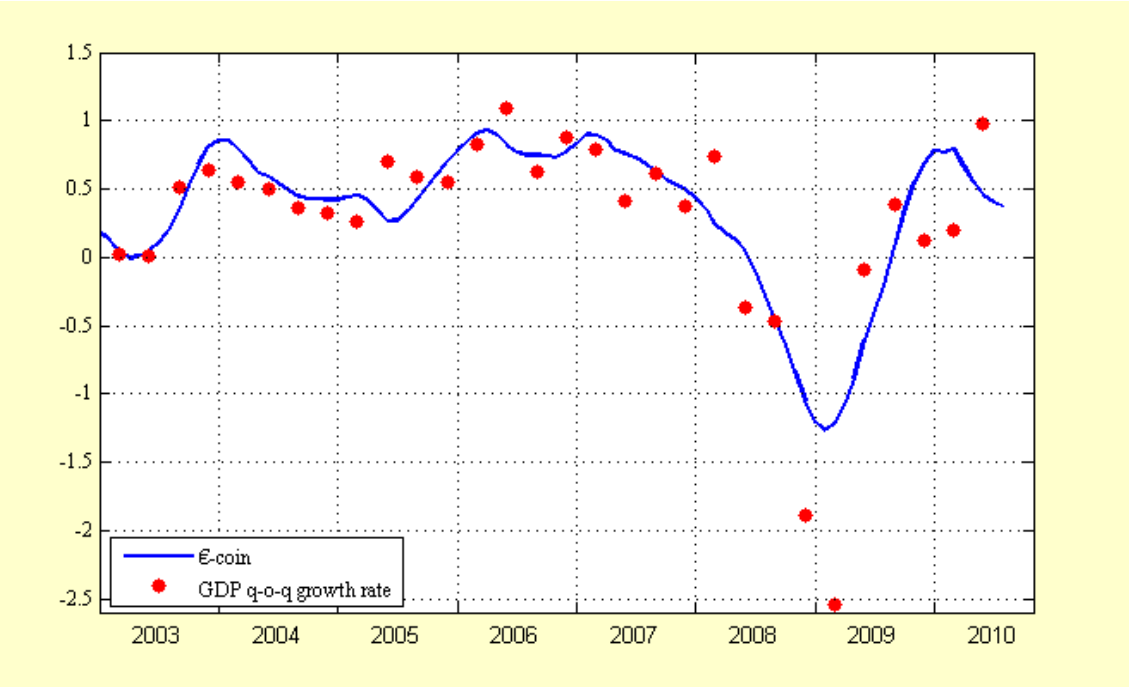
Source: Economic Forecast Spring 2010, European Commission, May 2010

The weakening of the dynamic that developed in the EU economy in the beginning of the second half of the year, together with the uncertainty about the future impact of the fiscal difficulties that many EU countries are experiencing, have influenced business and consumer expectations. The leading indicators, such as the indicator of economic activity calculated by CEPR[12] and the economic sentiment indicators of the European Commission (DG ECFIN) either remained unchanged or decreased. More specifically, the CEPR indicator for the Euro area declined in August for a forth consecutive month, yet its fall substantially decelerated. Its value remained positive, signalling continuation of positive GDP growth in the Euro area in the following quarter of 2010, albeit at lower rate in comparison to the preceding months. The drop in the index was caused by industrial production slowdown, which was counterbalanced by the mild strengthening of business sentiment and consumer confidence in the second quarter.

[12] The Center of Economic Policy Research (CEPR) in cooperation with the Bank of Italy each month calculates the €-COIN leading indicator of economic activity for the Euro Area. 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 labour 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	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10*	June-10	July-10	Aug-10
EU-27	90,0	91,5	95,0	97,2	97,6	99,8	101,9	100,2	100,3	102,1	102,7
Euro-Area	89,6	91,9	94,1	96,0	95,9	97,9	100,6	98,4	98,9	101,1	101,8

*Since May 2010, the economic activity classification of the enterprise data used for the estimation of the Economic Sentiment indicator and its components, has switched from NACE Rev. 1.1 to NACE Rev. 2.
Source: European Commission (DG ECFIN), August 2010

A wait-and-see attitude – at least temporarily – is revealed by the European Commission's economic sentiment indicators for the Euro area and EU-27, which in Greece are compiled by IOBE. In August the overall indicator remained at the levels recorded in the previous month in both areas, slightly higher that the average level for the period 1990-2009. As for the individual sectors, the economic sentiment indicator in construction did not vary, remaining at intensely negative levels. The economic sentiment in industry and retail trade marginally improved by a single point in the Euro area, but not in the EU as a whole, where these indicators remained unchanged. Lastly, consumer confidence increased by three points, reaching its long-term average in the Euro area, and surpassing it in the EU as a whole.

2.2 The Economic Environment in Greece

A) Economic Sentiment

The **Economic Sentiment Indicator for Greece** in the period from June to August stood at 66 points on average,

remaining at very low levels during all the first eight months of 2010. This level is significantly below the long-term average for the period 2001-2009 (99 points) and the level recorded in the corresponding period of the previous year (72 points). The fiscal consolidation effort resulted in the implementation of a series of measures at a variety of policy areas, affecting on the one hand the real income of a wide range of population groups and, on the other, the course of the economy in general. As a result, the economic sentiment deteriorated significantly. Nevertheless, the sentiment has stabilised in this three-month period, which indicates that up to a point the enterprises and the households are adopting to the new circumstances. The most important effect of the recession, however, is the surge in unemployment, which has increased the insecurity of the Greek households. As a result, the evaluation of the current situation and the expectations for the future have been exceptionally pessimistic, while consumer confidence has reached historically low levels. On the supply side, business expectations have improved slightly (in comparison with the spring quarter) in Construction and Services. In contrast, the expectations in Retail Trade deteriorated further, as the corresponding index recorded a new historically lowest level. Lastly, the sentiment in industry remained unchanged in comparison with the preceding quarter, reflecting the relative stability that the expectations in this sector have exhibited lately.

Contrary to Greece, in the EU the economic sentiment has improved substantially on a year-on-year basis, as the indicators in most countries have being increasing. More specifically, in the three-month period from June to August, the index in the EU-27 averaged 102 points, 21 points higher compared to the corresponding period of the previous year, mainly due to the improved economic conditions in Germany and France. In greater detail:

The **Consumer Confidence Index** in Greece fell further in the period from June to August, compared to the March-May period, registering a historic low at an average of -65 (from -62 in the preceding three-month period), which is worse than the corresponding level in the previous year by almost 20 points. The average values for the index in the EU and the Euro area during the same period were significantly higher, at -13 and -14 respectively, while the Greek consumers remained the most pessimistic in Europe.

Consumer confidence deteriorated significantly in May, when the fiscal measures of the EC-IMF-ECB support agreement were settled. The announced cuts in wages and pensions, with the subsequent weakening of the purchasing power, the increased burden from indirect taxation and the dismal prospects in the labour market intensified the already heightened uncertainty and fears of the consumers. All the constituents of the index have deteriorated since May, with the largest drop recorded in the expectations of the consumers about the financial situation of their households and the economic situation in the country in the coming 12 months. 72% of the respondents expected their financial situation to worsen in the coming

12 months, while four in five respondents predicted slight or significant deterioration of the overall economic situation. The propensity to save remained at very low levels. Meanwhile, 94% of the respondents expected slight or significant deterioration of unemployment. The uncertainty and the worries that the consumers are experiencing, as reflected in their expectations about their financial situation in the coming 12 months, have not subsided even after three months of adaptation to the new measures.

In addition, the proportion of consumers reporting that they were 'in debt' and were dipping into their savings stood at 9% (from 10% in the preceding three-month period). Meanwhile, the percentage of those that were saving small or large amount increased to 25% from 22% in the period from March to May (29% year-on-year). Lastly, one in two consumers, as in the corresponding period of the previous year, reported that they were "just making ends meet".

Table 2.6

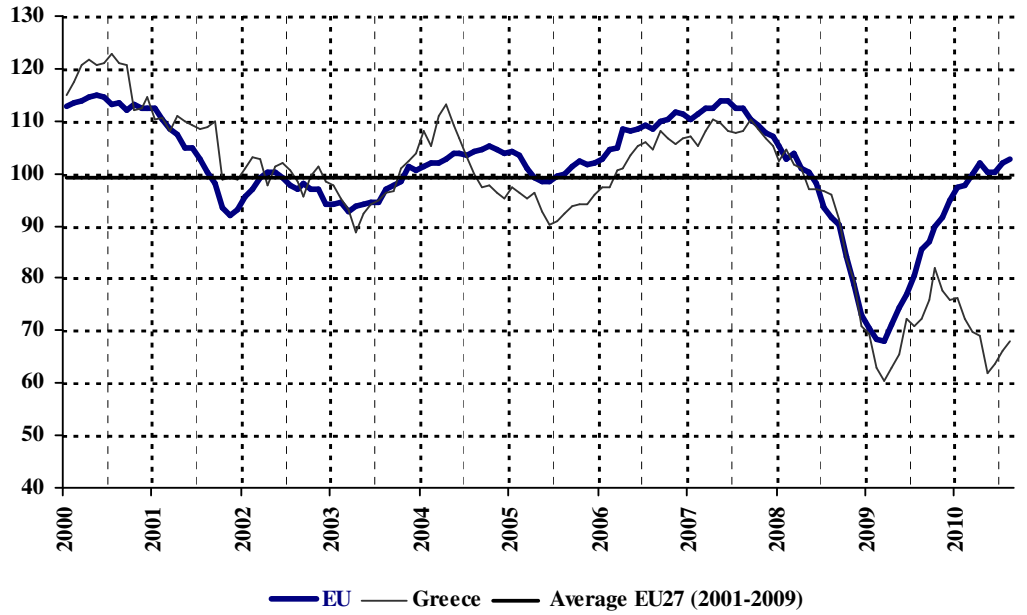
Economic Sentiment Short-Term Indices

	Economic Sentiment Indicator[1]		**Business Confidence Indicators [2] (Greece)**				**Consumer Confidence Indicator[1] (Greece)**
Month/Year	*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	97,6	72,4	72,6	48,5	71,6	63,1	-51
Mar-10	99,8	69,6	75,3	39,6	54,5	61,7	-58
Apr-10	101,9	69,1	80,6	44,6	64,0	64,1	-61
May-10	100,0	61,9	74,9	44,0	64,3	56,8	-67
June-10	100,3	63,8	75,3	51,1	53,3	63,1	-67
July-10	102,1	66,3	75,8	46,1	50,8	64,1	-67
Aug-10	102,7	67,9	76,9	54,7	53,2	67,0	-61

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

Figure 2.2

Economic Sentiment Indicator, EU27 and Greece (seasonally adjusted data, *1990-2008=100*)

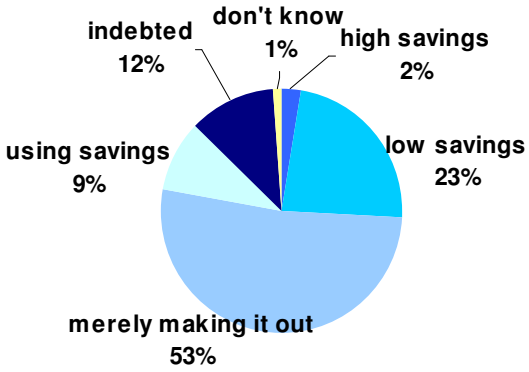


Source: European Commission, DG ECFIN

Figure 2.3

Consumer survey data on their household's financial situation

(June – August 2010 average)



Source: IOBE

In **Industry,** the Confidence Indicator in the last three months (June – August) stood at 76 on average, at about the same level with those recorded in the preceding three-month period and by only 2 points lower on a year-on-year basis. As a result, Industry has remained the least affected sector, exhibiting a relative stability for a long period of time. Still, most of the constituent indices remained at negative levels. The expectations regarding the course of production in the coming 3-4 months returned to a negative balance (from +8 in the preceding trimester and +3 in the corresponding period of the previous year). In contrast, the estimates of order levels

and demand experienced slight improvement, mainly due to higher foreign demand, despite the fact that slightly more than half of the enterprises still considered them to be low for the time of the year. Further reduction was registered in the finished product inventories, both in comparison with the preceding period and on a year-on-year basis, with the corresponding index reaching +14 points on average (from +22). The employment expectations remained gloomy at the level experienced in the corresponding quarter of the previous year (-17), recording, however, a slight increase from the March-May period. Meanwhile, the utilisation rate of the production factors remained at about the same levels compared with the previous year (close to 70%), similarly to the number of months of assured production, which stood at 4.

The Confidence Indicator in **Retail Trade** in the period from June to August 2010 stood at a historically low average of 52, from 61 in the preceding three-month period, loosing almost 40 points year-on-year. This sector experiences in the most direct manner every change in the consumer behaviour of the households and the falling course of their expenditure. With the exception of a slight increase in April and May, the fall of the index has continued through the end of summer since last November. Meanwhile, all the activity indicators highlight the dismal situation in the sector. The enterprises' estimates on their sales deteriorated substantially, with the corresponding indicator reaching -62 (from -42 in the preceding three-month period). Meanwhile, the projections of the sales over the coming three months were also quite pessimistic, with the relevant balance standing at an average of -48 (from -41 in the preceding period), when in the corresponding period of the previous year the balance stood at significantly higher levels (-10). Large reduction was also recorded in the expectations of the enterprises about the orders placed with suppliers, as 62% of the enterprises were expecting them to fall, while their inventories have remained bloated. As for the employment expectations in the sector, only one in ten enterprises was expecting an increase (26% in the corresponding period of the previous year), which signified a substantial weakening of new job creation. Lastly, regarding price expectations, the slightly negative balance of the previous three-month period doubled to -12, at about the same level with those recorded in the corresponding period of the previous year.

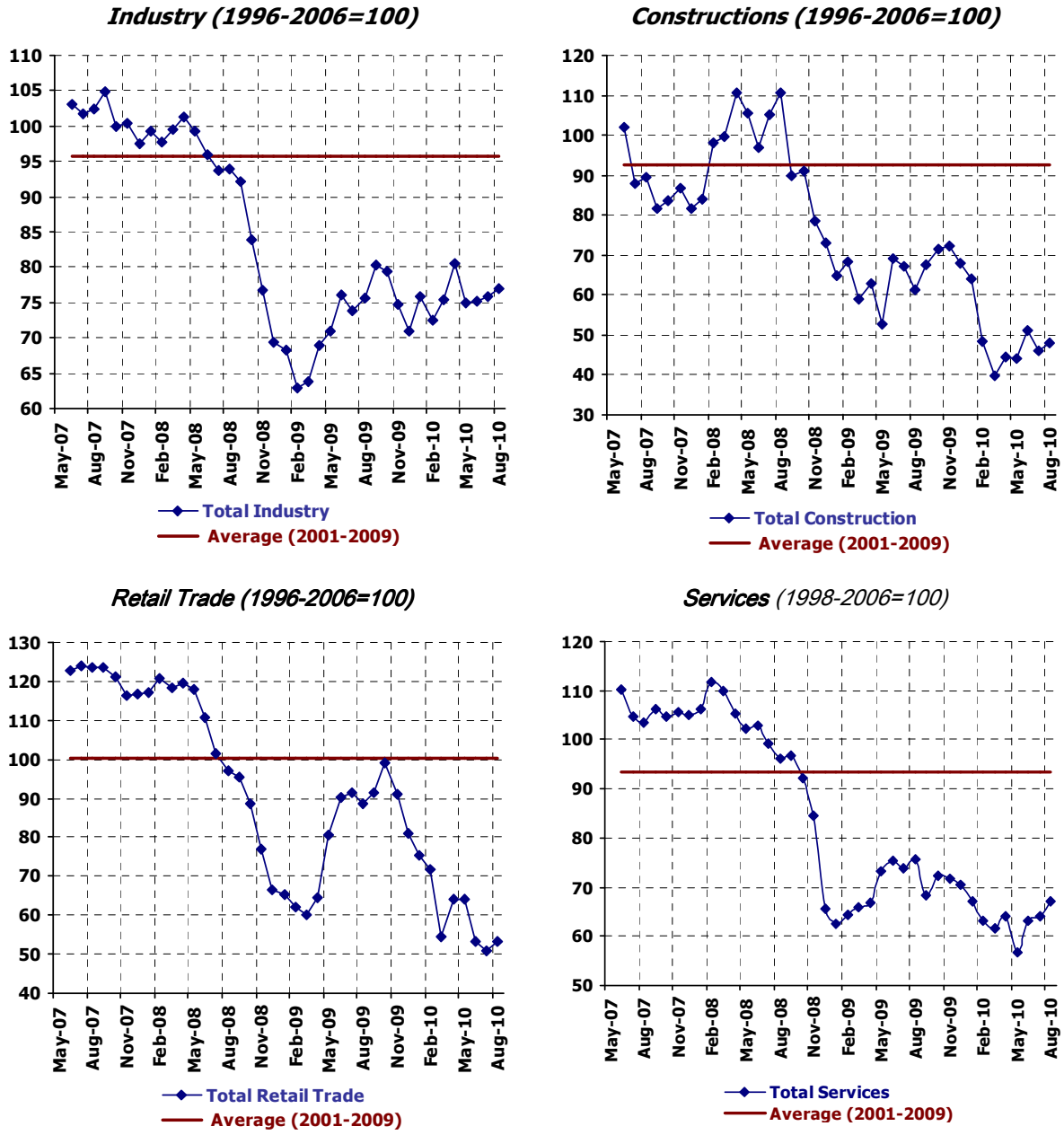
The business confidence in the **Construction** sector recorded slight improvement in the last three-month period, remaining however, at the exceptionally low levels characteristic for the sector in the past two years. The Confidence Indicator stood on average at 48 (from 43 in the preceding three-month period), performing significantly worse than in the same period last year (-22 points year-on-year), when the sector was already in recession. The very grim expectations of the businesses about their

current work schedule and employment were slightly alleviated, with the corresponding balances standing at -65 on average, higher by 10 points quarter-on-quarter. The employment expectations remained at very low levels, with the corresponding index reaching -42. Meanwhile, the negative balance of the enterprises' estimates on their current work schedule improved significantly, standing at -34 (from -47 in the previous three-month period). The number of months of assured activity fell to 12 (from 16 in the corresponding period of the previous year), which revealed that the improvement in the expectations came mainly from the projects that have already started, rather than new projects. The enterprises in the sector were expecting further fall of prices, while 10% of the enterprises reported that they were not facing any obstacles to their construction activities, with 41% assessed as the main obstacle to their operation lack of financing, 34% low demand, and the remaining 11% the overall economic situation, inadequacy of the state, large discounts, suspension of projects, prolonged wait for new legal framework, distortions in the public procurement process and others.

The Confidence Indicator in **Services** recorded a mild increase in the period from June to August 2010, standing at 65 on average, from 61 during the preceding three-month period, but 10 points lower on a year-on-year basis. Following the dismal trend of the sector until May, when the confidence indicator recorded historically low values, the business sentiment has stabilised since June. Clearly, however, the assessment of the enterprises on their current activity was intensely negative, standing at -29 (from -4 in the corresponding period of the previous year), while their expectations of the future demand remained at about the same level (-16). Moreover, the employment expectations have declined slightly, indicative of the uncertainty about the ability to create new jobs that has dominated this sector. The price expectations were intensely deflationary, with the corresponding negative balance standing at -21, close to its historically low levels (from -13 the preceding quarter). Lastly, only ¼ of the companies reported that their business activity was being conducted without obstacles, while in contrast 34% of the companies indicated as the main obstacle insufficient demand, and 18% indicated factors such as inadequacy of the state and red-tape, VAT increase, inadequate tourism policy, poor infrastructure, industrial action and other.

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 Developments: Threats , Opportunities and Economic Policy Proposals

B1. Key findings

With the policy measures that have been adopted up to now, Greece has made an important step to avoid declaring debt moratorium, despite the continued distrust by the global markets. Of course, the country is surviving thanks to the €110 billion loan of the support mechanism and the liquidity assistance of the Greek banks by the European Central Bank (ECB). These facilities provide a "window of opportunity", which should be utilised in order to: (a) fully restore the fiscal balance and the liquidity in the banking system and to normalise the credit conditions for the private sector, and (b) return the economy to growth on a path of real convergence to the rest of the Euro area.

Nevertheless, there are problems, threats and opportunities, both in the short-term and the medium / long-term that should be taken into account.

1. Short-term period

In the short-term, the immediate threats are: a) fiscal targets shortfall, b) lack of liquidity in the private sector. The key factor behind the threat of fiscal targets shortfall is the low rate of revenue increase (3.3% for the first eight months of the year) compared to the annual target (13.7%). This shortfall forced the government to reduce the Public Investment Programme by about 33% in that period in order to avoid missing the deficit target, which resulted in a drop of GDP (due to this measure alone) by 1.2 percentage points and to delay in NSRF's utilisation. It also led to payment delays to various suppliers of the public sector, which resulted in further limitation of the already scarce liquidity in the private sector. The liquidity problem, in turn, was caused by a 'viscous cycle', where bonds of the Greek state and banks have been practically expelled from the international financial markets, resulting in much more conservative and risk averse attitude by the banks, which in turn has triggered negative fiscal and banking multipliers that in the current circumstances is impeding economic activity.

Regarding the shortfall in fiscal revenues, it should be stated that part of it is due to the adoption of overambitious targets for the tax measures (especially regarding the impact from the increase in excise taxes and VAT rates), likely because of underestimation of the demand elasticities with respect to prices and income. However, large part is also due to innate problems of the tax collection and audit mechanisms of the Finance Ministry, which have persisted or probably have even intensified. Evidently, measures, such as mobilisation of revenue collection, particularly from VAT, better administration and management and, generally, systematic and professional approach (e.g. timely recruitment and targets and incentives per regional tax authority) are urgently needed. This issue is the catalyst for the developments in the short-term.

The termination of unaudited tax cases in return for a fixed payment for companies and freelance professionals that has been announced by the Finance Ministry is an

ad-hoc measure of last resort, which conceals many threats. If this measure is not accompanied with a systematic attempt to reorganise the audit mechanisms of the Finance Ministry and to establish a modern, simple, permanent and competitive tax system, its outcome in the long-term will be harmful. The inveterate tax evaders will be once more rewarded and the tax evasion problem will aggravate.

The tackling of tax evasion (and the dodging of social security contributions), which constitutes the most important priority in the area of economic policies, is a function of two main factors. First, systematic, continuous, targeted and professional sampling-based audits maximise the probability of catching tax evaders. The second factor concerns the establishment of proper punishment and its quickest possible enforcement to all those caught evading taxes. The experience of the other Euro area and OECD countries is precious and the government can and must ask these countries, and specialised audit companies, for technical assistance.

The other major short-term threat, the liquidity insufficiency, can be alleviated if the banks resort to raising their equity capital, preferably from the domestic or foreign capital markets, following the example set by the National Bank of Greece, or taking advantage of the Financial Stability Fund and its €10 billion reserve designated to this purpose. All remaining measures are most likely serving other (legitimate) purposes, but not the goal of improving the liquidity conditions in the economy.

2. Medium / Long-term

In the medium / long-term, the most important problem is that Greece is still enacting its old model of development, where statism has been the dominant philosophy. The major threats to the competitiveness and the long-term sustainability of the Greek economy and, consequently, to the welfare of its people stem from this problem. The latest social security measures and the stance of the government on the issue of public-use truck licenses have shown that there is no lack of leadership initiatives. However, this is not enough. There is a need for a clear outline of a new model of development, which is market-friendly, with emphasis on competitiveness and openness, where private investment and exports are the drivers of growth, particularly in sectors with proven competitive advantage: tourism, infrastructure, shipping and hauling, green energy, agriculture. The government should take up the initiative of drafting a ten-year development programme, stating clearly this change of direction. As an aside, such a programme will contain evaluation of the evolution of the public debt, taking into account privatisation measures, the utilisation of state-owned real estate, etc. Likewise, the same programme could address wider issues that decisively affect competitiveness in the long-term, such as the legal complexity and the performance of the so-called 'knowledge triangle' (Education-Research-Innovation), an issue that is analysed in detail in the next section. The new model of development that should be adopted for the Greek economy, has the following additional features:

a) Establishment of stable and competitive tax framework to prevent expatriation of companies and to attract foreign capital. The development incentives should be mainly tax-related, given the adverse experience with subsidies for implementing new investment.

b) Acceleration and completion of the reforms - liberalisation of all restricted professions and markets, simplification of the business licensing procedures, removal of various counterincentives to competitiveness and entrepreneurship (each ministry should record these counterincentives per policy area) - in order to provide a supply-side boost for economic growth. Most models indicate that this boost surpasses 10% of GDP within five years for the case of Greece.

c) Adoption of fast-track processes for large investment projects, as during the preparation for the 2004 Athens Olympic Games.

d) Utilisation and strengthening of the tools that were used successfully in the past for large investment projects (concession contracts, public-private partnership, etc.)

e) Sale and/or utilisation of state-owned real estate, in order to, one the one hand, raise revenue to repay part of the public debt and, on the other, to create 'investment poles': tourist residences for the 'baby boomers' (a policy already followed in other Mediterranean countries), green energy, etc. Now is the time when this should happen, together with extensive privatisation of companies (listed on the stock exchange or not), in order to reduce public debt beyond the initial estimates of the support agreement, putting an end to the talk about debt moratorium, to establish strategic partnerships with foreign companies and, in the case of the banks, to provide liquidity flow to the Greek banking system.

f) Strengthening of the equity of the banks, either through the stock exchange (existing and new shareholders, domestic or foreign) or the Financial Stability Fund, in order to shield the Greek banking system, given the more stringent requirements of Basil III, but mainly to be able, as already mentioned, to provide more liquidity to the economy's private sector. The recent announcement of the National Bank of Greece for a move in this direction is an example worth following. In contrast, the establishment of a state-owned core of the banking system by merging the state-owned banks is not recommended under the current circumstances.

g) Restoration of modern corporate governance conditions in key, large state-owned companies and organisations. The government should seek to gain the stake-holders' consensus on this. However, if the labour unions refuse to cooperate, the government should persevere without delay to consolidation and/or liberalisation of

the relevant markets (e.g. electricity and railway sectors).

h) Adoption of international accounting standards, information systems and modern organisation and management practices in public administration and the wider public sector. Today in most of these organisations (e.g. hospitals) there is no double-entry accounting system, measurement and recording of expenses and evaluation of personnel, results and processes. As a result of these insufficiencies, the culture of these organisation is dominated by levelism, indifference, corruption and finally prodigality of public resources. The health care sector is probably the most characteristic example, where the cost saving can reach 1% of GDP per annum.

i) Adoption of measurable targets regarding Greece's position in the global rankings of competitiveness, transparency, corruption, educational performance, innovation activities, etc. Public administration, the public sector organisations and the state-owned companies should lead the way, particularly in relation to data transparency.[13]

j) Facilitation of labour mobility from the branches and enterprises that approach the end of their life-cycle to those that are at the beginning of it. The labour market plays an important role in the new model of development and the state can and should have a substantial role in adaptation facilitation through the various benefits, support, training and education programmes. The most successful examples for Greece to imitate are provided by the Scandinavian countries. Germany also minimised the impact of the latest crisis on employment through consensual policies with the labour unions (the Kurzarbeit programme). NSRF envisages significant subsidies (approx. €300 million) for adaptation support in the labour market, which remain untapped.

k) Adaptation of the model of social policy to the new model of development. The new model of development, the key directions of which were described previously, should be conformable to a new model of social policy. The current model of social policy, with its excessive emphasis on pensions and various ad-hoc 'packages', announced mainly during election campaigns, proved to be inefficient, as despite the fact that the resources for social transfers have been close to the Euro area average, the poverty rate in Greece has remained relatively high. The new model of social policy should ensure a minimum guaranteed income, facilitate adaptation and mobility in the labour market and, most importantly, provide equitable access to high-quality education and health. Education constitutes, in the long-

[13] Bank of Greece, which monitors the accounts not only of the central government, but also of most public entities, security funds and local authorities, discontinued to publish cash flow data on General Government, limiting the publicly available information to the figures of Central Government. In contrast, the International Monetary Fund in its recent report on the course of Greece's economic programme (Report No. 10/286, September 2010) presented similar data on a monthly basis (Table 10).

term, the link between economic efficiency and social justice and thus is the most important area of reform. The next section contains the key reforms that strengthen the 'knowledge triangle' (Education-Research- Investment) and, as a consequence, the competitiveness of the domestically produced goods and services in the medium/long-term.

B2. The 'Knowledge Triangle" (Education-Research-Innovation) and the Economy

The performance in the knowledge triangle (Education-Research-Innovation) determines, to a large extent, the competitiveness of the domestically produced goods and services and the long-term financial returns of the enterprises. Indeed, while competitiveness in the developed economies is a function of the relative costs and prices, the most important underlying factors are technological content, differentiation and quality of the produced goods and services.[14]

In Greece the performance in terms of the 'knowledge triangle' is very poor. The country is placed third from the bottom in the ranking of secondary education attainments in OECD's PISA evaluation programme. The performance in tertiary education is also relatively poor (the highest-ranked Greek tertiary education institution – National and Kapodistrian University of Athens – is placed at the 175th position in the latest global rankings), even though it is not behind other countries of the European South, such as Portugal. Lastly, our performance in innovation activities is also rather poor according to all the available indicators of OECD.

Given the above findings, it should not come as a surprise that the coverage ratio for the imports of medium and high technology by the corresponding Greek exports is the lowest in EU-27, nor that the performance of the country in the so-called 'structural' competitiveness is poor. The Greek economy's ills come from, among others, low educational levels, lack of investment in research and development and low levels of innovation. Thus, one of the biggest developmental and social challenges today is the improvement of the country's performance in terms of the knowledge triangle. The new model of development and social policy should be largely based on the knowledge economy.

Innovation is, of course, as much a scientific, as it is a business activity. But the business environment in Greece is also placed very low in all international rankings. The obstructions to entrepreneurship are also obstructions to innovation. The same holds for the intensity of competition in the markets for goods and services. OECD ranks the Greek economy very low with respect to intensity of competition. Protected sectors usually do not innovate.

As already mentioned, the knowledge triangle problems start from secondary education's poor results. This is mainly due to lack of critical thinking on the part of the pupils, lack of evaluation of the schools and the teachers and lack of competition

[14] Yannis Stournaras and Maria Albani (2008), 'Greece after the crisis – In the search of a new development model', Athens: IOBE

and eminence attitude. Fewer lessons but in more depth, radical reorganisation and modernisation of the curriculum and the reinstitution of the public experimental school, especially in downgraded areas, are three key directions of educational reforms that should be implemented immediately.

The Finnish system of secondary education has proven to be the best in the world. While, in general, the schools are not private, it combines evaluation, competition, attitude of eminence, ability to choose schools and life-long teaching of the teachers. In Greece, there are private schools, which have been offering for many years the International Baccalaureate (IB), which is considered as one of the most prestigious and effective certified diplomas in the world, offering to its pupils the opportunity to enrol in the best universities in the world for undergraduate studies. IB has many common characteristics with the Finnish secondary education system. As such, the adoption of an IB programme by the Greek state-owned secondary schools and the university enrolment of the students through a corresponding process is desirable, as it has been internationally tested.

Regarding tertiary education, the universities mostly need autonomy, evaluation processes and flexibility. The state control is still asphyxiating. The universities should be characterised by the principles of Autonomy, Eminence, Quality and Flexibility. Today, too many resources in Greece are spread to too many regional universities, faculties and departments. Many of these should be merged in order to create a 'critical mass'.

Regarding research and innovation, most studies indicate that the promotion of product and process innovation activities is feasible in Greece. This is also supported by the fact that there are many well-established businesses that are research institution spin-offs. Nevertheless, with the exception of a few appreciable cases, many of which were mentioned in the recent Thessaloniki Report, the Greek enterprises mostly transfer know-how, instead of producing it. The prerequisite for promoting product and process innovation in Greece are:

a) The applied research and development in the universities and the research centres should be aligned, in principle, with Greece's competitive advantages: e.g. research in the primary sector (agronomy, organic farming, fish breeding, Mediterranean diet, etc.), in the tertiary sector (tourist products encompassing Greece's cultural heritage, public health care, health recuperation centres), in the secondary sector ('green' technology development, desalination technology, solid waste management, water management, etc.). Meanwhile, we should examine (and cure) the causes that prevent large multinational companies (which innovate, do intra-industry trade and are in the position to promote Greek goods and services abroad through their distribution networks) to invest in Greece.

b) Institutions: The coordination of both private and state-owned enterprises with the universities, the polytechnics and the

research centres, should improve and the administration and management of the R&D institutions should become more effective. The overall R&D policy should take into account the strategy for economic development. This requires long-term planning, perception of the needs and the dynamic competitive advantages of the country, perception of the interdependencies between the universities, the research institutions, the businesses (domestic and foreign) and the local authorities, creation of 'innovation poles', sufficient funding and effective management and administration that can transform targets into results. Research and development is a spearhead activity and should be based on eminence. In Greece, unfortunately, the eminence attitude is often demonised.

In all of the above, Greece should cover significant gaps, in order to catch up with its Euro area partners. Firstly, there are mentality and legal framework problems. In Finland, large companies fund public research programmes and even chairs in public universities. In Greece, such activities are frowned-upon and even forbidden. In the university departments that are involved in R&D, the signing of contracts with private enterprises and institutions is not an easy process and the legal framework is unclear, while there is a widespread fear that involvement with the public sector would eventually lead to an intervention from the public prosecution authorities. The ban on the participation of foreign professors in the examination boards of PhD theses (while allowing them in the supervisory committees) was until recently a characteristic example of the introversion of research in the Greek universities.

The obstacles to entrepreneurship from an excessively bureaucratic state inhibit the creation of enterprises, and in particular of enterprises that could innovate. In addition, the structure and the operation of public administration in Greece do not benefit the activities that require long-term planning and provide long-term returns. The clerical apparatus lacks, in many cases, the required competencies and flexibility. In new spearhead technologies, such as genomics (one of the goals of which is to determine the human DNA sequence), public administration is not ready to adopt the knowledge that is being accumulated and to apply it for the advancement of public health, as in personalised medicine, despite the fact that there are many Greek scientists with this speciality in Greece and abroad. It can be stated at this point that the high education institutions in Greece, and particularly those that are involved in research and have postgraduate schools, could be utilised by the public administration for assistance on a large range of issues in the scientific, technical, economic, social, cultural and other domains.

The advancement of the activities of the 'knowledge triangle' contributes to both economic efficiency (by improving total factor productivity) and social justice (by providing equal access to high quality public education). Thus, the reforms related to all levels of education, research and innovation should become the catalyst of the new model of development and social policy in Greece. IOBE has contrib-

uted in this direction and will continue contributing even more in the future, with studies, especially in the area of innovation, of its link with entrepreneurship and of its regional dimension.

B3. Three scenarios on the economic developments

No one today can be absolutely certain about the future economic developments. On one hand, the international environment is infested with uncertainties, stemming from the remnants of the latest financial crisis and, on the other, the domestic environment is swamped by probably its largest economic crisis since World War II. Three scenarios on the course of the Greek economy prevail:

a) The first scenario, which can be named "hope scenario" envisages that Greece continues, in general terms, to implement the fiscal consolidation programme of the support agreement and, in parallel, the policies that facilitate growth and, indirectly, fiscal consolidation. Such policies are the liberalisation of markets and professions, privatisation, promotion of investment by adopting 'fast track' rules and mentality. These policies comply with the adoption of a new, modern, model of development, whose main directions were outlined in the previous section. In this case, the fiscal deficit is expected to fall to levels close to 7% of GDP in 2011 and 5% in 2012, while aggregate income will continue its fall in 2011, but at a clearly improved rate than in 2010. From 2012 the GDP growth rate is expected to be positive, ranging between 1.5% and 2.5%.

It is possible, but not certain, that the implementation of this scenario will allow the gradual return of Greece in the global bond markets. It is not certain, because public debt will continue to rise, even under this optimistic scenario (reaching 144% of GDP in 2012 and 2013). Under these circumstances, the investors in the global markets might continue to be reluctant to buy Greek bonds, which would imply that the spreads will not fall drastically. The most probable and reasonable outcome in this case is an extension of the duration of the loans that were granted to Greece by the IMF, EC and ECB. In general, the salvation of the Greek economy in this scenario is in the hands of these three institutions and in particular of the German government. Thus, we hope, but we are not certain that we are going to avoid debt moratorium. We depend on wider economic developments, but also on the political situation abroad and in Germany in particular.

b) The second scenario, which could be given the name "catastrophe scenario", envisages that either i) the fiscal consolidation is abandoned due to public outcry and lack of resilience by the government or ii) it continues but the government does not engage in structural reforms. The first case is that of "sudden death", where the granting of the remaining tranches of the €110 billion loan is discontinued and Greece declares debt moratorium. In the second case, the "death" is slow and agonising, in the sense that the economy will react adversely to "plain" fiscal consolidation, as the lack of structural reforms will not allow the strengthening of the resilience of the economy

through a boost of competitiveness and an improvement in the current account balance. In this case, the debt moratorium will be delayed but will not be avoided due to the long-lasting sluggishness of growth. According to international experience, the possibility of positive reaction of GDP to fiscal consolidation cannot be negated, but the probability of such an event is very small. The debt moratorium, according to international experience, would prove to be catastrophic for the welfare of the majority of Greek people and will threaten the stability of the European monetary union.

c) The third scenario, which can be termed "salvation scenario", envisages that, in addition to the policies of the first scenario (the "hope scenario"), the government adopts aggressive policy of state-owned real estate utilisation along the lines of the aforementioned new model of development. The indicative value of the state-owned real estate is estimated at around €300 billion. The direct effect of this would be that the global financial markets would take notice of the early repayment of part of the public debt. This unexpected positive development would create the expectations that, sooner or later, the debt-to-GDP ratio is going to follow similar path with the Euro area average and the catastrophic for the welfare of the Greek people possibility of debt moratorium would become much less likely to happen. In addition, as already mentioned, the utilisation of the state-owned real estate would create investment 'poles' in areas where Greece has comparative advantage: tourist residence for wealthy 'baby boomers' that wish to live for a long periods during the year in the European South, green energy, etc.

In this respect, it is advisable that: First, an attempt is made to perform an appraisal of the value of the state-owned real estate by an institution, such as the Hellenic Public Real Estate Corporation (HPREC), which would include the property of HPREC itself, tourism real estate, the Olympic Games properties and the real estate of the Defence Ministry, the Agriculture Ministry, the social security funds, etc. Second, the means and the potential revenue from its utilisation should be established. Third, the course of the public debt over the next ten years should be estimated, taken into account this factor.

According to the position of IOBE, presented in a public event in July 2010, the support agreement is a much-needed medium-term programme of fiscal and structural reforms, but is not a panacea, nor could be considered a long-term strategy of development. In addition, some of the measures it contains and some of its estimates for 2011, 2012 and 2013 should be updated and/or replaced, as they are already deemed outdated by the current developments.

For example, the special levy on highly profitable firms with total revenue of €600 million, or the saving of €500 million from the Kalikratis plan cannot be considered in the current conditions realistic proposals for the fiscal consolidation programme in 2011. Their replacement with measures of equal strength should form part of the currently drafted 2011 budget. The fact

that a total saving of public funds of 3.9% of GDP is envisaged from the dynamic of the measures already taken and from new policies, while the fiscal deficit improves by only 0.5% of GDP is also problematic. The envisaged annual increase of interest expenditure by 0.9% in 2011 is reasonable and explains part of the difference. However, the increase in primary social expenses is not justified, given the reforms in the social security system that were performed in 2010. These, and other, deliberations for 2011 and beyond, together with the macroeconomic impact from alternative ways of achieving the fiscal targets (size of multipliers), will become the subject of thorough economic research for IOBE in the coming months.

C) Fiscal Developments

The second tranche (€9 billion) of the loan from the Euro area countries and IMF to Greece was approved in the first fortnight of September, after the first review of the stand-by arrangement and the positive assessment by the reviewers. In this regard, the Council of the European Union, after confirming that in general Greece was complying with the directions of Decision 2010/320/EU (adopted on 10 May 2010), decided to amend it.[15] The main amendments of fiscal interest concern tighter monitoring of the public enterprises, restructuring of the railways operator, provisions for the limitation of the long-term pension expenditure, changes in the operation of the auxiliary pension finds that would ensure their budgetary neutrality and, lastly, an act disallowing local authorities to run deficits at least until 2014.[16] An interesting 'detail' in the amended decision is that for all measures, after consultation with the Commission, they can be substituted by measures of comparable savings, while under the previous formulation this was allowed only in exceptional circumstances. As such, the amendment introduces a kind of flexibility. This change of attitude transpires in the recent deliberation by the government on changing the measure of broadening the high VAT base to at least 30% of the goods currently in the low VAT bracket, as envisaged in the stand-by agreement, with another measure of comparable results.

The Memorandum envisaged that until the end of the first half of 2010, the following should have taken place in the fiscal area (the expected result of the measures is presented in brackets):

Revenues:

- VAT rate increase (€ 800 million for 2010 in total)
- Increase in the excise taxes (€ 450 million)

Expenses:

- Reduction of bonuses and allowances of public sector employees (€ 1,100 million)
- Reduction of pension bonuses (€ 1,500 million)
- Reduction of pensions above a certain threshold (€ 350 million)

[15] With Decision 2010/486/EU of 7 September 2010.

[16] This is not so obvious, as the local authorities finance their expenses primarily through state subsidies.

- Abolishment of the budget reserve (€ 700 million)
- Cancelation of the second instalment of the solidarity allowance (€ 400 million)
- Reduction of domestically funded investment spending (€ 500 million)

Structural measures

- New progressive tax system
- Equal treatment of income from labour and property
- Abolishment of tax exemptions, autonomous taxation, etc.
- Publication of timely monthly statistics from the General Accounting Office
- Local authority modernisation
- Increase in the absorption of EU funds

According to the stand-by arrangement, the following measures (or alternative measures of comparable savings) should be included in the budget that will be shortly presented to parliament:

Revenues:

- Special levy on highly profitable firms (€ 600 million)
- Amnesty of building permit violations (€500 million)
- Amnesty of land use violations (€ 800 million)
- Book specification of incomes (€ 50 million)
- Presumptive taxation of professionals (€ 400 million)
- Taxation of income in kind (cars) (€ 150 million)
- Broadening the base of the high VAT rate (€ 1,000 million)
- Green taxes (CO_2 emissions) (€ 300 million)
- Gaming royalties and licenses (€ 700 million)
- Increase of real estate's legal value (€ 500 million)
- Excise tax on luxury goods (€ 100 million)

Expenses:

- Savings from introduction of unified public sector wages (€ 100 million)
- Reduction of intermediate consumption (€ 300 million)
- Nominal pension freeze (€ 100 million)
- Additional pension reduction above a certain threshold (€ 150 million)
- Savings from "Kalikratis" plan (€ 500 million)
- Reduction of domestically funded investment spending (€ 500 million)

Structural measures:

- Strengthening of tax audit and collection
- Restructuring of the organisation and the processes for the drafting of the budget and the operation of the General Accounting Office
- Social security system reforms
- New remuneration system in the public sector

- Independent auditing of public administration
- Strengthening of the reliability of budgetary statistics

The commitments for the fist half of the year were, in general, accomplished according to schedule or even earlier, as in the case of the social security reform. An exception is the restructuring of the railways operator, which is still in progress. The commitments for the structural measures for the third quarter either have been finalised at legislative level (such as the 'Kalikratis' plan or the fiscal administration reforms), or are in progress. These policies are very important, as they create infrastructure and preconditions for more effective administration and management. For this reason, their implementation in practice should happen as soon as possible, which depends on the speed with which the implementation procedures will proceed after the passing of the relevant legislation through parliament. The adopted laws require the issuance of a large number of secondary acts (presidential decrees, ministerial decisions and other administrative acts), as well as the creation of the organisational units that will implement the laws in practice.

The measures that will be included in the next budget have not yet been specialised. It should be noted at this point that the common practice until now was to prepare the secondary legislation after the passing of the budget. It is obvious, however, that for the timely and effective implementation of the measures all the relevant preparation should be completed before the budget's passing through parliament in December, so that the relevant budget's provisions can be implemented immediately. This will also assist in the improvement of the budget's transparency.

Regarding the performance of the already adopted measures, the data announced by the government for the first eight months of 2010 show that the net deficit of the state budget is lower by €6.9 billion year-on-year (see Table 2.7). The net deficit stood at €14.5 billion, covering already the 77.5% of the annual target of €18.7 billion. According to IMF,[17] the target for the first nine months was €17.3 billion.

The reduction of the deficit by about €6.9 billion corresponds to 32.2% of the deficit in the corresponding period of 2009, but is lower than the annual reduction target of 39.5%. As such, in order to achieve the target the deficit for the final quarter should not exceed €4.2 billion. However, as can be seen in the table, the deficit for the last quarter of 2009 stood at €9.5 billion.

[17] European Commission (2010) *The Economic Adjustment Programme for Greece* Occasional Papers 61, Directorate-General for Economic and Financial Affairs, p.27.

Table 2.7
State Budget Execution (January-August)

	€ mil.	8-month			12-month		
		2009	2010	2010/09	2009	2010*	2010/09
REGULAR BUDGET	1. Net Revenues (a-b)	31.333	32.357	3,3%	48.468	55.124	13,7%
	a. Revenues before tax returns	*34.432*	*35.409*	*2,8%*	*53.420*	*60.224*	*12,7%*
	b. Tax Returns	*3.099*	*3.052*	*-1,5%*	*4.952*	*5.100*	*3,0%*
	2. Expenditures (a+b+c)	47.104	43.498	-7,7%	71.802	67.873	-5,5%
	a. Primary Expenditures	*37.084*	*32.626*	*-12,0%*	*57.975*	*54.611*	*-5,8%*
	b. Granting of hospitals	*0*	*190*	*…*	*1.502*	*245*	*-83,7%*
	c. Interest Payments	*10.020*	*10.682*	*6,6%*	*12.325*	*13.017*	*5,6%*
	R.B. Primary Deficit (1-2a-2b)	***-5.751***	***-459***	***-92,0%***	***-11.009***	***268***	***-102,4%***
P.I.P.	3. Revenues	1.347	1.322	-1,9%	2.041	3.258	59,6%
	4. Expenditures	6.958	4.675	-32,8%	9.588	9.200	-4,0%
	P.I.P. Primary Deficit (3-4)	***-5.611***	***-3.353***	***-40,2%***	***-7.547***	***-5.942***	***-21,3%***
STATE BUDGET	**A. REVENUES (1+3)**	**32.680**	**33.679**	**3,1%**	**50.509**	**58.382**	**15,6%**
	B. EXPENDITURES (2+4)	**54.062**	**48.173**	**-10,9%**	**81.390**	**77.073**	**-5,3%**
	B.1 Primary Expenditures (2+4-2c)	***44.042***	***37.491***	***-14,9%***	***69.065***	***64.056***	***-7,3%***
	C. NET DEFICIT (A-B)	**-21.382**	**-14.494**	**-32,2%**	**-30.881**	**-18.691**	**-39,5%**
	D. PRIMARY DEFICIT (A-B.1)	**-11.362**	**-3.812**	**-66,4%**	**-18.556**	**-5.674**	**-69,4%**

* target
Source: Budget Execution Bulletin (August 2010), Ministry of Economics, GAO.

The primary deficit (i.e. the deficit not including interest expenses) of the state budget stood at €3.8 billion, lower by 66.4% (€7.6 billion), against an annual target of 69.4%. We can get a clearer picture of the current fiscal management from the primary deficit (as interest expenses are more or less determined in previous years), if we examine the ordinary budget (OB) separately from the public investment budget (PIB). In particular, the primary deficit in the OB was reduced by €5.3 billion, against an annual target of €11.3 billion. In order to achieve the target, the OB should have a surplus of €800 million in the next four months, against €5.3 billion deficit in the corresponding period of 2009.

On the other hand, the PIB deficit fell at a double rate compared with the target. The deficit reduction for the first eight months of the year stood at €2.3 billion, surpassing the projected annual decrease of €1.6 billion. Until now, PIB has contributed about 30% of the reduction in the primary deficit, against 13% initially planned. Overall, despite the significant progress, the fulfilment of the target for the ordinary budget has been lagging behind, which has been compensated, partially at least, by a larger reduction in investment expenditure.

The gross revenue of the ordinary budget (before tax refunds) in the first eight months of the year was higher by 2.8%, much less than the target of 12.7%. In particular, VAT revenue increased by 1.6% against 11.9% target, while indirect taxes are also behind targets, mainly due to the revenue gap in the excise tax on tobacco, which increased by 10.3% against the planned +37.1%. The remaining tax revenue (mainly from direct taxation) fell by 2.1%. This can be attributed

to both corporate taxation and income taxation on private individuals. The reduction of the revenue from income taxation was expected, as it came mainly from reduction in the advance tax collection, which in turn was caused by reduction of remuneration in the public sector, freeze of wages in the private sector, freeze and/or reduction of pensions and reduction of employment by about 2% y-o-y in the first half of the year. Lastly, even though the EU flows appeared reduced by 1.9%, it is anticipated that they will recover, at least partially, until the end of the year.

The primary expenditure in the ordinary budget fell at a rate of 12% in the first eight months of the year, significantly lower than the -5.8% target. The investment expenditure fell by 32.8%, much more than planned (-4%), but also more than the 14.5% decrease projected for 2010 as a whole, after the new cuts in the public investment programme. On the other hand, the interest payments increased at a slightly higher rate than planned and are expected to surpass the target by about €200 million.

IMF estimates, based on July data,[18] that the revenue gap will reach €1.6 billion, while expenditure will be lower by €2.5 billion than the target,[19] reducing the deficit in the ordinary budget by €900 million more than planned. The outcome in the end will depend, of course, on two counteracting forces. On one side is the force of "tradition" that sees primary expenditure (and PIB in particular) to increase towards the end of the year, and the other is the force of the policy measures, which becomes stronger with the passage of time.[20] In addition, the IMF revenue estimates are perhaps somewhat optimistic, given the indications that stem from the August data.

The government, having realised the revenue gap, is preparing to adopt an amnesty measure that will settle the outstanding tax cases of the past decade. Unfortunately, as already mentioned, the need for cash brings in practices from the past, which are hardly consistent with the goal of transition to a fair and efficient tax system. The expected revenue from this measure will depend on the stringency of dealing with those that decide not to participate, the conviction that this measure will be adopted again in the future, the financial liquidity of the potential participants and the total cost of the measure. This policy is not included in the stand-by agreement, while it is far from certain that IMF's technical assistance experts would have agreed with it.[21]

The overall deficit will be further influenced by:

a) Determination of the primary expenditure on the basis of national accounting. Given that the GAO's data are on

[18] IMF (2010) *Greece: First Review Under the Stand-By Arrangement* Country Report 10/286, p. 35.

[19] The military expenditure for deliveries is not included.

[20] August was a rather disappointing month, given that the OB revenues (before tax refunds) fell by 0.8% (-9.1% in total), while the total primary expenditure increased by 0.1%.

[21] The IMF's proposals always discourage such type of policies, encouraging audits that start from the most recent, rather than the earliest (due to risk of limitation) financial year.

cash flow basis, the expenditure on deliveries, projects and activities that have been performed, but have not been paid, is not shown in Table 2.7, but will have to be included in the overall estimates. The main risk comes again from the hospitals, despite the substantial savings achieved so far. This is expected to inflate the deficit by €1 billion.

b) Activation of guarantees. This item is not included in the above data, but forms part of the national accounts deficit. For 2010 it is expected to reach €1.5 billion.

c) Deficit of the general government institutions that are not part of the state budget (social security funds, local authorities and others). The stand-by agreement does not include estimates on the deficits of the sub-sectors of general government on national accounts basis.[22] IMF anticipates that the result for these institutions will be worse than previously expected by €400 million.

d) Charges from off-budget accounts, expected at €500 million.

e) Difference between delivery and payment for military equipment, which is expected to increase the deficit by €300 million.

f) Time adjustment of tax revenues, EU flows and hospital expenses, which are expected to ease the deficit by about €2 billion.

Overall, the above factors are expected to decrease the deficit by €1.7 billion, or about 0.7% of GDP, out of which €900 million (0.4% of GDP) should be subtracted to account for IMF's estimates of the deficit of the ordinary budget. The net result of these calculations is that, given the data available up to this point, the deficit at the end of the year will be close to 8.3% of GDP. However, given that GDP will be probably higher than IMF's estimates, the deficit will stand at levels close to 8.1%.

According to IMF's estimates, public debt at the end of 2010 will reach 130% of GDP, against the initially anticipated 133%. It will reach its peak in 2012 at 144%, against the initially anticipated 149%. The increase by 15 percentage points of GDP in 2010 can be broken down as follows: primary deficit contributes 15%, the difference between the interest rate and the GDP growth rate provides for 40% and the remaining 45% comes from other autonomous factors, mainly debt uptake from state-owned enterprises. The autonomous public debt increase to a large extent cancels out the effort to reduce the fiscal deficit and for this reason it should be curtailed. The best way to achieve this is by reducing debt (and/or deficit) through privatisation.[23]

Overall, the fiscal developments can be considered as encouraging and the Pro-

[22] Despite that, data on this are available, as already mentioned, on cash flow basis. See IMF (2010) *Greece: Review Under the Stand-By Arrangement/Supplementary Information*, p. 3.

[23] According to the national accounting standards, the revenue from most types of privatisation reduce the debt, but not the deficit.

gramme's execution is running on a path of compliance. There are, however, risks on the revenue side, which should lead the government to implement quicker the restructuring of the tax system, the tax administration and the collecting processes. In addition, the reduction of the expenditure by households and enterprises, which brings down the corresponding tax revenues, requires the acceleration of the structural reforms in the economy, so that consumption, investment and employment recover as quickly as possible.

3. PERFORMANCE AND PROSPECTS

3.1 Macroeconomic developments

Developments in the first half of 2010

The intense concern over the ability of Greece to cover its debt obligations, the adoption of two packages of fiscal measures, the extensive negotiations for the establishment of EU-IMF-ECB support mechanism and the subsequent accession to it constituted the key developments in the Greek economy during the first half of 2010. In this regard, the recession accelerated in the second quarter of this year, reaching 3.7% on an annual basis, from 2.3% in the preceding quarter. Overall, the fall of GDP in the first half reached 3.0%, when in the corresponding period of the previous year it stood at 1.4%. Nevertheless, the fall was by one percentage point smaller than the updated estimates of the European Commission and IMF for 2010 as a whole, which remained unchanged in comparison with the previous estimates, published in May.[24]

In contrast with the first quarter of 2010, all basic components of GDP recorded significant decline. For the first half as a whole, the largest reduction was registered in fixed capital formation, followed by public consumption. Sharp inversion of the upward trend from the first quarter was observed in private consumption. The significant reduction of imports was moderated by the fall – at a lower rate – of exports. As a result, the net impact from the external sector on GDP, despite being negative, was significantly lower on a year-on-year basis, reflecting the weakening of the deficit in the external sector.

In greater detail, total final consumption, public and private, was lower by 2.9%, year-on-year, in the first half of 2010, while in the corresponding period of the previous year it was increasing by 0.4%. This decrease was mainly due to large fall in public consumption by 9.1%, while private consumption decreased by 1.3%. The reduction in private consumption was lower compared with the corresponding period of the previous year, when it was falling by 1.8%. However, the limited decrease of private consumption expenditure should be seen in the light of the tax incentives for issuing purchase receipts that were introduced this year, which increased substantially the officially recorded transactions. Regarding public consumption, its extensive fall can be considered as a correction of last year's soaring increase (+10.0%). After all, its value is at exactly the same levels registered in the first half of 2008.

Gross investment expenditure continued its downward trend for a third consecutive year. Despite the deceleration of its fall in the second quarter on a quarter-to-quarter basis, its overall year-on-year decline in the first half of 2010 reached 13.9%. The decline in the corresponding period of 2009 was standing at 5.7%, while in 2008 it was standing at 2.7%. In contrast, the contrac-

[24] European Economy, Occasional Papers, no. 68, European Commission, August 2010- Greece, First Review of Stand-By Arrangement, IMF, September 2010

tion of fixed capital formation accelerated in the second quarter, reaching 16.5% overall for the first half of 2010. The divergence of the trends in the two figures reflected inventory accumulation, which was expanding at a very fast pace, reaching almost 5.0% of GDP in the second quarter. Regarding the constituent categories of fixed capital, non-residential construction recorded the largest fall (-28.3%). It was followed by residential construction with 17.9% and metal products/machinery with 10.3%. The only category of fixed capital formation that experienced growth during the first half of the year was agricultural machinery (8.4%).

Regarding the external sector of the economy, the trends that formed in the last quarter of 2009, persisted through the second quarter of this year. Exports declined in the first half (-2.8%), but at a lower rate than imports (-9.9%). The export reduction stemmed mainly from a fall in the export of services, which took place entirely in the second quarter. On the import side, the continuous, stable increase in the export of services has been impressive (+11.1% in the first half), but their share in total imports has been small and their increase was overcompensated by the sharp fall in the import of goods. These trends in the trade inflows-outflows were reflected in the fall of the external sector deficit from 12.4% of GDP in the first half of 2009 to 10.0% in the corresponding period of the current year.

In terms of production value, domestic gross value added fell by 4.6% year-on-year in the first half of 2010, at a significantly higher rate compared with the first quarter (-2.8%). Reflecting the investment slump in construction, the value added in the sector contracted by 24.6%. Similarly, a reduction of approximately 7.0% was recorded in industry, including energy, domestic financial activities, and activities related to real estate and leasing. The only sector that experienced growth in value added terms was agriculture, forestry and fishing, at rates faster than those recorded in the previous year (1.8% against 1.4%).

The impact on demand and production from uncertainty, due to fiscal instability and successive packages of restrictive fiscal measures, did not allow for improvement in the labour market conditions. Unemployment stood at 11.8% on average during the second quarter of the year. It remained at levels close to those recorded in the first quarter, however, its year-on-year decline, which had stabilised at the beginning of the year, expanded anew. Unemployment increased also due to labour force expansion, which for the first time in history surpassed five million in 2010 and could not be absorbed by the declining employment. The increase in indirect tax rates that formed part of the fiscal measures pushed inflation above 5%. It stood at 5.2% in the second quarter and even higher (5.5%) in July and August, highlighting the distortions that have existed in many markets, as in the same period total demand fell substantially.

The examination of the structure of GDP in the current adverse conditions and its evolution over the years is particularly interesting. On the demand side, consumption expenditure accounted for 91.2% of GDP, gross capital formation for 19.9%, exports for 20.2% and imports for -31.4%. During the three-year period 2006-2008, i.e. before the global economic crisis, the corresponding

shares stood at 88.8%, 23.3%, 23.6% and -35.7%. Thus, the largest change was recorded in imports (-4.3 percentage points), while the smallest was registered in consumption (+2.4%), whose weight against the other variables increased. If we subtract the impact from the increased issuance of purchase receipts that pushed up the results for consumption in 2010, the share of consumption in GDP should be standing close at its levels before 2009. The increase in consumption share is broken down equally between its two constituents, private and public. However, given that private consumption was standing at 72.9% of GDP in 2006-2008 and public consumption at 15.9%, the increase in the share of public consumption was proportionately larger.

On the supply side, agriculture, forestry and fishing contributed 4.2% of the domestic gross value added (from 4.1% in 2006-2008), industry (including energy) 11.9% (from 13.1%), construction 3.8% (from 6.7%), trade – hotels – restaurants - transport - telecommunications 35.2% (from 37.7%), financial activities – real estate activities – leasing 19.7% (from 17.1%) and the remaining services 24.2% (from 21.4%). The above figures primarily highlight the intensive contraction of the construction sector. In terms of the ranking of proportional share contraction, construction was followed by industry - energy and trade – hotels – restaurants – transport - telecommunications, which have been the sectors hit hardest from the recession. In contrast, significantly higher has been the contribution to domestic production by financial activities - real estate activities - leasing and the remaining services.

Medium-term outlook

The pursuit of the fiscal targets envisaged in the Memorandum of Economic and Financial Policies and the effort to implement the reforms planned in the Memorandum of Understanding on Specific Economic Policy Conditionality will be the key factors shaping the economic and, more generally, social developments in the current half and in the following years. The implementation of a new set of measures that was announced with the signing of the two Memoranda has put additional pressure mainly on private consumption demand, as the reduction in public consumption expenditure had already started in the beginning of the year. The effort to achieve the fiscal consolidation targets for this year's budgets is also affecting the level of investment, impacting on the growth prospects of the economy. In addition, the inability to raise the planned revenue would most probably lead to a further reduction of the Public Investment Programme.

Table 3.1

Main Economic Volumes (constant 2000 prices)

Year/ Quarter Τρίμηνο	GDP		Final Consumption		Investment		Exports		Imports	
	mil. €	Annual Rate of Change	mil. €	Annual Rate of Change	mil. €	Annual Rate of Change	mil. €	Annual Rate of Change	mil. €	Annual Rate of Change
2001	**142.001**	**4,2%**	**127.980**	**4,1%**	**33.025**	**3,9%**	**33.878**	**0,0%**	**52.882**	**1,2%**
2002	**146.884**	**3,4%**	**134.663**	**5,2%**	**33.441**	**1,3%**	**31.034**	**-8,4%**	**52.219**	**-1,3%**
2003	**155.614**	**5,9%**	**137.952**	**2,4%**	**39.627**	**18,5%**	**31.940**	**2,9%**	**53.768**	**3,0%**
2004	**162.808**	**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*	**166.457**	**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*	**185.428**	**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*	**181.789**	**-2,0%**	**165.124**	**0,4%**	**36.738**	**-13,4%**	**36.437**	**-18,1%**	**56.688**	**-14,1%**
a' 2010	44.689	-2,3%	40.882	-0,8%	8.784	-16,8%	9.097	-0,5%	14.155	-6,6%
b' 2010	43.904	-3,7%	39.034	-5,1%	8.723	-10,7%	8.676	-5,0%	12.485	-13,5%

* provisional data

Source: ELSTAT, Quarterly National Accounts, September 2010

The deepening of the recession in the second quarter, mainly due to the fall in private consumption, and the acceleration of inflation make the government and society overall question the desirability of adopting additional tax measures until the end of the year. Apart from the concern about the measures that are expected to be adopted shortly in order to limit the fiscal deficit to the set levels, constant disruptions to daily life are caused by social – in most case professional – groups, whose

interest has been harmed by reforms that have been implemented or announced. This strengthens the uncertainty, domestically and internationally, about the implementation speed of the agreed reforms. All this is happening in a period when the reform implementation is the key issue in the update reports of the European Commission and IMF on the stand-by arrangement with Greece.[25]

The course of the key economic activity and leading indicators points to preservation, and in a few cases, deepening of the recession's intensity. On the supply side of the economy, the fall in industrial production that had subsided in the second quarter, intensified in the beginning of the third, reaching 8.6% in July. Still, this change is slightly lower in comparison with the change in the corresponding month of the previous year, which is also true for the first seven months of the year in total. Construction decreased substantially at a rate larger than in the previous year, with the production indicator reaching the same levels with those recorded in the corresponding quarter of 2006. Its low level is due to the sluggish activity in the construction of buildings, which fell to its lowest levels since 2000. Turnover in hotels and restaurants decreased substantially in the second quarter, recording its lowest levels for the corresponding quarter at least since 2005. Its course can be seen as a first indication for the trend in the summer months in this key for the Greek economy sector. Turnover in retail trade decreased in the second quarter, registering no significant change overall for the first half of the year, even though it could have been higher, given the increase in the issue of purchase receipts due to the new tax incentives.

The acceleration of the fall in aggregate demand was analysed thoroughly in the first section of the current chapter. Private consumption, which tracks closely the movement in retail trade turnover, is now also falling. Investment in fixed capital, i.e. excluding the - disproportionate for an economy in recession – accumulation of inventory, was the lowest for a first half since 2002. This result, however, was largely expected due to a) continuous reduction in the Public Investment Programme (at 51% of its annual target during the first eight months of the year) and b) continuously deceleration expansion of credit to enterprises, which in the industry and trade sectors has turned into credit contraction[26] Weakening of the upward trend and eventually reduction (in July) was recorded in industrial orders, as the orders from abroad were adversely affected from the fall in international trade.

Similar are the trends that appear from the business surveys conducted by IOBE. The economic climate indicator, after approaching in May its historically lowest level recorded in March 2009, slightly improved in the following two months, remaining however at a large distance from its long-term average. Regarding its constituent sectors, new historically lowest level was recorded in retail trade in July,

[25] European Economy, Occasional Papers, no. 68, European Commission, August 2010- Greece, First Review of Stand-By Arrangement, IMF, September 2010

[26] Since last September in the former and April in the latter.

while close to the corresponding low records was the index in Services and Construction. The consumer confidence index also recorded a historically lowest price in May and June.

Regarding the outcome for the upcoming months, the intensification of the effort in the final stretch for this year's fiscal deficit target, the social and political processes surrounding the implemented/drafted reforms in the midst of a local election campaign and, lastly, the submission of the draft budget for the following year to parliament are expected to determine the economic developments until the end of 2010 and the outlook for 2011. In this context, the continuation of the effort to contain the state's consumption expenditure is taken for granted. Nevertheless, the reduction in **public consumption** in the second half of 2010 will probably be lower than that achieved in the first half of the year, as there are sizeable outstanding payments of the state, e.g. to its suppliers, while a loosening of the effort to reduce the state budget expenses can already be seen in July and August.

The consolidation in the consumption habits from the income reductions in the public sector and in pensions, as well as from the price changes due to taxation, where some excessive initial reactions are expected to be moderated, will constitute the key feature of the course of the other element of consumption demand, **household consumption**, in the second half of the year. Unemployment, which is significantly higher year-on-year, caution about the fiscal measures and reforms that will be either implemented shortly or included in the 2011 budget and reduction in Christmas benefits will maintain, or even slightly enlarge, the fall in household consumption. Nevertheless, intense acceleration of the fall is not expected, as the share of consumption expenditure, public and private, has not decreased, despite the three sets of adopted fiscal measures.

The slump in **investment expenditure** is expected to continue in the second half of the current year. The very low level in the corresponding half of the previous year and, secondarily, acceleration in the Public Investment Programme (PIP) are expected to moderate its fall. Even if the scenarios predicting a further reduction in PIP come true, PIP's implementation will be higher year-on-year in the second half of the current year, provided that the budget target is achieved. On the other hand, the plan to submit the new investment law to parliament in the final quarter of the year has put many investment plans on hold for quite some time now. Moreover, the corporate credit expansion decelerated further in the three-month period from May to July, falling below 2.8% in July. The banks' effort to safeguard their capital adequacy and the climate of mergers in the banking sector will preserve the tightness of their credit policy. Lastly, the latest news from the industrial orders are discouraging, whose rate of increase has decelerated since the beginning of the year and the orders are now falling, keeping the utilisation of production capacity and the propensity to invest in the sector at low levels.

The limitation of the negative impact of the **external sector** on GDP, observed

since the beginning of 2010, is not expected to be revoked for the year total. Nevertheless, the contraction of **imports** that primarily caused a reduction in the external deficit until the second quarter of 2010, will most likely stabilise or decelerate towards the end of the year. Despite the fall of the import flows, as part of the overall acceleration of domestic demand's weakening, the procurement of energy supplies for the coming winter, a key factor for the trade balance, is expected to be frontloaded due to the fear that the excise taxes of heating oil and motor diesel will be set equal from the beginning of 2011. The higher year-on-year oil price and the lower euro/dollar exchange rate will contribute further to the reduction in imports, with the second factor acting on all dollar-nominated imports.

Counteracting forces to the further reduction of the external deficit are expected to take hold on the export side too. The level of exports in the second half of 2009, and especially in the last quarter of the year, constitutes a high benchmark for this year's export performance. Moreover, the outlook for the global trade transaction in the second half of 2010 are certainly less promising compared to the first. As such, the pressures from the external sector on overall GDP will become stronger towards the end of the year.

To sum up the predicted trends in the basic components of GDP for the second half of the year, the larger fall in private consumption in comparison with the first half and the recovery of the deficit in the external sector are expected to lead to deepening of the recession. The only component of GDP that might slightly moderate its larger fall is public consumption. Taking into account these interactions, the course of implementing the stand-by agreement and the required period of reform maturation, IOBE estimates that that the rate of change in GDP in 2010 is expected to stand at about -**3.5%**. Relatively close to this estimate are the recent forecasts of the European Commission and IMF, which (continue to) expect a reduction of GDP by 4% in their Greek stand-by arrangement reviews, while a milder recession than 4% is predicted by the Finance Ministry.[27]

H Unavoidably, the economic recession will have a negative impact on the **labour market**. Despite the fact that unemployment increased only marginally in the second quarter, it increased significantly on a year-on-year basis. Its quarter-on-quarter reduction in the third quarter that was taking place until 2008 is probably not going to happen this year, similarly to 2009. Indeed, it is conceivable that unemployment has increased on a quarter-on-quarter basis in the summer months. In July the foreign tourist receipts were lower by 5% year-on-year, which can be seen as an indication of fewer arrivals of foreign tourists, affecting employment in tourist enterprises.[28]

The main factor behind the increase of unemployment is the fall in employment. Its year-on-year decrease accelerated in the second quarter, reaching 2.3% against

[27] European Economy, Occasional Papers, no. 68, European Commission, August 2010- Greece, First Review of Stand-By Arrangement, IMF, September 2010

[28] Balance of Payments, July 2010, Bank of Greece

1.3% in the previous quarter. The number of unemployed that had worked in the past increased by 44.7% (139,800) within a year since the second quarter of 2009. The increase in unemployment was further boosted by increase in the labour force, which has surpassed 5 billion people since the beginning of 2010. The inability to absorb this increase, due to shrinking employment, has increased the risk of creating new unemployed. This has been reflected in the increase in "new" unemployed by 9% since the second quarter of 2009. Regarding the upcoming months, the first indications for employment that came from the latest business expectations from IOBE's surveys showed a decrease of employment in all key sectors of the Greek economy.

Taking into account a) the trends in employment and labour force since the beginning of the current year and b) the expected strengthening of the recession until the end of 2010, unemployment is expected to increase in the second half. This increase will affect the year total result for unemployment, which is expected to reach and probably slightly surpass **12.0%** (see chapter 3.4 for more details).

The higher unemployment, the acceleration of the fall in consumption demand in the second half and the completion of the adaptation of the prices to the successive increases in the tax rates from February until May are expected to curb the increase in **inflation** from the end of the third quarter. Besides, after the announcement of the latest set of measures, inflation varied until August around the – high – level registered in May (5.4%), despite the low benchmark level of the price index in the summer of 2009. This fact will probably become the first indication that the rigidities existing in many markets in Greece have started to bend. This opinion is strengthened by the IMF's observation in its stand-by arrangement review that inflation at constant tax rate has fallen in the last months below the Euro area average for the first time since Greece adopted the Euro. Another factor that is expected to contribute to the deceleration of inflation in the upcoming months is its relative high benchmark level in the last quarter of 2009. With inflation running at 5.5% in August and 4.4% for the first eight months of the year, its weakening in the remaining of the year is expected to lead to an overall level of **4.6%** for 2010 as a whole.

Table 3.2

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

	2008	2009	2010	2011
Annual Percentage Changes				
Gross Domestic Product	2,0	-2,0	-4,0	-2,6
Private Consumption	2,3	-1,8	-3,5	-4,5
Public Consumption	0,6	9,6	-9,0	-8,0
Gross Fixed Capital Formation	-7,4	-13,1	-7,3	-7,0
Exports of goods and services	4,0	-18,1	1,3	6,1
Imports of goods and services	0,2	-14,1	-10,3	-6,6
Employment	0,1	-1,2	-2,6	-3,0
Compensation of employees / head	5,9	5,5	-1,0	0,1
Real Unit Cost of Labor	3,9	6,3	-0,6	-0,4
GDP Deflator	3,5	1,0	3,5	1,3
Harmonized Index of Consumer Prices	4,2	1,3	4,6	2,2
Contribution to real GDP change				
Domestic Demand	0,2	-2,5	-5,5	-5,9
Net Exports	0,8	0,7	3,5	3,2
House Inventories	1,0	-0,1	-1,9	0,1
GDP percentage				
Trade Balance	-16,6	-14,0	-12,0	-10,4
General Government Balance	-7,7	-13,6	-7,8	-7,6
Current Account Balance	-13,8	-13,1	-10,6	-8,0
General Government Debt	99,2	115,1	130,2	139,8
Percentage				
Unemployment (% of civilian labor force)	7,7	9,5	11,6	14,5

Source: European Economy, Occasional Papers, no. 68, European Commission, August 2010

Table 3.3

Comparison of forecasts on selected Economic Indexes for years 2009- 2011
(constant 2000 market prices, annual % changes and levels)

	MFIN			EC			OECD			IMF		
	2009	*2010*	*2011*	*2009*	*2010*	*2011*	*2009*	*2010*	*2011*	*2009*	*2010*	*2011*
GDP	-2,0	-4,0	-2,6	-2,0	-4,0	-2,6	-2,0	-3,7	-2,5	-2,0	-4,0	-2,6
Final Demand	:	:	:	-5,2[1]	-4,7[1]	-1,2[1]	-2,5	-6,1	-5,3	:	:	:
Private Consumption	-1,8	-4,0	-3,7	-1,8	-3,5	-4,5	-1,8	-3,7	-3,6	-1,8	-3,0	-3,9
Harmonized Index of Consumer Prices	1,3	1,9	-0,4	1,3	4,6	2,2	1,3	3,0	0,3	1,3	4,6	2,2
Gross Fixed Capital Formation	-13,9	-11,4	-11,8	-13,1	-7,3	-7,0	-13,9	-12,5	-11,5	-13,9	-12,0	-11,7
Unemployment (%)	9,4	11,8	14,6	9,5	11,6	14,5	9,5	12,1	14,3	9,4	11,8	14,6
General Government Balance (% of GDP)	-13,6	-8,1	-7,6	-13,6	-7,8	-7,6	-13,5	-8,1	-7,1	-13,6	-7,9	-7,3
Current Account Balance (% of GDP)	-11,2	-8,4	-7,1	-13,1*	-10,6*	-8,0*	-11,2	-8,9	-6,7	-11,2	-10,8	-7,8
Gross Public Debt (% of GDP)	115	133	145	115,1	130,2	139,8	:	:	:	115	130	139

* on national accounts basis

Sources: Note on the Economic Policy Programme for the Eurogroup-IMF support mechanism, MFIN, May 2010 - European Economy, Occasional Papers, no. 68, European Commission, August 2010 ([1]European Economic Forecast Spring 2010, European Commission, May 2010) - OECD Economic Outlook No. 87, May 2010 - Greece, First Review Under the Stand-By Arrangement, IMF, September 2010.

In summary, the Greek economy is suffering the first effects from a remarkably frontloaded fiscal consolidation attempt, which unavoidably will create intense shocks not only at economic, but at social level too. As time is needed for the adaptation of the markets to the counteracting changes in income and taxes and mainly for the maturation of the results from the reforms, the effort that has been extended so far by the Greek society does not seem to have convinced the players in the international capital markets, as the spreads on the Greek bonds remain high. Nevertheless, the rigidity of inflation, despite the third and largest wave of tax increases in May, indicates a change in the way markets (producers, transport, trade) react, which however is still limited and will become wider noticed with the continuous ease of the inflationary pressures in the upcoming months, as analysed above.

Patience, dialogue, disposition to reconciliation of the different views and interests, as opposed to the pursuit of conflict, and, lastly, communication of the positive results from the implemented measures are needed today in order to extract maximum benefit from the restructuring process that the Greek economy is essentially undergoing. In addition, the comparison of the positive developments with the corresponding potential outcome from remaining on the dead-end path that the country followed until recently will make the need and the benefits of the efforts that have already been expanded and will be required in the upcoming years even clearer.

3.2 Developments and prospects in key sectors of the economy

This section presents the quarterly indices of activity complied 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.

Industry

Industrial production continued to decline since May 2008, falling by 8.6% year-on-year in July 2010 (against a fall of 10.2%). As a result, industrial production fell by 6.3% y-o-y in the first seven months of the year, while in the corresponding period of the previous year the fall of the index was more intense (-10.3%). In contrast the industrial production in the Euro area has completely recovered, increasing by about 7% in the first seven months of the year (against a drop of 18.2% in the previous year). In all member-countries of the Euro area, except Greece and Cyprus, industrial production increased at a rate varying from +1.4% in Spain to about 23% in Slovakia.

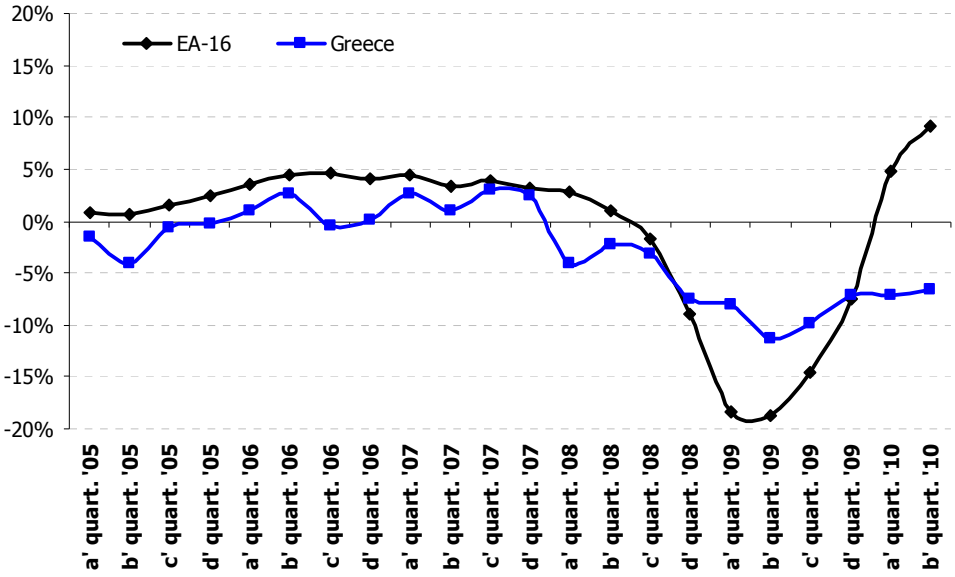
At branch level, the largest reduction in production in Greece is recorded in electricity and natural gas supply by 9.9% in 2010 against 3.4% the year before. In Manufacturing, production continued to fall, but at a lower rate compared to the large drop recorded in 2009 (-5.5% against -12.6%). Similar is the trend in Mining-Quarrying, where the index fell by

5% against -13% the year before. In contrast, Water Supply increased marginally by 0.7% against a drop of 1.2% in the corresponding period of 2009.

Production in the majority of **Manufacturing** branches (18 out of 24) has been falling in the first seven months of the year, with the exception of the branches with export orientation. The production of Basic Metals increased by 9.5% against a drop of 22.8% in the corresponding period of the previous year, while in Chemicals the index recovered marginally at 1.3% against a large drop in the previous year (-16.7%). Coke & Refinery Products and Pharmaceutical Products also increased their production, but at a rate lower than that recorded in the first seven months of 2009 (1.1% against 7.7% and 5.8% against 16.1% correspondingly), while the remaining two branches that recorded production increase were Wood-Cork (18.1% against a drop of 33.4%) and Motor Vehicles (3.8% against -28.3%).

Still, the reduction recorded in key sectors of domestic manufacturing, such as Food manufacturing (-3.1%) with a drop half the rate compared with the first seven months of 2009 and Non-Metallic Minerals, where production shrank by 10%, following its large drop the year before by 25.8%, determined the downward course of the overall index. Similar trend was recorded in Manufacture of Metal Goods (-7.9% against -20.6%) and Plastics – Rubber (-4.6% against -14%). In contrast, in sectors such as Beverages, Clothing, Tobacco and Leather the drop recorded in the first seven months of 2010 was larger than the drop in the corresponding period of 2009

Figure 3.1
Production Index in Manufacturing, Greece and Euro area-16, % change w.r.t the same quarter of the previous year (2005=100)



Source: Eurostat **data processing:** IOBE

Lastly, in Textiles industrial production continued on its downward course, albeit at a smaller rate compared to the previous year (-17.8% against -30.8%), with its level standing at only one third of that recorded five years previously.

The decline of production in **Mining-Quarrying** came from the drop of production in Mining of Coal & Lignite by 13.4% against a drop of 1.1% in the first seven months of 2009, which was linked with the reduction of production of electricity from lignite (-11.3% in the first seven months of 2010, according to the Hellenic Transmission System Operator). In contrast, production increased in Other Mining and Quarrying by 2.2%, following its large drop in the previous year (-29.9%), and in Mining of Metal Ores (23.2% against -30.4%), while in the Extraction of Crude Petroleum & Natural Gas the production index doubled in comparison to the year before.

Slowdown of the downward trend was also observed in the various categories of goods. The reduction rate ranged from 0.4% in Intermediate Goods (-21.3% in the previous year) to 25.6% in Capital Goods (-26% in the previous year). In the Consumer Non-Durables, the index fell by 6.7% in the first seven months of 2010 against a fall of 5.8% in 2009, while in Energy the index declined by 6.2%, against a slight decrease of 0.5% in the corresponding period of the previous year. Lastly, turnover in industry fell in July by 3.6% year-on-year, even though for the first seven months of the year the index has increased by 5.5% against its large contraction by 27% in the previous year.

Construction

Based on the (provisional) data for the second quarter of 2010, the general index of production in Construction fell by 18.3% year-on-year, against a drop of 13.9% in the previous year. However, the index increased quarter-on-quarter by 30.2% - the largest q-o-q increase in the past four years. As a result it stood at levels similar to those it had in the second quarter of 2006. The index was also falling, albeit at a lower rate, on average in the Euro area, by 3.8% in the second quarter of 2010 (-7.5% in the previous year). The index was falling in most Euro area member-countries, except Malta (12.9%), Germany (4.0%) and Luxembourg (3.9%).[29]

Regarding the production indices of the branches that comprise the sector, in Building Construction production fell by 20.2%, against a drop of 24.1% in the second quarter of 2009, while the reduction in the output of Civil Engineering works was almost three times as high (-17.3%) compared to the year before. Meanwhile, total building activity (private and public) in the first half of 2010 was limited to 25,222 permits, recording a 8.6% year-on-year decline, while in the preceding year the fall reached 15.6%. The reduction was much larger, however, in terms of building volume, reaching 24.4%, against a drop of 26.5% in the previous year. At regional level, reduction in terms of permits was recorded in most regions of the country (11 out of 13). Larger was the drop in Crete (-18.7%), West

[29] There is no available data for the second quarter of 2010 for Italy, Cyprus and Finland.

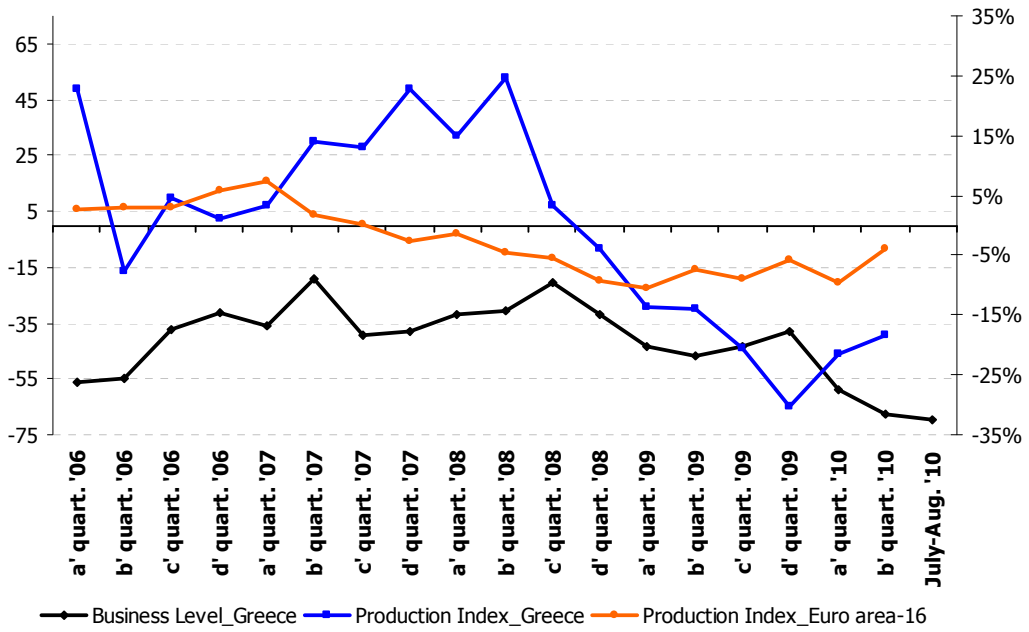
Macedonia (-17.0%), North Aegean (-16.6%) and Central Greece (-12.4%), while slight increase was recorded only in Peloponnese (1.6%) and West Greece (1.3%).

On the other hand, the transactions with residences with the mediation of credit institutions during the period from April to July of 2010 were slightly lower year-on-year (approximately 17,600), at a level only half that recorded in the second quarter of 2008. Meanwhile, the upward trend that was observed in transactions since the end of the previous year, which could have contributed substantially in the absorption of the excess supply, was reversed, as the number of transactions fell by 26.2% quarter-on-quarter. The decline in the credit expansion rate in July by 1.9% (against 2.3% in June and 3.0% in May) and the fall of the average interest rate on new mortgage loans (3.6% in June) is another characteristic trend in the real estate market.

Based on the 2009 data on property price estimates, supplied by four large banking institutions,[30] property prices fell by 5.9% on average. The largest reduction was recorded in East Attica and the Western suburbs of the wider Athens area. Similar trend was observed in the data for the first quarter of 2010, where the year-on-year drop reached 7.7%, with East Attica and the Western suburbs remaining the areas with the largest reductions (above 10%).

[30] The analysis is performed on behalf of Propindex, using data supplied by National Bank of Greece, Alpha Bank, Eurobank and Emporiki Bank.

Figure 3.2
Construction Production Index (annual % changes) in Greece and in the Euro area-16, Business Level Index in Greece* (1996-2006=100)



* Business level (l.h.s.), Production Index (r.h.s.)
Sources: ELSTAT-IOBE

Retail Trade

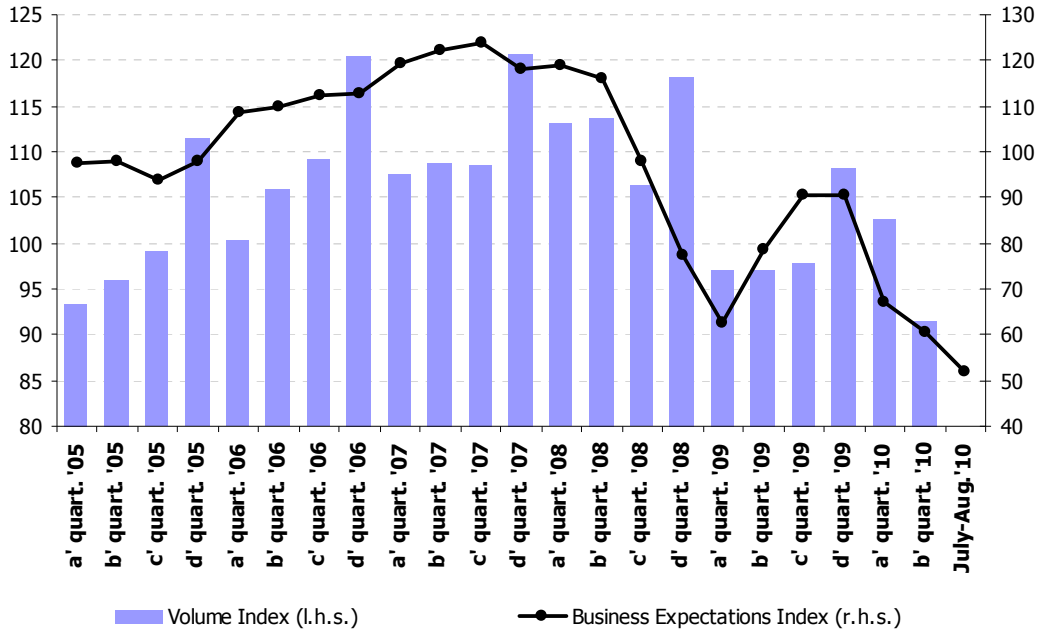
The **Volume Index in Retail Trade** (turnover at constant prices, including automotive fuels and lubricants)[31] fell by 5.7% year-on-year in the second quarter of 2010, against a 14.6% drop in the previous year. However, in the first half of the year the index remained at about the same levels y-o-y (drop by 0.1% against a reduction of 14.5% in comparison with 2008).

Regarding the main categories of retail trade, the largest drop in the first half of 2010 was recorded in Departmental Stores by 11.1%, against a fall of 7.3% in the first half of 2009, in Automotive Fuels & Lubricants (-7.8% against -34.1% in the previous year), in Clothing-Footwear (-5.4% against +3.7%), and in Furniture-Electrical Appliances-Household Goods (-3.0% against -21.1%). In Supermarkets, the volume index remained unchanged, while in 2009 it was falling by 8%. Meanwhile a small increase was recorded in Books-Stationary-Other Gift Items (1.2%), following their significant drop in the previous year by 29%. In contrast, the index increased by 9.3% in Pharmaceuticals-Cosmetics (against a small drop by 0.5% in the second quarter of 2009) and by 1.4% in Food-Beverages-Tobacco (against a drop of 3% in the previous year).

[31] 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'.

Figure 3.3

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



Sources: ELSTAT-IOBE

The **Turnover Index** for Trade, Maintenance and Repair of Motor Vehicles and Motorcycles (branch 45 according to NACE Rev.2) remained on a downward path in the second quarter of 2010, registering its largest fall (-35.4 against -12.1 in 2009) since 2008. As a result, the index recorded its new lowest level in five years. The same trend was observed in the sub-branch Trade of Motor Vehicles (branch 451 according to NACE Rev. 2), where the index fell at a triple rate (-41%) compared with the second quarter of 2009.

Table 3.4

Annual Changes in the Index of Retail Trade Volume, January-June

Store Categories of Retail Trade	Volume Index (2005=100,0)				
	Jan.-June 2008	Jan.-June 2009	Jan.-June 2010*	PC (%) '09/'08	PC (%) '10/'09
Overall Index	113,4	97,0	97,0	-14,5	0,0
Overall Index (excluding car fuels and lubricants)	107,9	95,6	95,5	-11,4	-0,1
Store Subcategories					
Large Food Stores	113,5	104,4	104,3	-8,0	-0,2
Multi stores	113,5	105,3	93,5	-7,2	-11,1
Car Fuels and Lubricants	140,2	92,0	84,8	-34,4	-7,8
Food-Drink-Tobacco	92,9	90,1	91,4	-3,0	1,4
Medicare-Cosmetics	108,7	108,2	118,2	-0,5	9,3
Clothing-Footwear	93,8	97,3	92,0	3,7	-5,4
Furniture – Electric household appliances - Household Goods	119,7	94,5	91,7	-21,1	-3,0
Books - Stationery- Other gift items	108,3	77,0	77,1	-28,9	0,1

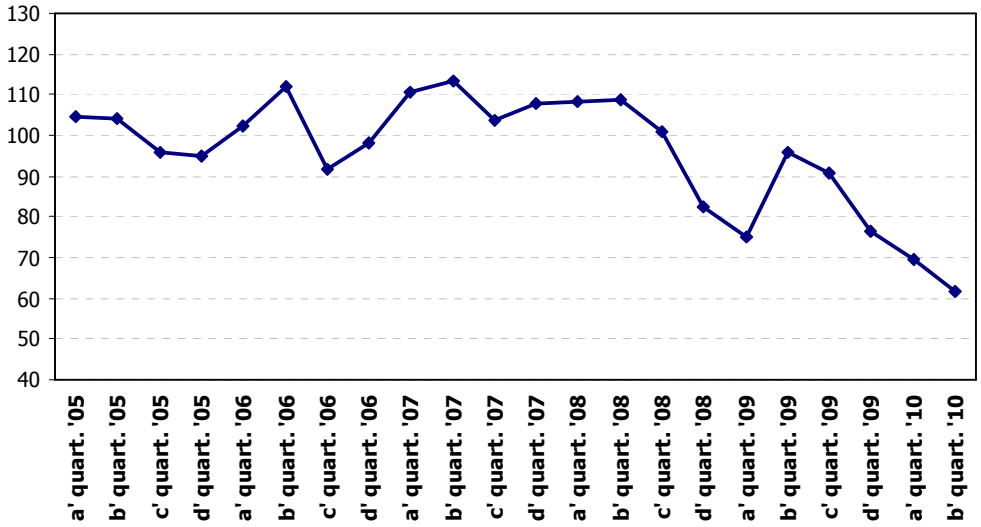
*Provisional data
Source: ELSTAT

The crisis in the motor vehicles sector has also been evident in the **Business Surveys** carried out by IOBE, where the Confidence Indicator for Motor Vehicles marginally increased in July, remaining, however, at very negative levels, 10 points below the levels recorded in January 2009.

The estimates for the upcoming months for sales and orders placed with suppliers have remained negative, while employment in the sector has been hit hard by the current economic conditions, as about 2.000 jobs have been lost during the crisis, according to a survey of the sector's companies, conducted by IOBE.

The overall confidence index for Retail Trade fell year-on-year in the first eight months of 2010. In its constituent categories, the index registered similar drop (-35.3% and -10.1% correspondingly), compared with the corresponding period of the previous year, in Motor Vehicles – Spare Parts and Department Stores. In Fabrics-Clothing-Footwear the drop decelerated (-18%), with the index falling, however, to levels half of those recorded in the first eight months of 2008. Similarly, the fall of the index decelerated in Food-Beverages-Tobacco (-8.2%), following its substantial drop in the corresponding period of the previous year (-28.2%).

Figure 3.4
Turnover Index in Trade, Maintenance and Repair of Motor Vehicles and Motorcycles -Sector 45- (2005=100)



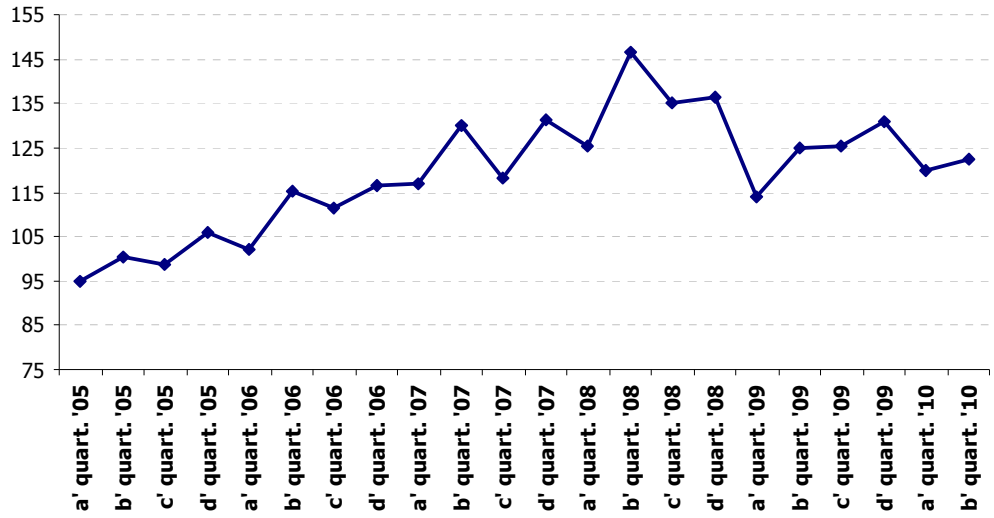
Source: ELSTAT

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

	Jan.-Aug. 2008	Jan.-Aug. 2009	Jan.-Aug. 2010	PC (%) '09/'08	PC (%) '10/'09
Food - Drink - Tobacco	115,6	83,2	76,4	-28,2%	-8,2%
Textile – Clothing - Footwear	121,4	85,8	70,3	-29,3%	-18,0%
Household goods	114,9	63,0	58,1	-45,1%	-7,8%
Motor Vehicles (including parts)	108,5	69,3	44,8	-36,1%	-35,3%
Multi stores	115,5	103,7	93,3	-10,1%	-10,1%
Total in Retail Trade	112,9	75,3	60,9	-33,2%	-19,2%

Source: IOBE

Figure 3.5
Turnover Index in Wholesale Trade -Sector 46- (2005=100)



Source: ELSTAT

Wholesale Trade

The **Turnover Index for Wholesale Trade** (branch 46 in NACE Rev.2)[32] declined by 2.1% year-on-year in the second quarter, against a decrease of 14.9% in relation to 2008. In comparison with the immediately preceding quarter, however, the index increased by 1.9%.

Services

In the Services sector,[33] the turnover index declined during the second quarter of 2010 in 12 out of the 14 branches, against 9 branches in the corresponding period of the previous year. Similar trend was registered for the first half of 2010 overall, with 11 sectors (against 9 in the previous year) recording a year-on-year decline.

In greater detail:

The largest decrease of the turnover index in the first half of 2010 was registered in **Other professional, scientific and technical activities** (branch 74) by 27.8% against a drop of 19.8% in the previous year. **Architectural and engineering activities** followed with a fall of 22.6% (against -7.2% in 2009), which reflected the downward trend in the Construction sector.

In contrast, the largest increase, by 12.4% (against -5.3% in 2009) was recorded in **Legal and accounting activities** (branch 69). In the second quarter of 2010, the index reached its highest level for the last three years and the second highest level among the 14 branches. However, the large drop of turnover in Management consultancy activities (branch 70.2) by 19.4% (against +6.2 the year before) implied that the two sectors

[32] The Wholesale Trade index is calculated without VAT and includes the total amounts invoiced by a company during the reference period (quarter).
[33] The indices that IOBE has selected to present are mainly those for which additional data are available from its Business Surveys.

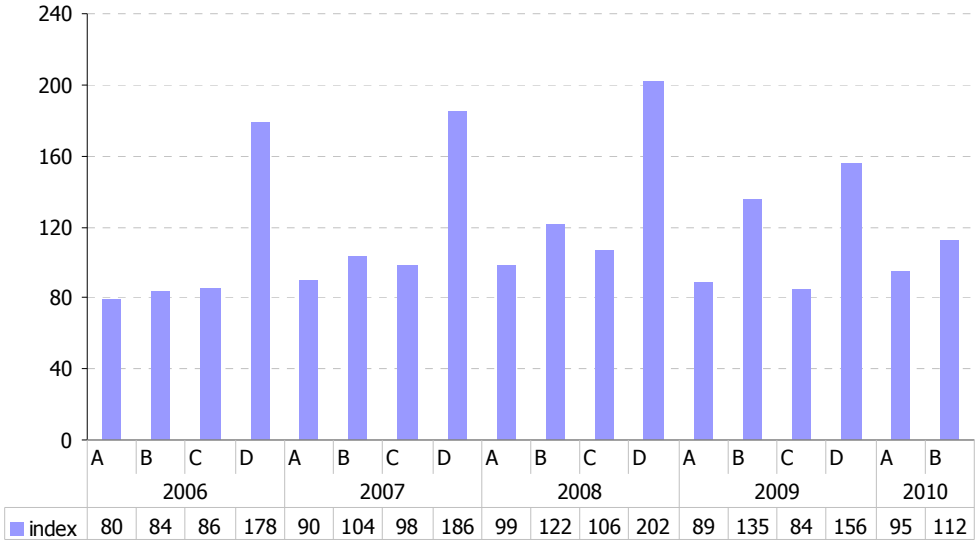
taken together recorded a fall by 7.1% (against +1.5% in 2009).

In **Telecommunications** (branch 61) the turnover index fell for a forth consecutive quarter. In the first half of 2010 the index dropped at a slightly lower rate, compared to 2009 (-7.4% against -9.3%), while the index in April and May stood at its lowest level in five years.

A significant drop of the index was also recorded in **Computer Programming, Consultancy and Related Activities** (branch 62), at a similar rate with 2009 (-19.4% against -18.2%), reaching its lowest level since 2005. The turnover index in **Advertising and Market Research** (branch 73) fell by 11.4%, double the rate compared to the first half of 2009. In the second quarter of 2010, the index fell by 14.1% y-o-y, reaching as a result almost the same levels with the first quarter of 2005.

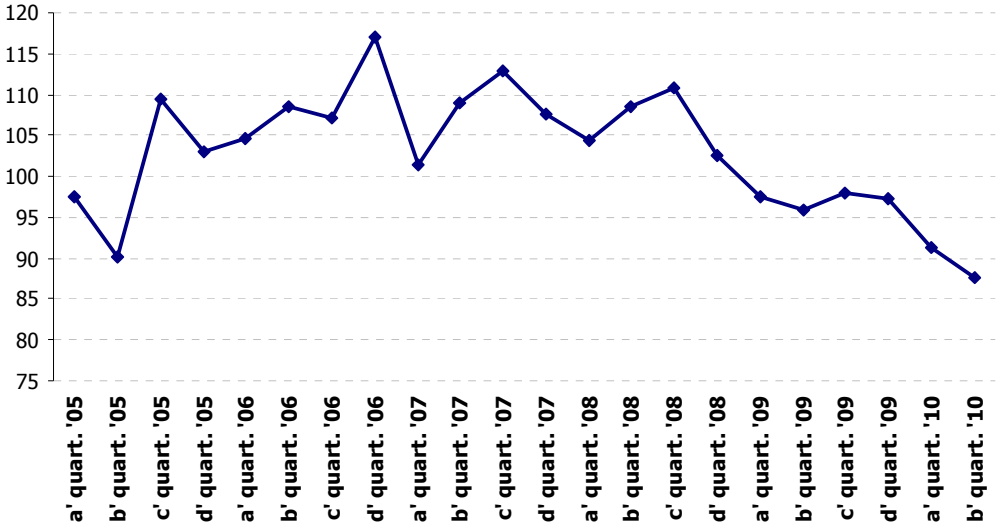
Lastly, the turnover index in **Accommodation and Food Service Activities** (branches 55 and 56) fell in the second quarter of 2010 at double the rate of 2009 (-10.2% against -4.6%). This result is directly linked with the impact on tourism from the negative publicity of the country abroad, especially during May and June. Nevertheless, in the first half of 2010 overall, the reduction of the index was more moderate, compared with the corresponding period of the previous year (-5.6% against -10.7%). In any case, the index reached levels slightly lower than those recorded in the first half of 2005. Still, the developments in the third quarter, which contains the two peak months (July and August), will be decisive for the annual turnover of the branch.

Figure 3.6
Turnover Index in Legal, Accounting and Consulting Services -Sectors 69 & 70.2- (2005 = 100)



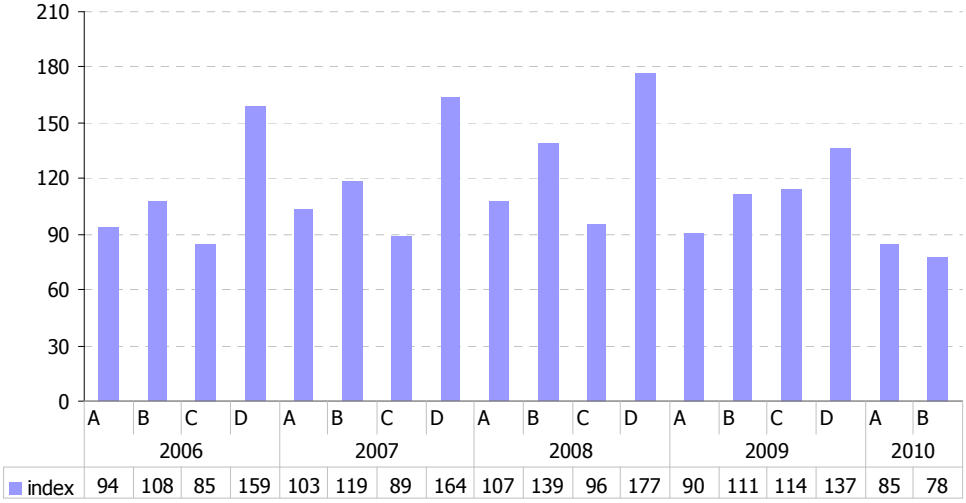
Source: ELSTAT

Figure 3.7
Turnover Index in Telecommunications -Sector 61- (2005 = 100)



Source: ELSTAT

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

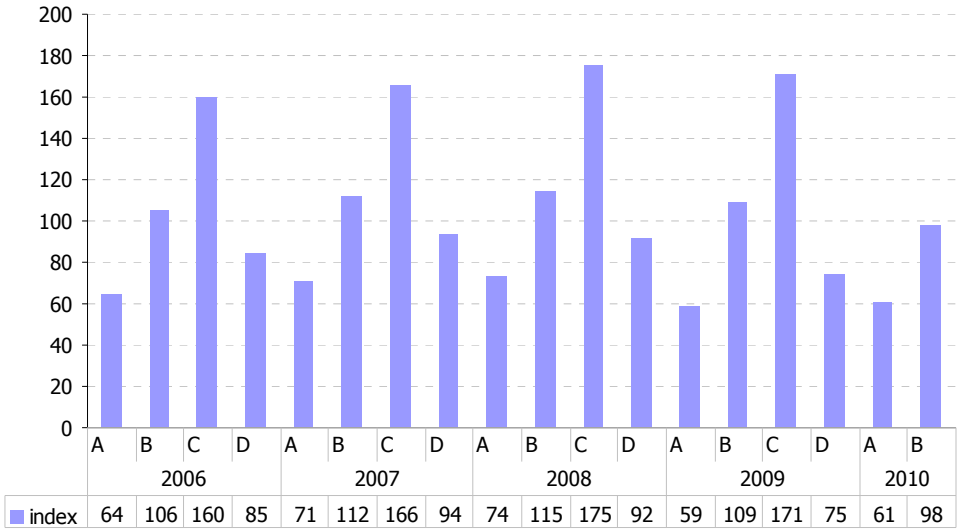


Source: ELSTAT

The index in these two branches, Legal-Accounting-Management Consultancy and in Advertising – Market Research, is following seasonal patterns, which can have adverse effects on viability, employment, etc., especially in times of crisis.

The developments that took place in the branches of services had already been identified to a significant degree in the projections of the leading indicators based on the results of IOBE's business surveys. During the first eight months of the year, the confidence indicator for Services fell by 9.1% year-on-year. In contrast to the overall trend, increase in the index was recorded in Financial Institutions and Business Services.

Figure 3.9
Turnover Index in Accommodation, Food and Beverage Service Activities -Sectors 55 & 56- (2005 = 100)



Source: ELSTAT

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

	Jan.-Aug. 2008	**Jan.-Aug. 2009**	**Jan.-Aug. 2010**	**PC (%) '09/'08**	**PC (%) '10/'09**
Hotels - Restaurants	104,89	75,1	74,5	-28,4%	-0,9%
Activities of travel agencies and tour operator, tourist assistance activities	95,61	71,0	66,0	-25,7%	-7,0%
Other Services to Businesses	96,20	57,4	61,9	-40,3%	7,9%
Intermediate Financial Organizations	91,06	68,7	74,3	-24,5%	8,2%
Informatics	98,28	65,4	45,3	-33,5%	-30,7%
Total Services	**104,27**	**69,7**	**63,4**	**-33,1%**	**-9,1%**

Source: IOBE

In summary, industrial production continued its contraction in the first seven months of 2010, decelerating, however, in comparison to the large fall it recorded in the previous year. This trend, which is the reverse of what was observed in most Euro area countries, signified that the growth in domestic manufacturing has depended mostly on domestic demand, which in turn has been adversely affected by the fiscal consolidation measures. The branches that achieved growth in this period were those that were supplying large share of their product in the foreign markets. Meanwhile, traditional branches of the Greek economy, such as Textiles, which in the past represented substantial share in Greek exports, have entered a prolonged recession, due to the intense competition from countries with low labour cost. The adverse trend is also reflected in new industry orders, which fell in July by 4.1% year-on-year due to the decrease of new orders in the domestic market (-19.6%), despite the significant increase in new orders from abroad (+25.8%). The

turnover index in industry fell in July, without reverting, however, the positive result for first seven months of the year as a whole.

The downward trend in domestic industrial production can be partially explained by the substantial slump that has persisted in Construction, as quite a few manufacturing branches are linked with building activities. The production index in Construction fell in the second quarter of 2010 to levels similar to those recorded in the second quarter of 2006. Yet, the index increased quarter-on-quarter. Total building activity, based on the number of permits, slowed down in the first half of 2010 year-on-year, while in volume terms it recorded a decrease of similar rate with the year before. Meanwhile, residence transactions with the mediation of credit institutions slowed down as well in the second quarter of 2010.

The turnover index in retail trade remained unchanged (y-o-y) in the first half of the year. The expenses for goods with higher demand elasticity, such as clothing, footwear and fuels, declined, in contrast to goods with lower elasticity, such as food. The Motor Vehicles branch is under heightened pressure, having lost large share of its turnover in the past two years. The sales in the branch were lower by almost a third year-on-year in the first eight months of the year, while the year total for 2010 is expected to be significantly lower compared with the past two year (about 155,000). Lastly, adverse impact of the crisis is also observed in Services, where turnover fell in most branches.

3.3 Export Performance of the Greek Economy

In the first half of 2010, the Greek exports stood at €7,384 million, higher by 3% compared with the corresponding period of the previous year, when they fell by 16.9%. In contrast, imports continued their downward trend, falling at a similar rate with the one registered in the same period of 2009 (-18.4% against -21.3%). As a result, the trade deficit declined by 27.2%, which, added to the sizeable drop it recorded in 2009 (-23.6%), meant that it reached its lowest level in five years at least.[34] The imports-exports coverage ratio increased by 7.6 percentage points year-on-year (+36.7%).

The industrial products, which represented the largest share in Greek exports (58.5%), increased by 2.3% (or €95.4 million) in the first half of the year, against their significant fall in the previous year (-19.8%). The increase came mostly from exports of 'chemical and related products' (+14.2%) and 'industrial goods classified by raw material' (+7.3%). Their increase by €249.6 million overcompensated the decline in the exports of 'vehicles and transport equipment' (€-139.5 million or -13.9%). Small decline was also recorded in the exports of 'various industrial goods', which maintained their share in exports stable in the past two years.

The share of agricultural products in total exports remained unchanged year-on-year, representing one forth of total ex-

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

port value. 'Food and live animals', following the stagnation experienced in the previous year, saw their export value increase by 5.6% (or €76.1 million) in the first half of 2010, which counteracted the decrease recorded in the remaining categories of agricultural products. In particular, the exports of 'beverages and tobacco' dropped by 12.6% (or €35.1 million) in comparison with the corresponding period of the previous year, when the exports in this category had registered the highest increase among the one-digit product categories. Exports in 'animal and vegetable oils and fats' continued to decrease with their value having declined by €41.6 million (-24.4%) in the last two years.

In the remaining categories, increase by 16.3% (€57.7 million) was experienced in raw materials (against 11% drop in the previous year) and by 30.4% (€45.3 million) in 'products and transactions not classified elsewhere', whose value, however stood at lower levels compared with the first half of 2008. Lastly, fuel exports remained unchanged, following their significant fall in the corresponding period of 2009.

Table 3.7
Exports per 1-digit product classification

January-June							
	Value (mil. €)		P.C. (%)		Structure (%)		
	2009*	**2010***	**'09/'08***	**'10/'09***	**2010***	**2009***	**2010***
Agricultural Products	**1.787,5**	**1.805,8**	**0,0%**	**1,0%**	**20,7%**	**24,9%**	**24,5%**
Food and live animals	1.358,2	1.434,3	0,1%	5,6%	15,7%	19,0%	19,4%
Beverages & Tobacco	277,8	242,7	6,8%	-12,6%	3,0%	3,9%	3,3%
Animal, Vegetable oils and fats	151,4	128,7	-11,1%	-15,0%	2,0%	2,1%	1,7%
Raw Materials	**353,4**	**411,2**	**-10,8%**	**16,3%**	**4,6%**	**4,9%**	**5,6%**
Crude materials inedible, except fuels	353,4	411,2	-10,8%	16,3%	4,6%	4,9%	5,6%
Fuels	**654,6**	**654,5**	**-27,0%**	**0,0%**	**10,4%**	**9,1%**	**8,9%**
Minerals, fuels, lubricants, etc.	654,6	654,5	-27,0%	0,0%	10,4%	9,1%	8,9%
Industrial products	**4.222,2**	**4.317,7**	**-19,8%**	**2,3%**	**61,0%**	**58,9%**	**58,5%**
Chemicals and related products	1.016,1	1.160,1	-13,3%	14,2%	13,6%	14,2%	15,7%
Manufactured goods classified chiefly by raw material	1.452,8	1.558,4	-28,9%	7,3%	23,7%	20,3%	21,1%
Machinery and transport equipment	1.001,8	862,3	-10,6%	-13,9%	13,0%	14,0%	11,7%
Miscellaneous manufactured articles	751,5	736,8	-19,3%	-1,9%	10,8%	10,5%	10,0%
Other	**149,2**	**194,6**	**-46,5%**	**30,4%**	**3,2%**	**2,1%**	**2,6%**
Commodities and transactions not classified by category	149,2	194,6	-46,5%	30,4%	3,2%	2,1%	2,6%
Total Exports	**7.167,0**	**7.383,6**	**-16,9%**	**3,0%**	**100%**	**100%**	**100%**

* Provisional data
Source: PEA-ERC-ELSTAT

In terms of destination, the exports of Greek product to most EU-27 member-countries (18) increased in the first half of 2010 and as a result total export in this regions increased by €302.5 million (+6.8%) year-on-year. This increase is fuelled by large increase in exports (+17.6%) to EU countries outside the Euro area. Indicatively, the exports to the United Kingdom increased by 51.4% (€145 million), which made the UK the fourth largest destination for Greek exports during that period. Increase was registered in the exports to all remaining EU countries outside the Euro area, except Bulgaria and Sweden, with most significant in terms of their share, those of Poland (29.8%), Denmark, the Czech Republic (30.3% in both) and Hungary (21.4%). In contrast, smaller increase was registered in the exports to the 16 Euro-area member-countries (+2.2%), whose share remained unchanged year-on-year.

As for Greece's main partners, the exports to Germany, which remained the largest market for Greek products, increased by 8.4%, standing at €845 million. Italy followed with €796 million, registering, however, decrease by 1.9% year-on-year. Meanwhile, in Cyprus, which has been the third largest trading partner of Greece, the exports stood at €542 million (+2.1%). In the remaining markets with large share of Greek products, significant increase was experienced in Turkey (28.8%) and France (12.1%).

Exports to OECD countries, which accounted for 58% of Greece's total exports, increased by 2.8% in the first half of 2010. In the Balkan region, exports increased marginally by 1.5%, following their large fall in the previous year (-23%), while their share remained constant. In Bulgaria, the main trading partner among the Balkan countries, the exports declined at a rate (1.3%), significantly smaller compared with FYROM (-16.5%). The decrease to these two countries was counterbalanced by increase in Romania (11.4%) and Albania (1.6%), as well as in the remaining countries in the region, whose share has been significantly lower, i.e. Croatia (63.1% and €13.9 million) and Bosnia-Herzegovina (39.5% and €7.1 million).

Exports to North America fell significantly (-26.6%), reaching their lowest level in four years at least. This was mostly due to a reduction of exports by €137 million (-34.9%) to the US market, which was the 9th largest trading partner of Greece in the first half of 2010. In contrast, the exports increased in Canada (+38%) and Mexico (+42.3%), which however was not sufficient to compensate for the drop in the exports to the US economy due to their small share.

Exports to the countries of North Africa and the Middle East increased at a rate smaller by 3.5 percentage points compared to the corresponding period of 2009 (8.4%). Regarding the countries that absorbed the largest share of exports in this region (about 80%), increase was recorded in the United Arab Emirates (+58.1%), Saudi Arabia (+43.1%), Libya (+30.3%), Morocco (+75.7%), Algeria (+13.7%) and Israel (+11%), while in Egypt, which represented the largest share of exports in the region, the value of Greek exports fell by €16.2 million (-16%).

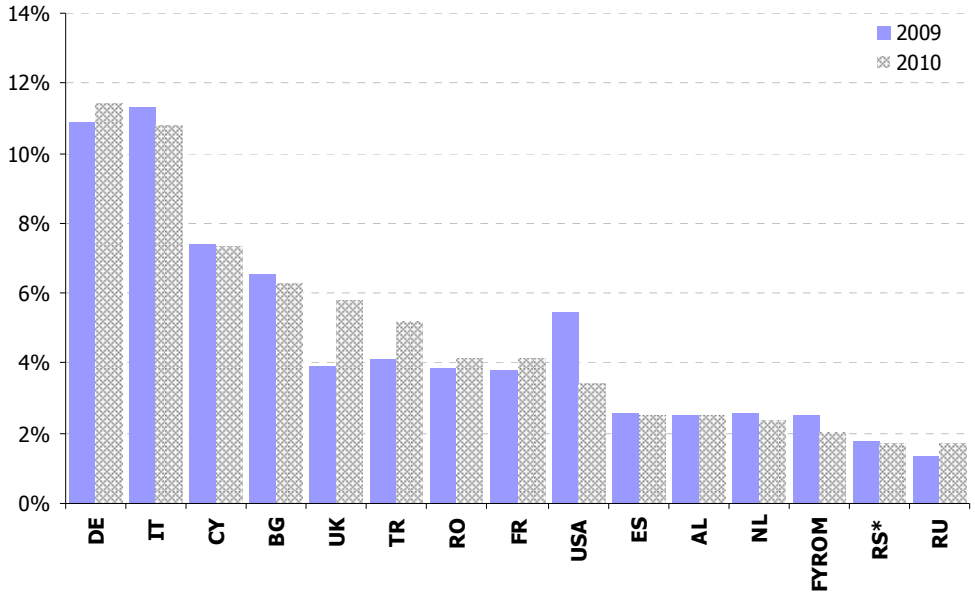
Regarding exports to the countries of the Commonwealth of Independent States, the increase in the first half of 2010 by €36.2 million (+22.5%) was caused by increase in exports to Russia by 30%, with their total value standing at €127 million. Lastly, exports to China increased by €25.3 million (+55.8%) year-on-year, while exports to India declined by 12.9%.

Table 3.8
Exports per destination, January-June

	Value (mil. €)			Structure	
	2009*	**2010***	**P.C. (%) '10/'09**	**2009***	**2010***
OECD (29 countries)	4.152,7	4.269,8	2,8%	57,9%	57,8%
EU-27	3.720,2	3.997,5	7,5%	51,9%	54,1%
Euro area-16	2.923,1	3.143,1	7,5%	40,8%	42,6%
North America	441,4	323,9	-26,6%	6,2%	4,4%
Other Developed Countries	54,0	57,7	6,9%	0,8%	0,8%
Rest OECD (excl. S. Korea)	526,0	477,0	-9,3%	7,3%	6,5%
Balkans	1.274,8	1.294,3	1,5%	17,8%	17,5%
Commonwealth of Independent States (CIS)	160,5	196,6	22,5%	2,2%	2,7%
Middle East and N. Africa	486,9	528,0	8,4%	6,8%	7,2%
African Countries (excl. S. Africa)	72,8	50,1	-31,2%	1,0%	0,7%
S. E. Asia	65,4	95,7	46,3%	0,9%	1,3%
Latin America	31,0	24,4	-21,3%	0,4%	0,3%
China	333,9	338,6	1,4%	4,7%	4,6%

* Provisional data
Source: ELSTAT-ERC

Figure 3.10
Countries with the biggest share on Greek exports, Jan.-June '10



***Exports to Serbia include also these to Montenegro and to Kosovo
Source: PEA **Data processing:** IOBE

Overall, the increase of exports in the first half of 2010 was tightly linked with the improvement in industrial production and consumption both in the main trading partners of Greece and in countries that absorbed a relatively small share of Greek exports. This increase, together with the fall in imports, resulted in a decrease of the trade deficit to its lowest levels in the past few years, which partially counteracted the fall in GDP during the same period from the reduction in consumption and public investment. Meanwhile, the downward trend of domestic demand, as a result of the fiscal consolidation measures, has revealed the need for increased penetration of the Greek products in the foreign markets and particularly in the developing countries, which would benefit significantly the foreign trade of Greece and the economy in general. For 2010 in total, the value of Greek exports is expected to stand at about € 14.5 billion, representing 6% of the country's gross domestic product.

3.4 Employment - Unemployment

The unemployment rate in the second quarter of 2010 reached its highest level since the beginning of 2000 (11.8%), increasing by 2.9 percentage points year-on-year, while remaining practically unchanged quarter-on-quarter (from 11.7%). As a result, the total number of unemployed reached approximately 594,000 – the largest at least since 1998 – increasing by about 151,400 (34.2%) year-on-year and by about 7,200 (1.2%) quarter-on-quarter. Meanwhile, the unemployment rate in Greece was the fourth highest in the Euro area (9.9% on average), only behind Spain (20.1%), Slovakia (14.8%) and Ireland (13.3%).

The number of employed fell to 4.43 million from 4.53 million in the second quarter of 2009 (2.3% reduction), remaining, however, practically unchanged (0.03% increase) quarter-on-quarter. The size of the labour force stood at 5.02 million people, while the employment participation rate, i.e. the labour force as a percentage of the population, increased to 54.0% from 53.7% in the previous year, as a result of the large year-on-year increase of the labour force (+0.9%) in comparison with the population growth rate (+0.4%).

Regarding the characteristics of the labour force, unemployment among women stood at 15.3% in the first quarter of 2010, against 12.5% in the same period of the previous year and 15.5% in the first quarter of 2010. The proportional increase was larger in unemployment among men, which despite being smaller than that among women, increased by 3.1 percentage points (approximately 88,200) year-on-year, standing at 9.4%. The adverse impact of the crisis was reflected in the persistently high rate of unemployment among young people aged 15-29 (22.8% against 17.7% in the previous year) and in the large increase in unemployment in the age groups that primarily constitute the productive labour force of the country. The unemployment rate among those aged 30-44 came to its highest level in 12 years (10.9%), with the number of unemployed (approximately 239,400) increasing by approximately 67,200 – the largest year-on-year increase among the main age groups.[35] Similar trend was observed in those aged 45-64, where the unemployment rate varied around 7.5% (against 5.4% the year before) and the

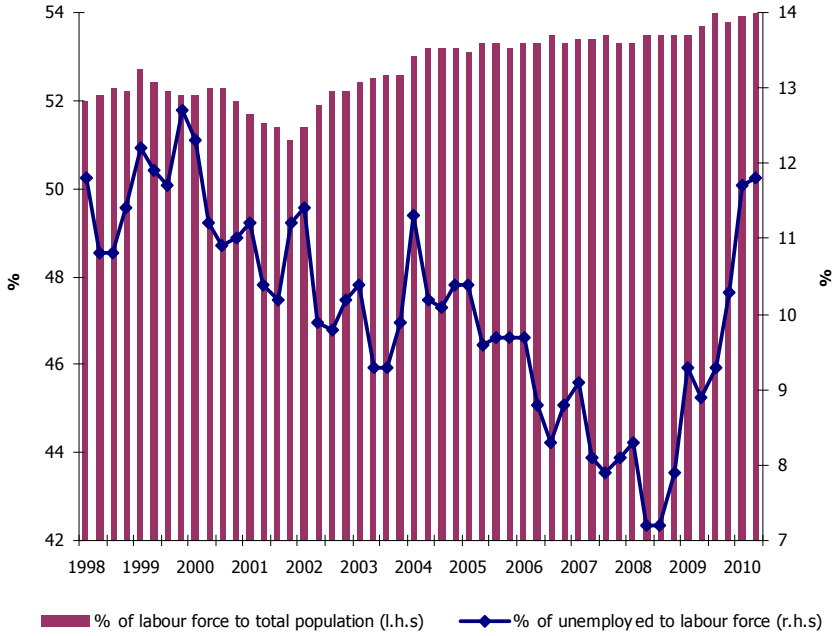
[35] i.e. in the age groups 15-29, 30-44 and 45-64.

number of unemployed reached approximately 133,900 (42% increase).

The jobless rate (23.8%) among the 'new unemployed', i.e. those that entered the labour market for the first time without being able to find a job, fell by 5.5 percentage points year-on-year in the second quarter of 2010. This indicates that large part of the population has delayed their job-seeking effort due to the adverse economic circumstances. In contrast, long-term unemployment, which was estimated to stand at 47.7%, has been on the rise, expanding by 4.7 percentage points year-on-year, which has revealed the difficulty for the unemployed to return to employment, having stayed out of job for more than 12 months. Foreign nationals were also facing obstacles in accessing the labour market, as the unemployment rate among this group remained at a higher level compared with the Greek nationals (14.3% against 11.4%) for a sixth consecutive quarter, which in part was caused by larger share of economically active foreign nationals (73.8% against 52.5% for the Greek nationals).

Regarding the level of education, unemployment was highest among individuals with medium and low educational level. The largest unemployment rate (19.7%) and, at the same time, the highest year-on-year increase in unemployment was registered among individuals who had not attended school at all, followed by tertiary technical education graduates and individuals who had completed only some years of primary school, where unemployment and its year-on-year increase registered similar rates (14% unemployment rate and about +4.2% y-o-y increase).

Figure 3.11
Labor force (% proportion as to population of 15 years old and over) and unemployed (%proportion as to labor force)



Source: ELSTAT, Labor Force Survey

Unemployment was also higher than the national average among intermediate school graduates (13.6%) and high school graduates (12.8%), while the smallest unemployment rates were recorded among university graduates (8.1% against 6.3% the year before) and holders of doctorates or post-graduate diplomas (7.4%), which also experienced the lowest increase in comparison with the other education level categories (0.6%).

Unemployment increased in all regions, at a rate varying from +0.4 percentage points in South Aegean to +4.3 percentage points in the Ionian Islands. Similarly to the first quarter of 2010, the largest problems in the labour market were experienced in Macedonia, as the three regions in this area recorded the largest unemployment rate in this period. In Western Macedonia, which traditionally has high number of unemployed among its labour force, the rate stood at 14.6% (from 12.3% the year before), while in East Macedonia-Thrace (13.9%) and Central Macedonia (12.7%), the year-on-year increase of unemployment surpassed three percentage points. The number of unemployed in the last two regions increased by approximately 25,600 and 97,900 respectively. Large impact from the recession was also experienced in Attica, which has concentrated one third of the employed, as the unemployment rate (11.6%) increased by 3.4 percentage points. Similar to the national average were the unemployment rates in Central Greece (11.5%) and Thessaly (11.4%), while the rate of increase in the latter was of similar magnitude with that of Attica. In contrast, smaller rates were recorded in Peloponnese (9.9%) and the Northern Aegean region (8.5%), having increased, however, by about 2 percentage points year-on-year.

As for the economic activity sectors, the upward quarter-on-quarter trend in number of employed in the primary sector (about 551,700 people) was overturned in the second quarter of 2010. Nevertheless, the number of employed in the sector increased on a year-on-year basis by 4.2% (or about 22,100 people), resulting in an increase of its share in total employment to 12.5% from 11.7% the year before. In contrast, secondary sector employment continued its downward trend (-7.4% against -6.4%), as the number of employed (886,400) recorded its new lowest level in 12 years. The share of the sector in employment stood at 20% (from 21.1% in the previous year). Lastly, in the tertiary sector the number of employed fell by 1.9% year-on-year, registering, however, marginal quarter-on-quarter increase (0.7%). This development, together with the decrease of employment in the other two sectors, resulted in an increase of this sector's share of in total employment to its highest level since 1998 (67.5%).

At a branch level, employment fell on a year-on-year basis in the second quarter of 2010 in 13 out of 21 branches under investigation. The largest reduction was recorded in Construction, where the number of employed fell by 10% year-on-year (about 36,600 people), while a further indication of the deep crisis in this sector came from the relatively large quarter-on-quarter drop by 10,400 (-3.1%). Substantial decrease by 3.3% (27,100 people) was also experienced in Wholesale-Retail Trade and Repair of Motor Vehicles and Motorcycles, which was the branch with the highest share of employ-

ment. Employment in Manufacturing fell by 6.4% (32,900 people), while the adverse events in tourism in May and June contributed to a decrease in the employed in Accommodation and Food Service Activities by 4%. Solely from the aforementioned branches employment decreased by about 109,200 jobs. Health and Social Work was the only branch among those with significant number of employees that recorded increase of employment (+9.7%).

In summary, the fiscal consolidation measures and the decline in demand and public investment have had an adverse impact mainly on manufacturing, construction and trade, resulting in a strong fall of employment in those branches, which represented 36% of total employment in the second quarter of 2010. In addition, since the beginning of 2009, together with the fall in employment, labour force has been expanding, which has impacted adversely the unemployment rate, expected to vary around **12%** for the year 2010 in total. The upward trend is expected to persist in 2011, given the recessionary expectations about the Greek economy. As noted in previous quarterly reports of IOBE, the main factors that would moderate an even sharper rise in unemployment are the large share of public sector employment and self-employment.

Regarding the employment status, the share of wage earners in total employment stood at 64.5% in the second quarter of 2010. Meanwhile the share of self-employed, including maidservants, stood at 35.5%, which is double the average rate for the Euro area and EU-27, where the share of wage earners reached 83% on average. In this period, the number of self-employed in Greece fell to its lowest level since 1998 (about 1,573,100 people), as this form of employment is encountered, apart from Agriculture, in branches that are badly affected by the recession, as Real Estate Activities, Wholesale-Retail Trade and Accommodation and Food Service Activities. Moreover, the welfare of the self-employed has been mainly affected by reduction of their income and working hours. In contrast, the wage earners have experienced the full impact of a job loss. Term-contract employees and foreign citizens are facing higher risk of job loss, as large number of them is employed in sectors that are hit harder by the recession. Still, the quarter-on-quarter increase of wage-earners by about 41,800 people (1.5%) in the second quarter of 2010 can be considered a positive development, given the pressure that was exerted on the economy in the given time period.

Lastly, part-time employment continued to be minimally present in Greece, as only 6.4% of total employment (about 282,100 people) were working on this basis in the second quarter of 2010, when the average for the Euro area and the European Union stood at 20.6% and 19.3% correspondingly. The largest rates of part-time employment in the EU were recorded in developed European economies, such as the Netherlands, Denmark and Sweden (48.7%, 49% and 27% correspondingly).[36] In these countries, this form of employment is considered means for acquiring work experience and for preventing long time spans out of the labour market.

[36] Data for the first quarter of 2010, when the rate of part-time employment in Greece also stood at 6.4%.

Table 3.9
Population of 15 years old and over by employment status
(in thousands)

Quarter/year	Grand Total	Labor Force					
		Total	*% population*	*Employed*	*% labor force*	*Unem-ployed*	*% 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**
a' quart. 2010	9.292,2	5.012,4	53,9	4.425,6	88,3	586,8	11,7
b' quart. 2010	9.301,5	5.021,0	54,0	4.427,0	88,2	594,0	11,8

Source: ELSTAT, Labor Force Survey

Additional data on the short-term outlook for employment are provided by the Business Surveys conducted by IOBE. In the period from June to August, employment expectations slightly improved, quarter-on-quarter, in Industry and Construction, while in contrast they worsened in Services and, with a more significant margin, in Retail Trade, which until recently provided most new jobs in the labour market. On a year-on-year basis, expectations were stable only in Industry, while in the remaining sectors expectations became more pessimistic.

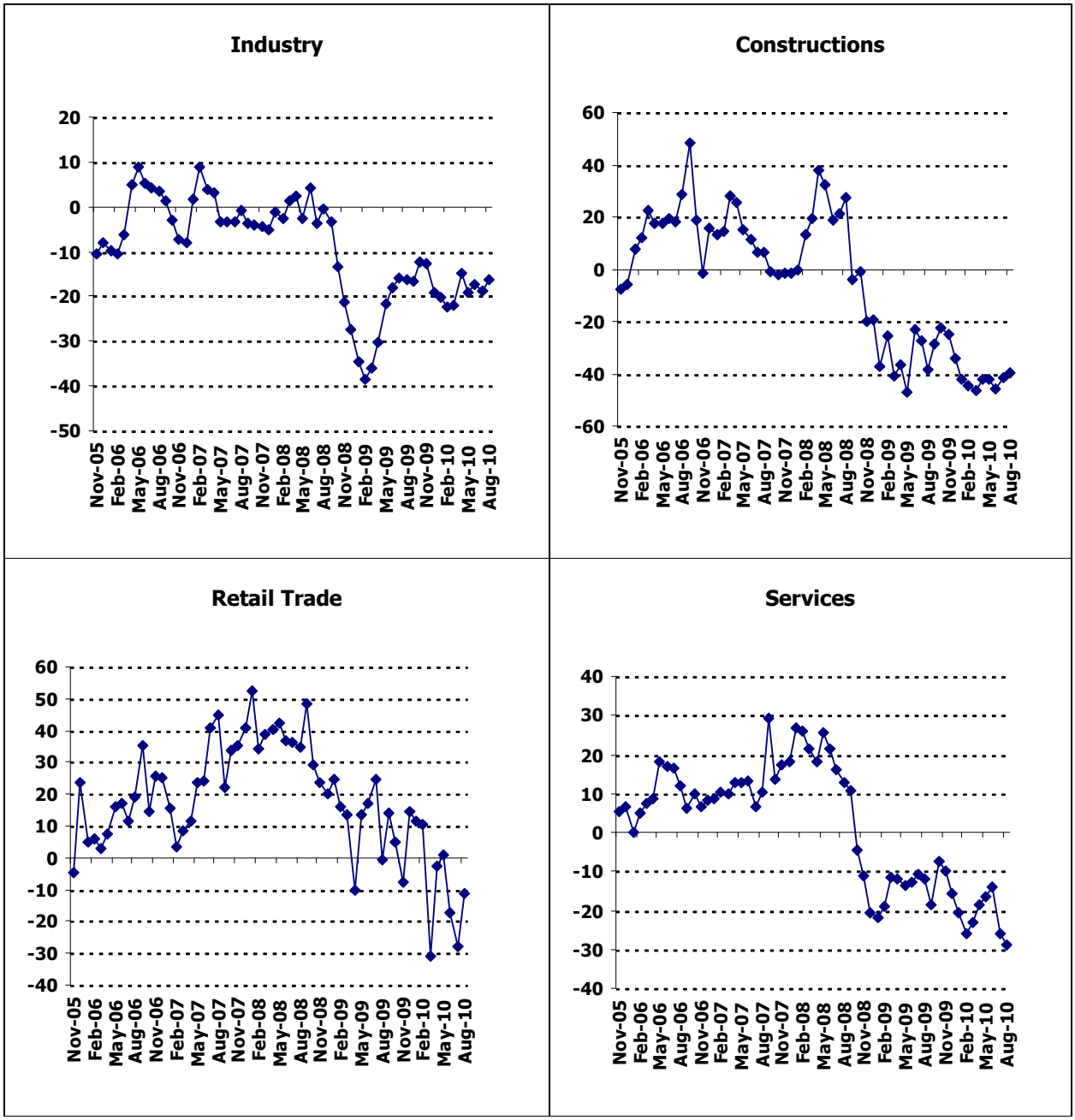
In greater detail:

In **Industry** employment expectations slightly improved (q-o-q) in the period from June to August, with the balance of positive – negative answers, however, standing at -17 from -19 in March – May. In comparison with the corresponding period of the previous year, the expectations balance stood at exactly the same levels. One in five enterprises were expecting employment to fall, while in contrast only 3% were expecting increase of jobs in the following quarter.

Employment expectations in **Construction** marginally improved in the last quarter on a quarter-on-quarter basis, but worsened on a year-on-year basis. The expectations for increase of jobs remained very low due to the adverse circumstances of the sector and the decline of production activity that it has been experiencing in the past two years.

Figure 3.12

Employment Expectations (% difference between positive – negative answers)



Source: IOBE

The employment expectations balance stood on average at -42 (from -30 in the corresponding period of the previous year), while three out of five enterprises were anticipating a further decline in employment in the near term and only 14% were expecting employment to grow. Modest improvement came from Public Works, which compensated for the fall in expectations in Private Construction. In both branches, however, the balance has remained strongly negative, which has signified continuation of job losses.

In the **Services** sector the employment expectations worsened in the period from

June to August due to large fall in expectations in July, while until June the index was improving. In the period under investigation, the balance of expectations stood on average at -23, from -19 in the preceding three-month period and much lower than its value from the corresponding period of the previous year (-12). One in three enterprises were anticipating further reduction in job creation in the upcoming months, while only one in ten businesses were anticipating growth.

Further reduction in the period from June to August was registered in the employment expectations in **Retail Trade**, where the negative employment expectations have begun to dominate, in contrast to the resilience that the enterprises of the sector were exhibiting until the beginning of the current year. The index stood on average at -19, from -11 in the preceding three-month period, recording a y-o-y drop of 33 points. This adverse development came mainly from the vertical drop in the index in Vehicles-Spare Parts and Household Appliances and, to a lesser degree, in Department Stores and Food – Beverages – Tobacco. Fabrics – Clothing – Footwear was the only branch where the index increased as a result of moderation of its strongly negative expectations.

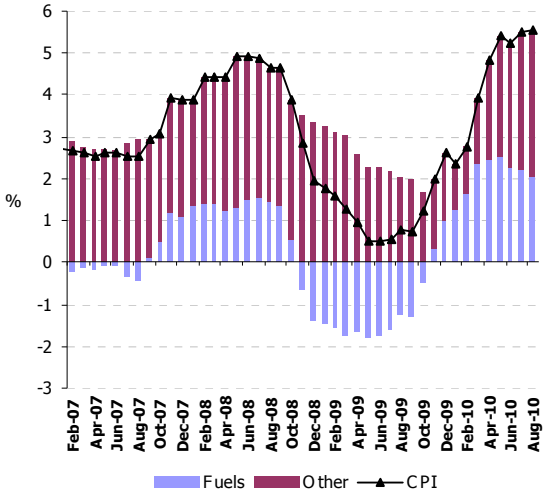
3.5 Consumer Prices

Recent Developments

The overall Consumer Price Index was running at 4.4% on average for the first eight months of 2010 from 1.0% in the corresponding period of the previous year and 4.6% in 2008. In August 2010 the inflation rate remained at its July level (5.5%), recording 4.7 percentage points year-on-year (y-o-y) increase. This is the highest y-o-y increase on record since April 1997. The significant y-o-y increase in CPI in the first eight months of 2010 came mainly from increase in the excise tax on fuels and the VAT rate. Indicatively, the fuel index registered average y-o-y increase by 38.8%, against a drop of 22.6% the year before, while the energy index increased by 30.1% against a drop of 17.3% in the previous year.

Core inflation was running at 2.8% in the same period from 2.6% in 2009, accelerating significantly since May to reach 3.6% in August. The largest y-o-y increase in August was registered in Motorcars (10.3%), Electricity (7.2%), Hospital Care (6.9%), Medical – Dental – Paramedical Services (3.4%), Water Supply – Sewerage Collection (3.1%) and Domestic Services (3.1%), pushing up the index by 0.9 percentage points.

Figure 3.13
Contribution of the change of Fuel prices to Inflation (annual % change)

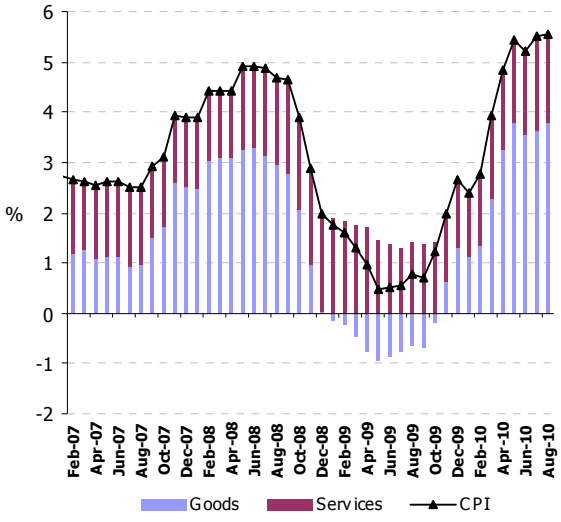


Source: Calculations based on ELSTAT data

Regarding the main consumption categories, the goods price index increased by 5%

in the first eight months of 2010, against a drop of 1% in the previous year, while in services the index was increasing at rates almost the same with those recorded in 2009 (3.7%). As an exception, fruit and vegetable prices decreased significantly in the first eight months of the year (-7.1%), in contrast with their significant increase by 9.8% in the previous year. Overall, the trend recorded in the past twelve months, which has seen inflation acceleration coming mostly from increase in the prices of goods, rather than services, has persisted.

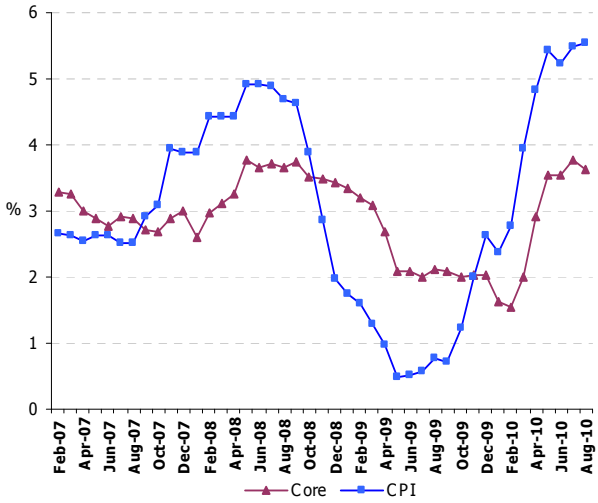
Figure 3.14
Inflation (annual % change)



Source: Calculations based on ELSTAT data

The harmonised index (HICP) followed a similar trend with the national index, running at 5.6% in August 2010 from 1% in the corresponding month of 2009. On average for the period January-August, the HICP inflation rate stood at 4.4%, recording a 3.2 percentage point year-on-year acceleration. This performance rendered Greece third in the ranking of the EU-27 member countries (1.9% on average), behind Romania (5.2%) and Hungary (5%). Furthermore, the Greek harmonised inflation rate remained highest in the Euro area, whose average stood at 1.4% (1.1 percentage points y-o-y increase).

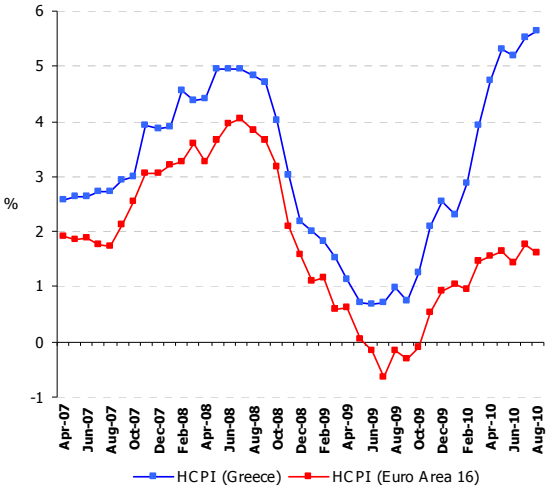
Figure 3.15
Core Inflation (annual % change)



Source: Calculations based on ELSTAT data

In all categories of goods and services, apart from Food and Non-alcoholic Beverages, where prices fell by 0.7%, the price index increased in the first eight months of the year. The largest increase, due to the increase in fuel prices, was recorded in Transport (16%), while in the corresponding period of the previous year prices had fallen by 4.7%. Next in this ranking was Alcohol – Tobacco, where the inflation rate was almost three times as high as the one recorded in the corresponding period of 2009. The prices in Housing also increased significantly (7%), while in the previous year the prices were falling by 3.6%. Similar trend reversal was observed in Telecommunications, where the increase in prices stood at 3.4% against a deflation of 0.5% in the previous year. Disinflation was recorded in Education (3% against 4.7% in the previous year), in Hotels-Cafes-Restaurants (2.8% against 4%) and Clothing-Footwear (1.2% against 3.1%).

Figure 3.16
Harmonized Index of Consumer Prices – Greece & Euro Area (annual % change)



Source: Calculations based on ELSTAT data

Regarding the cost of production, the producer prices in domestic industry increased by 6.7% in the first seven months of 2010, compared to a decrease of 7.6% in 2009, mainly as a result of the increase in the prices of energy products. The largest increase was recorded in Coke and Refinery Products (40.1%), Energy Goods except Electricity (34.5%), Electrical Equipment (17.6%) and Energy Goods (17.8%), in contrast with the corresponding period of the previous year, when prices fell by a similar margin. In the remaining categories, the increase of the index was similar or more modest compared to the year before, while producer price deflation was recorded in Chemical Products (-6.7%), Tobacco Products (-6.6%) and Basic Pharmaceutical Products (-5.5%). Meanwhile, production cost has been adversely affected also by the upward trend in imported raw material prices, as the industry import price index increased by 7.9% in the first seven months of 2010, against a fall of 3.9% in the previous year.

Medium-term Outlook

The significant price increase since the beginning of 2010 was caused by increase of taxes on goods and services as part of the fiscal consolidation effort. The average impact on CPI inflation in the first eight months of 2010 from products with high increase of taxation, such as motor fuels, heating oil, tobacco, alcohol, traffic dues, insurance, motorcars and mobile telephony, stood at 3.6 percentage points, half of which was linked with the increase in fuel prices. Thus, inflation would have been running at about 2% during this period, if the excise taxes and VAT on these products had not increased.

Meanwhile, the reduction in consumption in the first half of 2010, together with the credit expansion slowdown by the banking sector, did not lead to reduction of the prices of goods and services. This fact was revealed by the course of core inflation (excluding fuel and raw fruits-vegetables), which has followed an upward trend, especially since April 2010, reaching the rates it recorded in 2008. In the first seven months of the year, the average (harmonised) index stood at 1.4% in the EU and 0.9% in the Euro zone, with Greece ranking high. This result has highlighted the distortions that continue to exist in key markets for goods and services due to the presence of restricted professions and oligopolistic power.

In 2010 as a whole inflation is expected to stand in the area of 4.6% (against 1.2% in 2009), a rate slightly above that recorded in 2008 (4.2%) when prices increased significantly due to the surge in crude oil price in the international markets. Meanwhile, the inflation rate is expected to fall in 2011 due

to the high benchmark level of the index in 2010. Still, possible increase in the tariffs of utilities and state-owned enterprises - particularly in those operating with financial loss, such as public transport – as well as the equalisation of the prices of heating oil and motor diesel, if adopted, will exert further inflationary pressures. Meanwhile, the price level has been influenced by the prices of imported goods and raw material, which have been increasing as a result of the gradual recovery of the global economy. The inflationary impact of crude oil has been decisive, given the extent of import dependency of Greece for this particular good.

The results of IOBE's monthly business surveys, which serve as leading indicators of price developments on the supply side, provide important information on the anticipated course of prices in the coming period.

The expectations of the enterprises for the future course of the prices of their products declined significantly in the period from June to August in all sectors of the economy. The deflationary price expectations not only prevailed in most branches, but, in comparison with the preceding three-month period, intensified significantly, especially in Private Construction. In Industry the deflationary expectations have been weaker, compared to the other sectors, while in Financial Intermediaries in Services and Food – Drinks – Tobacco in Retail Trade, the anticipation of price increase were still dominating the deflationary expectations. In greater detail:

- In **Industry**, deflationary expectations dominated, as the relevant balance for the June – August period stood at -2, against +3 the preceding three-month period. The inflationary expectations diminished, particularly in June, when only 8% of the enterprises were expecting price increase. In the corresponding period of 2009, the index stood slightly lower at -6. Meanwhile, 77% of the enterprises were expecting stabilisation of prices in the short term, while 13% held deflationary expectations.

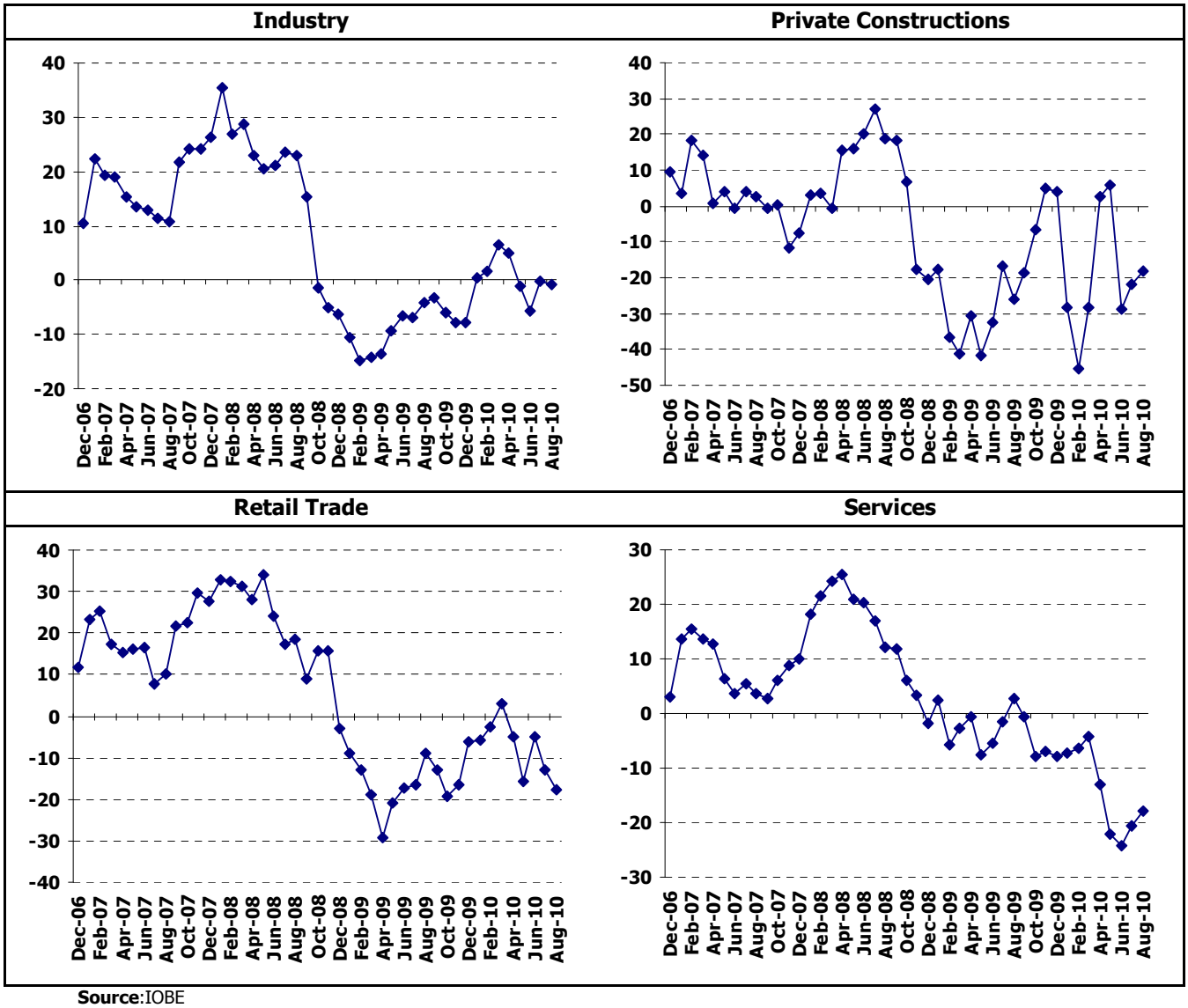
- In **Retail Trade**, the deflationary expectations of the enterprises have intensified since May, continuing this trend during the June – August period. The negative balance of expectations doubled quarter-on-quarter, standing at -12, a similar level compared with 2009 (-14). The share of companies that were expecting price increase in the upcoming months reached 14%, while one in four enterprises were anticipating decline. The only branch in this sector that exhibited positive balance of price expectations – signifying future increase of prices – was Food-Drinks-Tobacco, while the strongest deflationary expectations were held by enterprises in Fabrics–Clothing-Footwear and Department Stores.

- Continued decline of price expectations in the last six months has been recorded in **Services.** The balance stood at -21 on average in the June – August period, from -13 in the preceding three-month period. One in four enterprises of the sector were expecting price decline in the upcoming months. In the corresponding period of the previous year the deflationary expectations of the enterprises in the sector were much more moderate (balance of -1).

- Lastly, in **Private Construction** price expectations continued to be characterised by intense variability. While in the period March – May the balance of expectations had toned down to -7, in the following three-month period the deflationary expectations intensified significantly, as the index more than tripled to reach -23, close to its last year performance (-25). The share of companies expecting price decrease reached 23% while only 4% (from 16% in the preceding three-month period) were expecting increase. The reinvigorated deflationary expectations in the sector were intertwined with the very dismal expectations about the activity level in the upcoming months as a result of the crisis that the sector has been experiencing for quite some time.

Figure 3.17

Price Expectations (% difference between positive – negative answers)



Source:IOBE

3.6 Balance of Payments

Current Account

In the first seven months of 2010 the current account deficit slightly contracted by 0.9% to stand at € 16 billion, significantly lower compared to 2008 (€ 21.4 billion). This change was mainly due to a reduction in the trade deficit and increase in the services surplus, while the current transfer surplus diminished.

The **trade deficit** fell in this period by 2% (€ 357 million),[37] while in relation to 2008 it has diminished by almost € 9 billion. The trade balance of goods excluding oil and ships fell by 13.2%, reflecting the large reduction in imports by 10% (€ 1.8 billion), which overcompensated for the reduction of exports by 4.2% (€ 273 million). The value of fuel exports increased impressively by 54.3% (€ 909 million), while the value of fuel imports increased as well by 34.5% (€ 2 billion), approaching its 2008 level.

The **services surplus,** which has acted as a counterbalance to the trade deficit in Greece, increased by 3% (€ 199 million), due to the larger increase in receipts (€ 890 million) in comparison with payments (€ 690 million). It should be noted that in the first seven months of the year, which include a substantial part of the tourist season, the receipts in tourism fell by 9% (€ 473 million), while payments for tourists services abroad also declined by 8.2% (€ 111 million). The increase in services surplus was caused by large increase in the receipts from transport services (mainly merchant shipping) by 14.7% (approx. € 1.2 billion) and a relatively smaller increase in payments by 18.9% (€ 766 million).

The **income account** deficit slightly narrowed by 0.7% (€ 41 million) in the first seven months of the year. Receipts from abroad (remuneration, wages, interest, dividend and profits) declined by 17.4% (€ 456 million), while the outgoing payments fell by 5.7% (€ 497 million).

The **current transfers** balance fell by 28.7% (€ 444 million), mainly due to the reduction in receipts from workers' remittances (€ 292 million). Meanwhile, total inflows[38] declined by 8.5% (€ 335 billion euro) and total outflows[39] increased by 4.5% (€ 109 million), due to higher revenue from VAT.

Capital Account

The **capital transfers balance** followed a similar trend with the current transfers balance. It dropped by 36.3% (€ 455 million), standing at € 800 million from € 2.5 billion and € 1.2 billion in 2008 and 2009 respectively. Receipts[40] fell by 33.3% (€ 477 million), reflecting the great delay in the absorption of EU funds (NSRF), while the outflows declined by 12.2% (€ 22 million).

Lastly, the **Current and Capital Account** deficit, which to some extent reflects the economy's external borrowing requirements, stood at € 15.2 billion, from 14.9 billion in 2009, marking an increase by 2%, while in 2008 the borrowing requirements reached € 19 billion.

[37] The amounts in brackets express year-on-year change, unless otherwise indicated.

[38] The inflows refer to payments from European Agricultural Guidance and Guarantee Fund (EAGGF) and the European Social Fund (ESF).

[39] The outflows refer mainly to contributions to the Community Budget.

[40] The capital transfer receipts refer to incoming payments from structural and cohesion funds.

Financial Account

The **financial account** surplus increased slightly in the first seven months of the year by 2.7% (€ 427 million), reaching € 16.4 billion from € 16 billion in 2009.

At the level of specific accounts, **direct investment** showed a net inflow of € 1.2 billion, lower by 30.8% (€ 515 million). The inflow of foreign direct investment stood at € 1.6 billion in the first seven months of the year, marking a decrease by 27.7%, while in June, according to the Bank of Greece, the following transactions took place:

i. **Inflow** of € 348 million for the acquisition of the bakery branch of Vivartia (formerly Chipita) of the MIG group by the special purpose vehicle UIFB (Cyprus), a concern of the Saudi group Olayan.

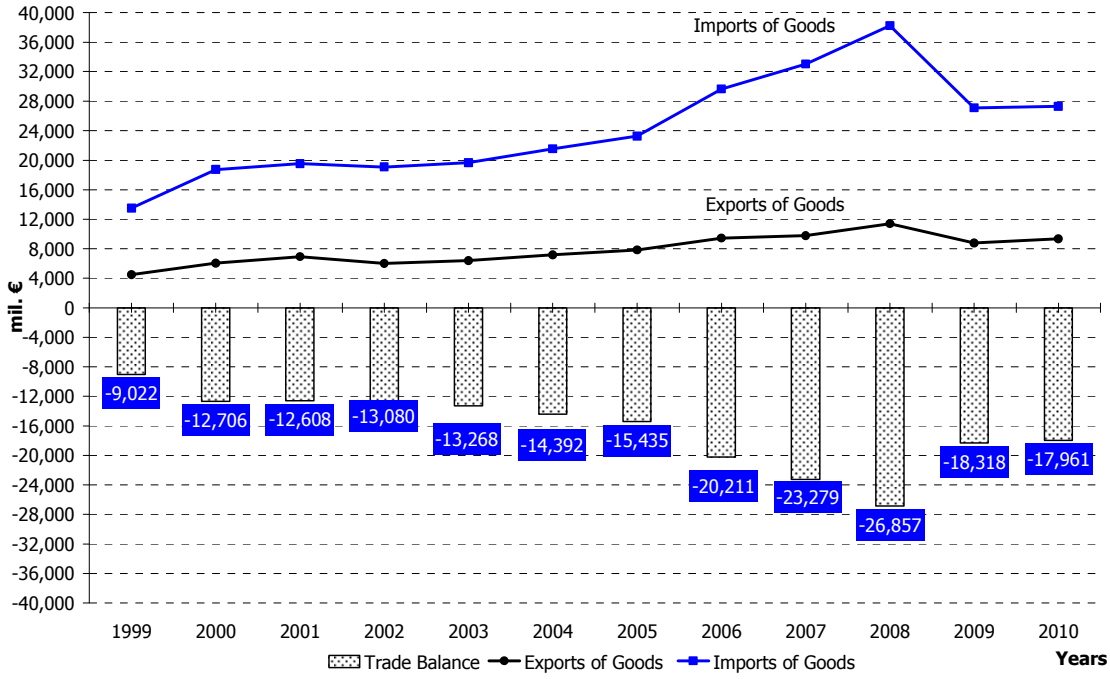
ii. **Outflow** of €120 million for the acquisition by Carrefour Marinopoulos SA of the holdings of Distribuidora International de Alimentacion SA (Spain) and Schoptish Holdings Ltd (Cyprus) in Dia Hellas SA.

iii. **Outflow** of €60 million for the acquisition by the Mytilineos SA group of the holding of Endesa SA (Spain) in Endesa Hellas SA.

Finally, outflow from residents' direct investment abroad stood at € 419 million, lower by 17.6%.

Figure 3.18

Imports-Exports 1998-2010 (January-July)



Source: Calculations based on Bank of Greece data

A net outflow of € 6.2 billion was recorded under **portfolio investment**, marking a decline by 126% relative to the corresponding period of the previous year, when portfolio investment had net inflow of € 23.7 billion. Decrease was recorded in the holding of bonds and treasury bills of the Greek state (€ 14.3 billion) and shares of Greek companies (€ 1.1 billion) by non-residents, while the holdings in foreign portfolios by residents increased by € 1.1 billion. These outflows were partially compensated by an inflow of € 10.3 billion, coming from reduction in the holding of foreign bonds and treasury bills by domestic financial institutions and institutional investors.

In the **'other' investment** category, large fluctuations were observed, as the net inflow reached € 21.4 billion, against net outflow of € 9.3 billion in 2009. This development reflected mainly borrowing of € 18.9 billion by the Greek state (first tranche of the stand-by arrangement), together with an increase in non-residents' deposit and repo holdings in Greece (€ 17.7 billion). These inflows were partly offset by outflow from increase in resident credit institutions' and institutional investors' deposit and repo holdings abroad (€ 15.7 billion). Lastly, the country's **reserve assets** at the end of July stood at € 4.6 billion.

Assessment

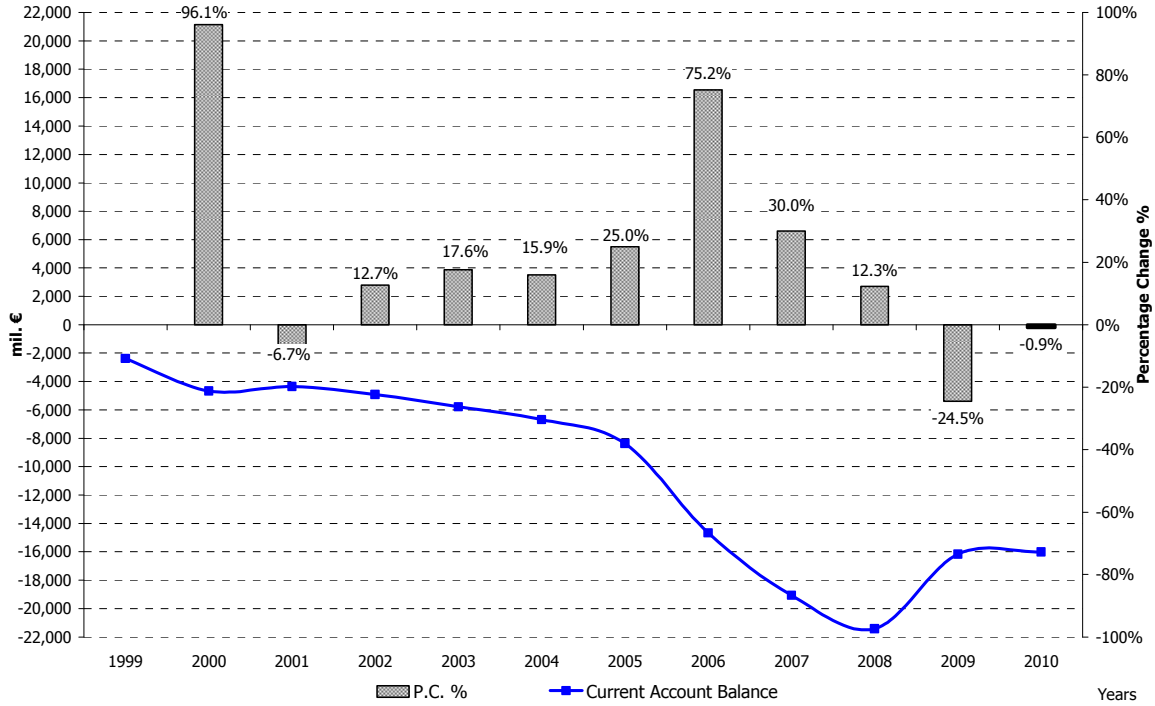
According to the National Bureau of Economic Research,[41] the recession has ended, with the trough in business activity in the US economy occurring in June 2009. Meanwhile, the turmoil in the international capital markets in May and June seems to have subsided, but the economies have not yet covered the lost ground. The recession lasted for 18 months, which makes it the longest of any recession since World War II. Despite the end of the recession, the problems that it created or compounded have remained, as unemployment is standing at a very high level, while the deficits and public debt have surpassed their normal levels.

In contrast with the international environment, in Greece 2010 is the year of the deepest recession in 16 years, with GDP sliding back to its 2006 levels. The reduction in consumption has affected imports drastically, unemployment is already high (11.7%), while the fiscal deficit is expected to stand at levels slightly above 8% for 2010. The high deficits of the Greek economy, strengthened by the recession, revealed the long-standing problems with the country's public administration, as the high cost of its operation has created disincentives, among other things, for business activity. In such a way, the widespread red-tape and the high cost of starting business in comparison with other countries, has discouraged the creation of new enterprises and thus of new jobs, while in parallel it has prevented the inflow from foreign direct investment, which come with multiplier effects on income and employment. The above has reflected in the course of the balance of payments over the past few years, where in both the current account balance and the financial account balance (which contains the foreign direct investment) the deficits have been expanding, while in the two key counterbalancing sectors (tourism, transport) the surpluses have been contracting.

[41] Business Cycle Dating Committee, National Bureau of Economic Research (http://www.nber.org/cycles/sept2010.html)

Figure 3.19

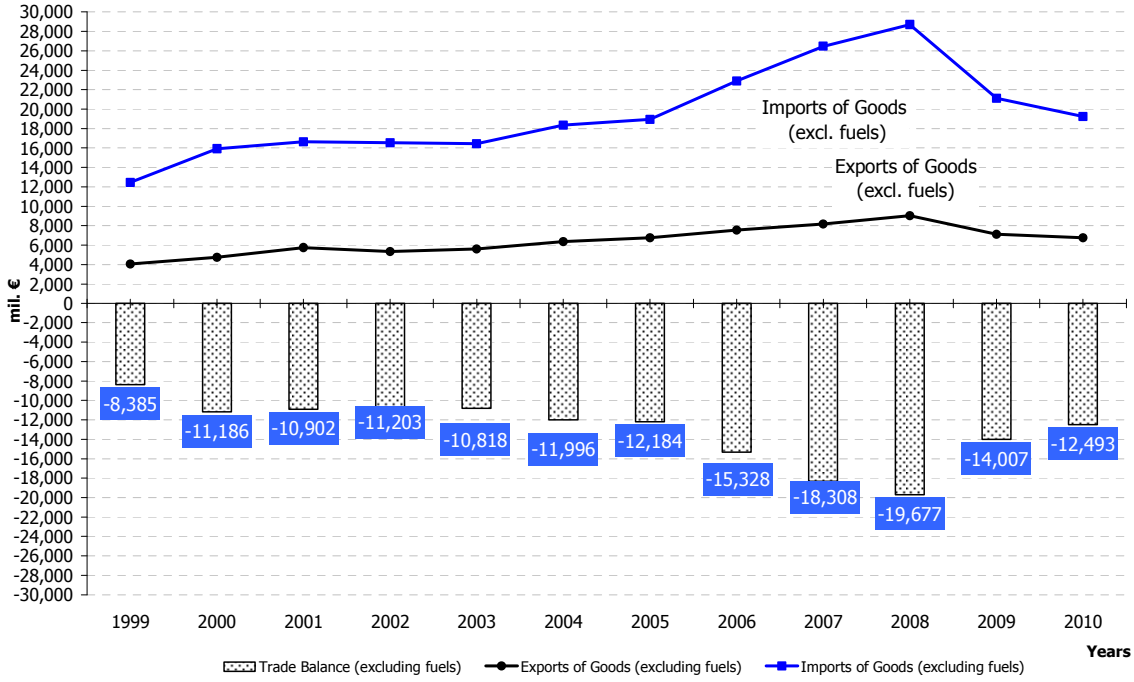
Current Account Balance 1998-2010 (January-July)



Source: Calculations based on Bank of Greece data

Figure 3.20

Imports-Exports (**excluding fuels**) 1998-2010 (January-July)



Source: Calculations based on Bank of Greece data

The financial crisis highlighted the structural problems of the Greek economy, such as its introversion and the low competitiveness of its products. The upheavals of the global economy, e.g. from the liberalisation of trade with low-cost countries (China and others) with its impact on domestic manufacturing of labour-intensive products (textiles and others), has held back industrial production in the Greek economy. The strengthening of export-oriented branches and the boosting of education and R&D expenditure with the consequent growth of innovative services, products and techniques, could constitute the way-out from the production and export slump that has dominated the Greek economy in the past few years. The means to achieve this, in a dismal fiscal and macroeconomic environment, could be found as much in the NSRF programmes as in the restructuring of public expenditure toward the promotion of employment, innovation and entrepreneurship.

Table 3.10

Provisional Balance of External Payments (January-July) in mil.€

		January-July			July		
		2008	2009	2010	2008	2009	2010
I	**CURRENT ACCOUNT (I.A+I.B+I.C+I.D)**	**-21,415.2**	**-16,159.2**	**-16,005.7**	**-2,391.6**	**-1,667.0**	**-1,481.8**
I.A	**GOODS (I.A.1-I.A.2)**	**-26,857.4**	**-18,318.2**	**-17,960.7**	**-4,080.0**	**-2,955.2**	**-2,694.6**
	Oil balance	-7,180.2	-4,311.0	-5,467.4	-1,223.1	-709.5	-1,024.8
	Trade Balance excluding oil	-19,677.2	-14,007.2	-12,493.3	-2,856.9	-2,245.7	-1,669.8
	Ship's Balance	-2,973.9	-2,241.8	-2,276.7	-426.5	-403.7	-296.3
	Trade Balance excluding oil and ships	-16,703.3	-11,765.4	-10,216.6	-2,430.4	-1,842.0	-1,373.5
I.A.1	**Exports**	**11,394.6**	**8,777.4**	**9,335.9**	**1,876.9**	**1,337.0**	**1,542.8**
	Oil	2,370.5	1,674.2	2,584.1	312.0	304.4	457.4
	Ships	1,099.5	524.5	446.2	167.8	51.4	101.7
	Other goods	7,924.6	6,578.7	6,305.7	1,397.1	981.2	983.7
I.A.2	**Imports**	**38,251.9**	**27,095.6**	**27,296.6**	**5,956.9**	**4,292.2**	**4,237.4**
	Oil	9,550.7	5,985.3	8,051.5	1,535.1	1,013.9	1,482.2
	Ships	4,073.4	2,766.3	2,722.9	594.3	455.1	398.0
	Other goods	24,627.8	18,344.1	16,522.2	3,827.5	2,823.2	2,357.2
I.B	**SERVICES (I.B.1-I.B.2)**	**9,341.7**	**6,666.4**	**6,865.5**	**3,066.3**	**2,300.4**	**2,364.9**
I.B.1	**Receipts**	**19,181.3**	**14,906.6**	**15,796.3**	**4,630.3**	**3,616.8**	**3,727.3**
	Travel	5,931.4	5,240.3	4,767.2	2,302.4	2,081.5	1,983.3
	Transportation	11,431.3	7,986.0	9,162.9	2,025.1	1,254.2	1,438.2
	Other services	1,818.6	1,680.3	1,866.1	302.8	281.0	305.8
I.B.2	**Payments**	**9,839.6**	**8,240.2**	**8,930.7**	**1,564.0**	**1,316.4**	**1,362.4**
	Travel	1,495.7	1,360.0	1,248.4	205.9	201.8	212.3
	Transportation	5,522.5	4,059.8	4,826.6	905.8	637.5	714.8
	Other services	2,821.4	2,820.4	2,855.8	452.3	477.1	435.3
I.C	**INCOME (I.C.1-I.C.2)**	**-6,334.0**	**-6,056.2**	**-6,015.1**	**-1,428.9**	**-1,107.8**	**-1,169.4**
I.C.1	**Receipts**	**3,203.8**	**2,618.7**	**2,162.0**	**485.5**	**348.9**	**339.9**
	Compensation of employees	213.4	182.5	118.3	29.8	46.1	18.1
	Investment income	2,990.4	2,436.2	2,043.7	455.7	302.8	321.8
I.C.2	**Payments**	**9,537.8**	**8,674.9**	**8,177.1**	**1,914.4**	**1,456.7**	**1,509.3**
	Compensation of employees	200.0	236.9	220.9	34.7	39.2	31.6
	Investment income	9,337.8	8,438.0	7,956.2	1,879.7	1,417.4	1,477.8
I.D	**CURRENT TRANSFERS (I.D.1-I.D.2)**	**2,434.5**	**1,548.7**	**1,104.5**	**51.1**	**95.5**	**17.3**
I.D.1	**Receipts**	**4,694.3**	**3,962.1**	**3,627.1**	**325.5**	**318.1**	**342.7**
	General Government (mainly transfers from EU)	3,367.8	2,774.5	2,732.1	114.1	156.3	223.9
	Other sectors	1,326.5	1,187.6	895.0	211.4	161.8	118.8
I.D.2	**Payments**	**2,259.8**	**2,413.4**	**2,522.6**	**274.4**	**222.5**	**325.4**
	General Government (mainly transfers to EU)	1,495.2	1,624.8	1,690.2	160.2	104.4	208.0
	Other sectors	764.6	788.6	832.4	114.2	118.1	117.4
II	**CAPITAL TRANSFERS (II.1-II.2)**	**2,585.4**	**1,256.2**	**800.6**	**401.5**	**354.6**	**664.2**
II.1	**Receipts**	**2,959.9**	**1,436.3**	**958.6**	**432.5**	**385.7**	**683.9**
	General Government (mainly transfers from EU)	2,770.5	1,311.2	883.0	418.0	365.5	675.0
	Other sectors	189.4	125.1	75.7	14.6	20.2	8.9
II.2	**Payments**	**374.5**	**180.1**	**158.1**	**31.1**	**31.1**	**19.7**
	General Government (mainly transfers to EU)	181.1	7.9	12.1	1.6	1.6	1.0
	Other sectors	193.3	172.2	145.9	29.5	29.5	18.7
III	**CURRENT ACCOUNT AND CAPITAL TRANSFERS (I+II)**	**-18,829.8**	**-14,903.0**	**-15,205.2**	**-1,990.1**	**-1,312.4**	**-817.6**
IV	**FINANCIAL ACCOUNT (IV.A+IV.B+IV.C+IV.D)**	**18,671.6**	**16,039.8**	**16,466.8**	**1,744.4**	**1,703.0**	**1,402.8**
IV.A	**DIRECT INVESTMENT***	**1,368.2**	**1,670.3**	**1,155.2**	**-58.4**	**593.5**	**263.5**
	Abroad	-1,199.2	-508.7	-419.4	-112.6	-81.4	-59.8
	Home	2,567.5	2,179.0	1,574.6	54.2	674.8	323.3
IV.B	**PORTFOLIO INVESTMENT***	**8,388.9**	**23,739.5**	**-6,197.7**	**8,072.9**	**4,769.1**	**-1,213.3**
	Assets	-7,716.2	-2,547.1	9,250.3	386.2	-832.7	635.3
	Liabilities	16,105.1	26,286.6	-15,448.0	7,686.8	5,601.7	-1,848.6
IV.C	**OTHER INVESTMENT***	**8,832.5**	**-9,356.0**	**21,412.3**	**-6,253.1**	**-3,675.5**	**2,333.6**
	Assets	-15,551.8	-15,744.0	-15,681.5	-6,664.4	-246.2	608.8
	Liabilities	24,384.3	6,388.0	37,093.8	411.3	-3,429.3	1,724.8
	(Loans of General Government)	-399.3	-1,829.2	18,850.9	-59.0	-94.2	-442.4
IV.D	**CHANGE IN RESERVE ASSETS****	**82.0**	**-14.0**	**97.0**	**-17.0**	**16.0**	**19.0**
V	**BALANCE ITEM (I+II+III+IV)**	**158.2**	**-1,136.8**	**-1,261.7**	**245.7**	**-390.6**	**-585.2**
	RESERVE ASSETS (STOCK) (end period)***				**2,410.0**	**2,672.0**	**4,628.0**

* (+) 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. SOLID WASTE MANAGEMENT IN GREECE[42]

The second of a series of IOBE studies on environmental management focuses on the issue of solid waste management. This issue concerns the regulation of solid waste generation, storage, collection, transportation, treatment and disposal, in congruence with the goals of public health maintenance, environmental preservation and economic development. The uncontrolled disposal of solid waste creates conditions that threaten public health and the sustainability of the natural ecosystems (contamination of groundwater aquifers and soils, aesthetic pollution, land use desolation, etc.). Meanwhile, the discharge of materials in the environment that could be reused is not consistent with the principles of sustainable development. The conversion of the by-products of each production and consumption process into raw materials could contribute to the preservation of natural resources thus reducing the environmental footprint of these processes. As such, the issue of waste management is connected to wider policies and has distinct economic dimensions (entrepreneurship, employment, etc.).

The framework for solid waste management in Greece

In Greece, the technical and institutional features of the solid waste management system are regulated by legislation that is not yet fully harmonised with the EU acquis, as the Directive 2008/98/EC has not being transposed to the country's legislation yet.[43] This is expected to happen by the end of 2010.[44]

The main responsibility for solid waste management lies with the Regions, which draw up the regional waste management plan. The National management plan of waste (hazardous or not), which comprises of the constituent regional plans, constitutes the key strategy instrument for the relevant ministries. The local authorities (either autonomously or through solid waste management units45) play a key role in the system, as they are responsible for the execution of the administrative tasks (rehabilitation of uncontrolled waste dumping landfills, sanitary landfill management, etc.) and the implementation of the pricing policy for sanitary landfills.

Greek legislation envisages specific targets and schedules for alternative treatment processes, while relatively simplified procedures are envisaged for the achievement of the targets. Today, in force is Law No. 3854/2010, which amended the older Law No. 2939/2001.

[42] "Solid Waste Management in Greece" is a sectoral study, currently in progress, whose publication is expected soon.
[43] "Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives"
[44] According to the Ministry of Environment, Energy and Climate Change
[45] The Solid Waste Management Units (SWMU) are the municipal institutions that make the targets set by their respective regional administration more specific and implement them.

The national management strategy follows the European hierarchy46 of waste management techniques. The goal is to improve the environmental performance of all parties participating in the life cycle of the products (producers, suppliers, consumers, waste management companies, local government, and the state). Meanwhile, Law No. 3854/2010 contains requirements and targets for the alternative treatment (recycling / composting) of a series of waste categories, such as packaging waste, batteries and accumulators, end of life vehicles, construction and demolition materials, lubricating oils, used tires, electrical and electronic appliances.

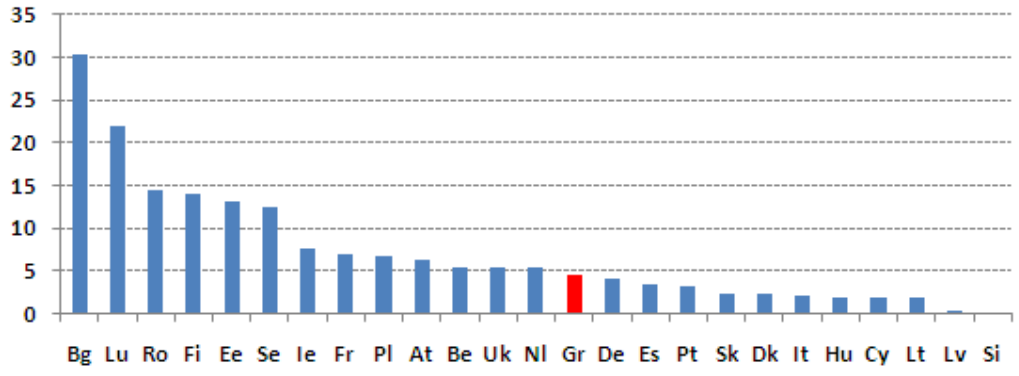
According to the new law on alternative treatment, the units responsible for packaging waste management should either organise or participate in collective systems for alternative treatment (CSAT), whose performance (against targets and schedules) is controlled by the (now active) National Organisation for the Alternative Treatment of Packaging and Other Products. Meanwhile the contribution of 6% from the ordinary revenue of the municipalities to the SWMUs is withdrawn. The new pricing is performed based on the cost of the supplied services and the volume of the treated waste (€ per tonne). This implies that waste management pricing has become more rational.

The lack of technical infrastructure, financial means and reliable audit mechanisms together with the insufficiency of the framework for imposing fines in case of nonconformity are the key restraining factors for the full implementation of the regulations. All involved parties should contribute to the effort of moderating these factors as soon as possible.

Generation of solid waste in Greece

Generation of solid waste per inhabitant in Greece cannot be considered high – the country is placed 14th among the 27 member-countries of the EU. Nevertheless, the management of solid waste faces quite a few challenges, which threaten public health and local ecosystems.

Figure 4.1
Annual waste production per capita, EU-27

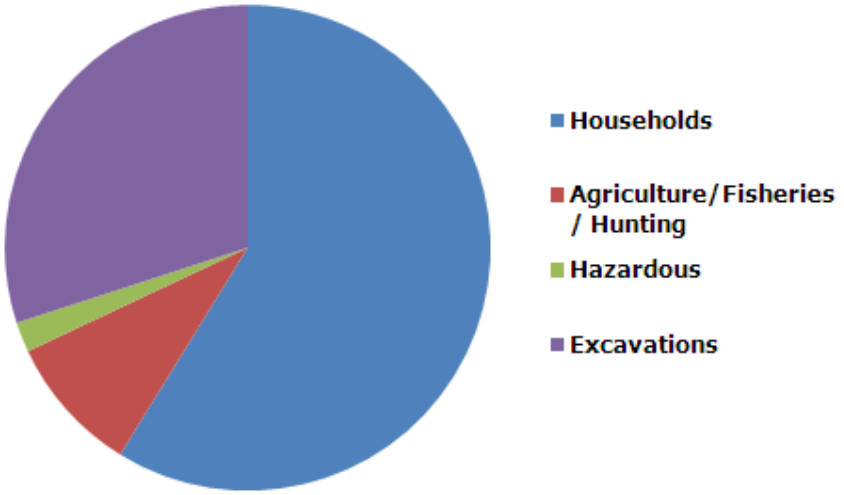


Source: IOBE, based on Eurostat data

[46] Prevention, minimisation, re-use, recycling, energy recovery, final disposal.

Within the country, households are the largest source of generated waste (based on the latest available data). The excavation sector is second, followed by forestry-agriculture-fishing-hunting and lastly hazardous waste.[47]

Figure 4.2
Waste production per sector in Greece



Source: IOBE, based on Eurostat data

Treatment Practices

The national waste management system depends more on **landfilling** and less on **alternative treatment** (such as recycling and composting). Large share of the waste (varying between 75% and 85%)[48] goes to sanitary landfills (SL) that fulfil certain requirements or to uncontrolled waste dumping landfills (UWDL).

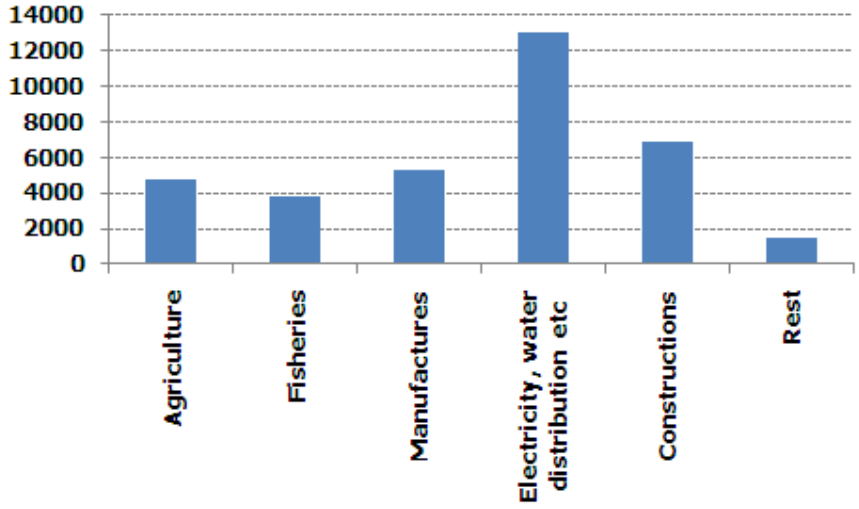
The delays in UWDL rehabilitation and the continued use of UWDL led to the imposition of substantial fines by the European courts. Despite that, full rehabilitation has still not been achieved: until today 71% of UWDL have been rehabilitated, while 15% are under immediate rehabilitation regime.

Moreover, it is estimated that large (albeit immeasurable) part of the waste is discharged **illegally** in local ecosystems, while in some (albeit rare) cases waste that requires special treatment ends up in the landfills untreated.

[47] In some of the above sectors, the data are based on estimates.
[48] The corresponding EU average does not surpass 40%.

Figure 4.3

Quantities of produced waste per sector of economic activity (in thousands of tones)

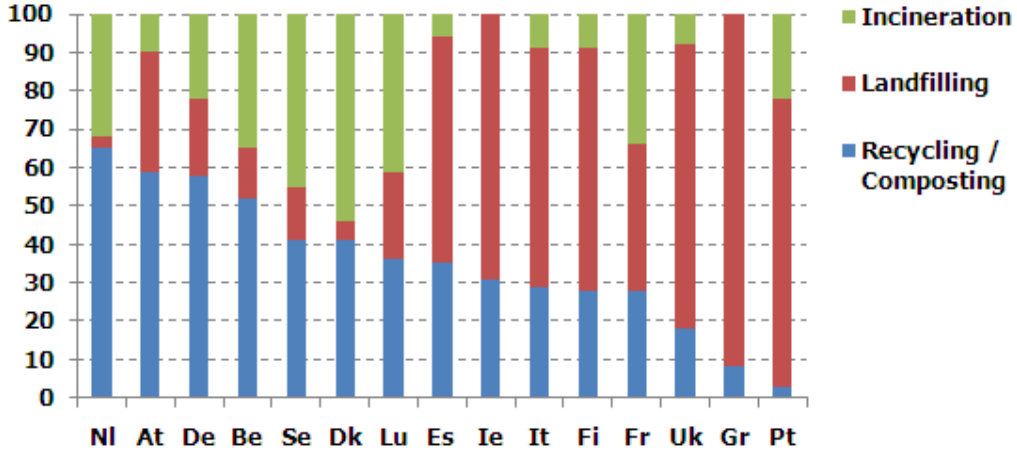


Source: IOBE, based on Eurostat data

There are already 14 private companies active in the **hazardous waste sector**, whose management remains a fervent issue. Today, most hazardous waste is "temporarily" stored, while a small amount is transported for further processing to other European countries, a practice which has proven to be very expensive.

Figure 4.4

Shares of Solid Waste management methods in EU-15 countries



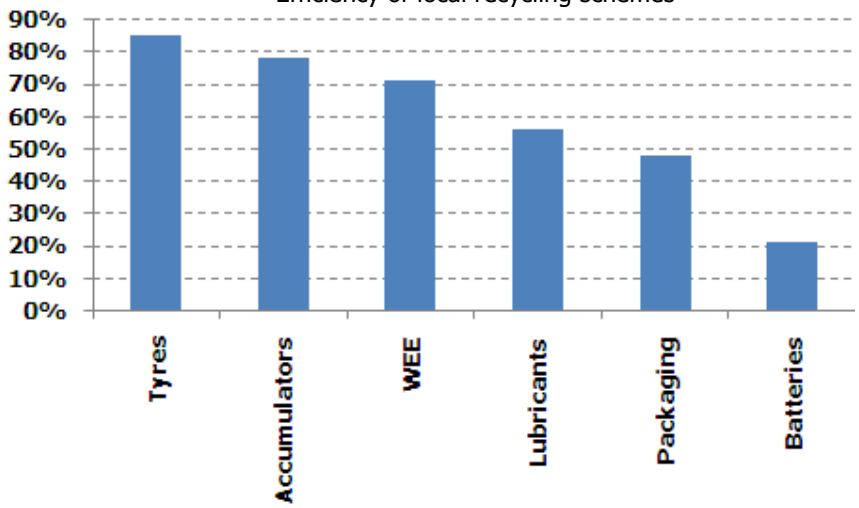
Source: International Solid Waste Association - ISWA, 2008.

Even though alternative waste management in Greece is still at low levels, it is growing over time. **Recycling** in Greece has lower share, compared with the EE-15 average, but recycling – as business activity – is becoming one of the fastest growing branches in the Greek economy, having attracted the interest of foreign investors. The upward trend that it has followed in the past few years, having increased its employment by 50% (annual change from 2008 to 2009), has strengthened the green entrepreneurship in the country.

The establishment of CSATs boosted significantly the collection and recycling of various waste flows. 504,000 tonnes of packaging waste (48% of the generated packaging waste), 46,700 tonnes of tires (85.4%), 31,406 tonnes of electric and electronic equipment (71%), 442 tonnes of electric batteries (21%), 32,000 tonnes of accumulators (78%), 36,440 tonnes of lubricating oils (56%) and 49,000 end of life vehicles were recycled in 2007.

Figure 4.5

Efficiency of local recycling schemes



Source: Ministry of Environment, Energy and Climate Change, 2010

Then again, the dimension of **energy recovery** of waste is virtually absent from the Greek waste management practice, despite the fact that it is placed higher than landfill disposal (as a treatment technique) in EU's hierarchy. Even though the construction and operation of Waste to Energy (WtE) units is incorporated in a specific legislation, which contains safe-guards for public health and environmental protection (Joint Ministerial Decision No. 22912/2005), the plans of building WtE units trigger intense reaction from NGOs and citizen groups.

The study, which will be completed soon, will contain specific proposals for establishing more effective action in the solid waste management sector.

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

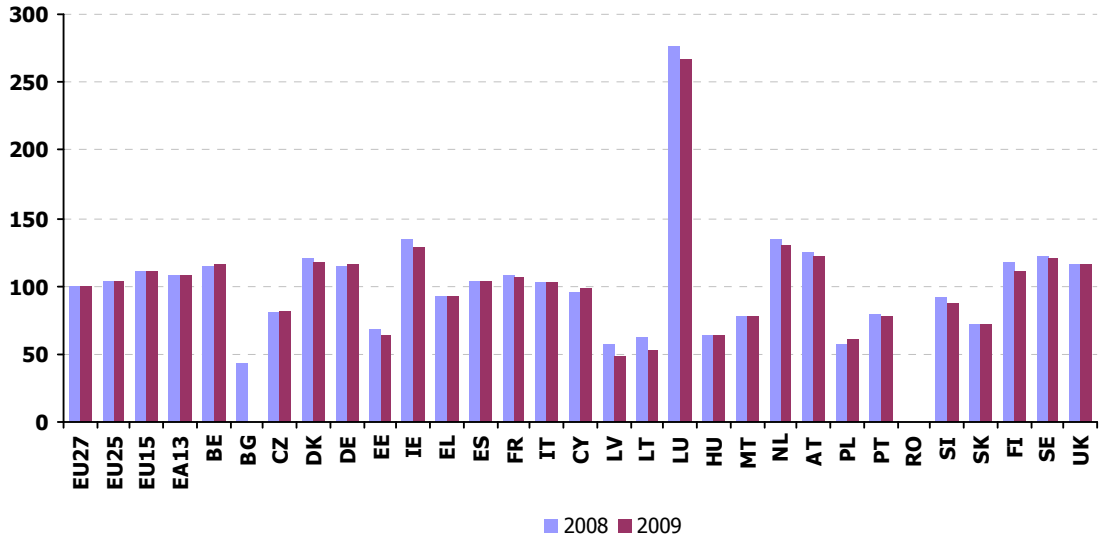
(SHORT - LIST)

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



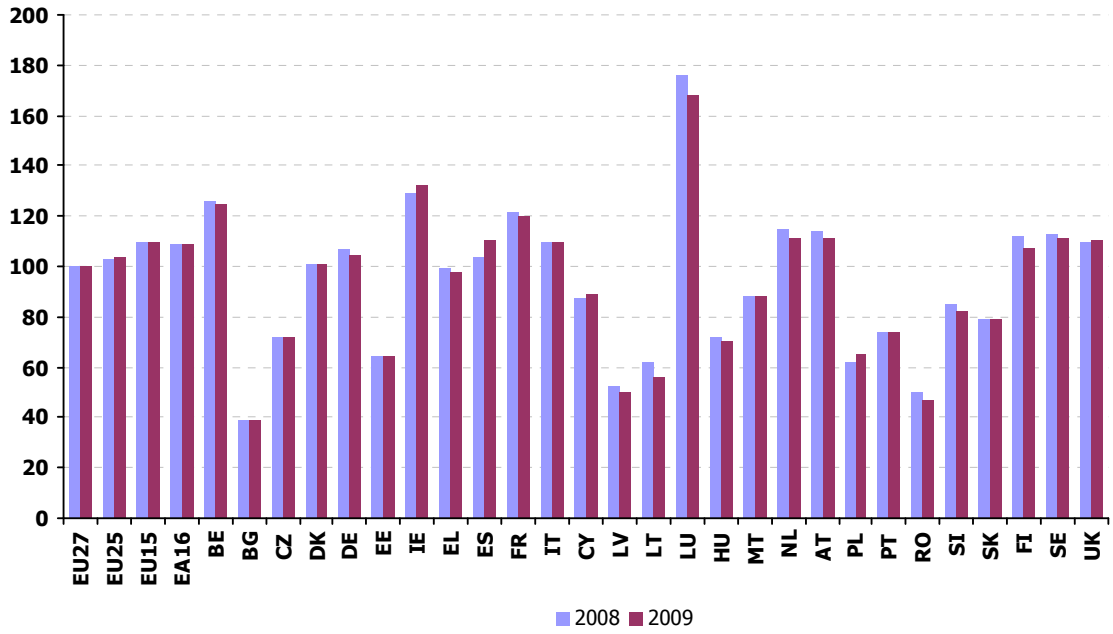
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	100	100	100	100	100	100	100	100	100
EU25	105	105	104	104	104	104	104	103	103
EU15	115	114	114	113	113	112	112	111	111
EA16	112	111	111	109	110	109	109	108	108
EL	86	90	93	94[P]	91	93	92	93	93

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



	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
EU25	104,6	104,5	104,4	104,2	104	103,9	103,7	103,3	103,4
EU15	112,7	112,1	111,6	111,1	110,9	110,7	110,3	109,8	109,8
EA16	112	110,9	110,5	109,5	109,7	109,6	109,6	109,2	109,1
EL	97,2	99,5	101,3	100,6	98,4	98,0	97,5	99,0	97,9

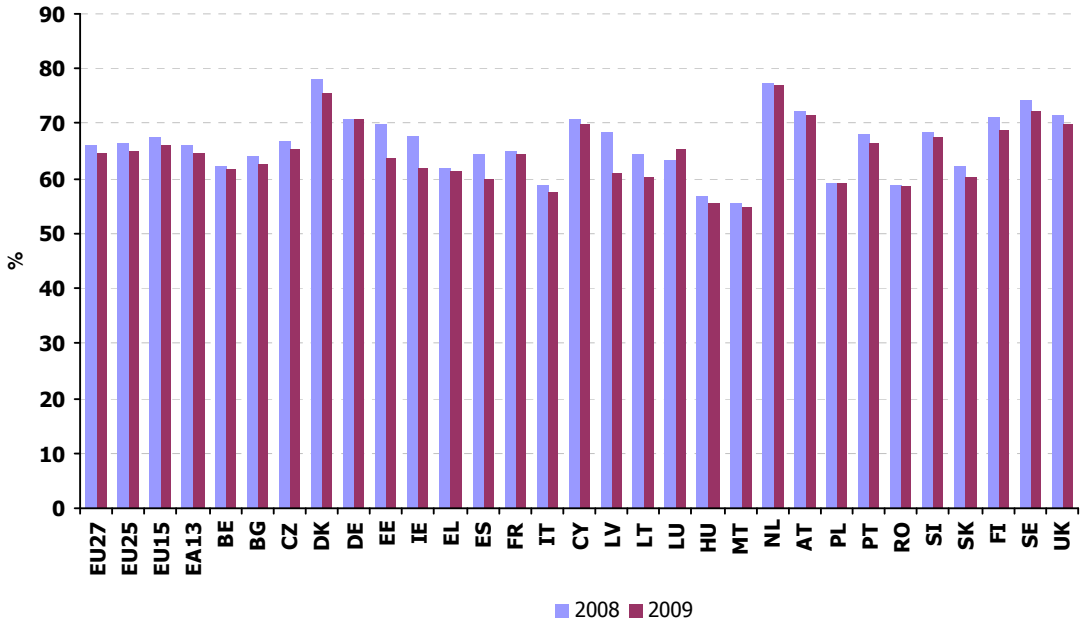
Source: Eurostat

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.

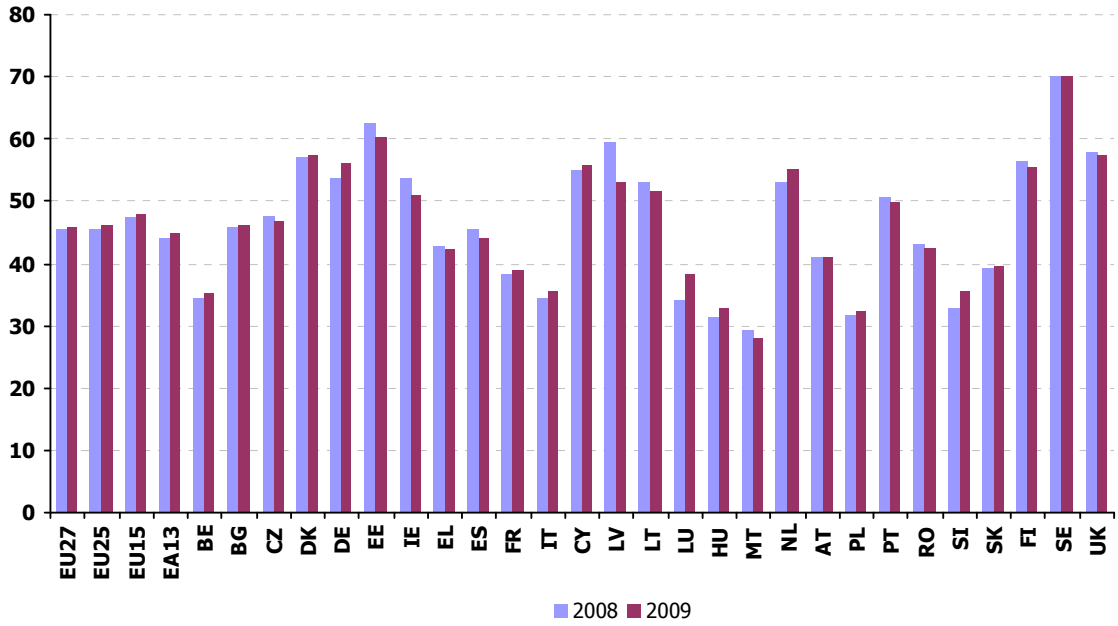


	2002	2003	2004	2005	2006	2007	2008	2009
EU27	62,4	62,7	62,8	63,5	64,5	65,4	65,9	64,6
EU25	62,8	63,0	63,1	64,0	64,8	65,8	66,3	65,0
EU15	64,2	64,4	64,6	65,4	66,2	66,9	67,3	65,9
EA16	62,3	62,6	62,8	63,7	64,6	65,6	66,0	64,7
EL	57,7	58,9	59,6	60,1	61,0	61,4	61,9	61,2
Males								
EU27	70,4	70,3	70,2	70,8	71,6	72,5	72,8	70,7
EU25	71,0	70,9	70,7	71,4	72,1	73,0	73,2	71,1
EU15	72,8	72,7	72,5	73,0	73,6	74,2	74,2	71,9
EA16	71,6	71,4	71,2	71,8	72,6	73,3	73,3	71,2
EL	72,5	73,5	74,0	74,2	74,6	74,9	75,0	73,5
Females								
EU27	54,5	55,0	55,4	56,3	57,3	58,3	59,1	58,6
EU25	54,7	55,2	55,6	56,6	57,6	58,6	59,4	58,9
EU16	55,5	56,2	56,7	57,8	58,7	59,7	60,4	59,9
EA13	52,9	53,8	54,3	55,6	56,7	57,9	58,7	58,3
EL	43,1	44,5	45,5	46,1	47,4	47,9	48,7	48,9

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)



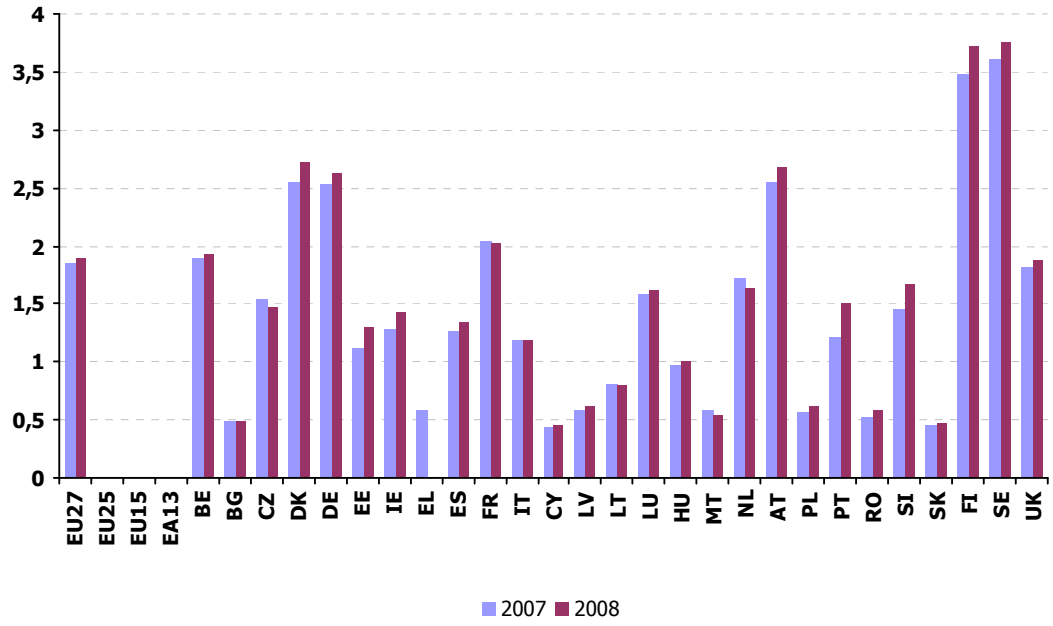
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	37,5	38,2	39,9	40,5	42,3	43,5	44,6	45,6	46,0
EU25	37,1	38,4	40,1	40,8	42,6	43,6	44,8	45,7	46,2
EU15	38,4	39,8	41,5	42,3	44,2	45,3	46,5	47,4	48,0
EA16	34,4	35,8	37,3	38,2	40,3	41,6	43,2	44,2	45,1
EL	38,2	38,9	41,0	39,4	41,6	42,3	42,4	42,8	42,2
Males									
EU27	47,4	48,2	49,7	50,1	51,6	52,7	53,9	55,0	54,8
EU25	47,2	48,6	50,1	50,6	51,9	52,8	54,1	55,0	54,9
EU15	48,3	49,8	51,4	52,0	53,2	54,1	55,3	56,2	56,2
EA16	44,9	46,4	47,6	48,4	49,8	50,9	52,3	53,3	53,5
EL	54,9	55,3	58,3	56,4	58,8	59,2	59,1	59,1	57,7
Females									
EU27	28,2	28,9	30,6	31,4	33,6	34,9	35,9	36,8	37,8
EU25	27,6	28,8	30,6	31,5	33,8	35,0	36,1	36,9	38,0
EU15	28,8	30,2	32,0	32,9	35,5	36,8	38,1	39,0	40,1
EA16	24,5	25,7	27,5	28,3	31,3	32,8	34,4	35,6	37,0
EL	23,1	24,2	25,3	24,0	25,8	26,6	26,9	27,5	27,7

Source: Eurostat

III-A. INNOVATION & RESEARCH

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

(as a percentage of GDP)



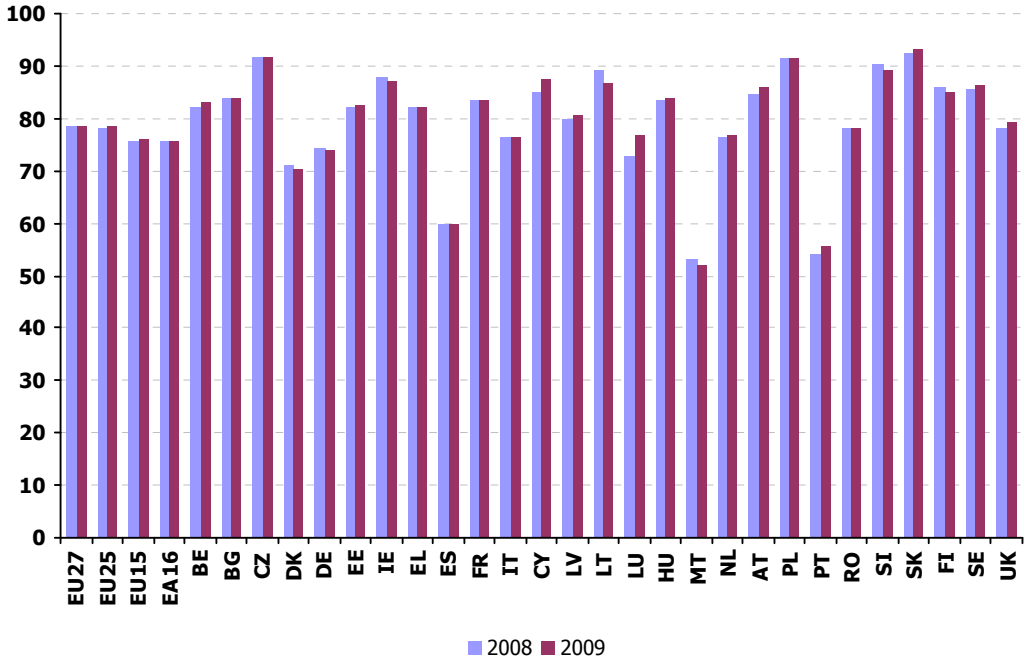
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	1,86	1,87	1,86	1,82	1,82	1,85	1,85	1,9	:
EL	0,58	:	0,57	0,55	0,59	0,58	0,58	:	:

(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)



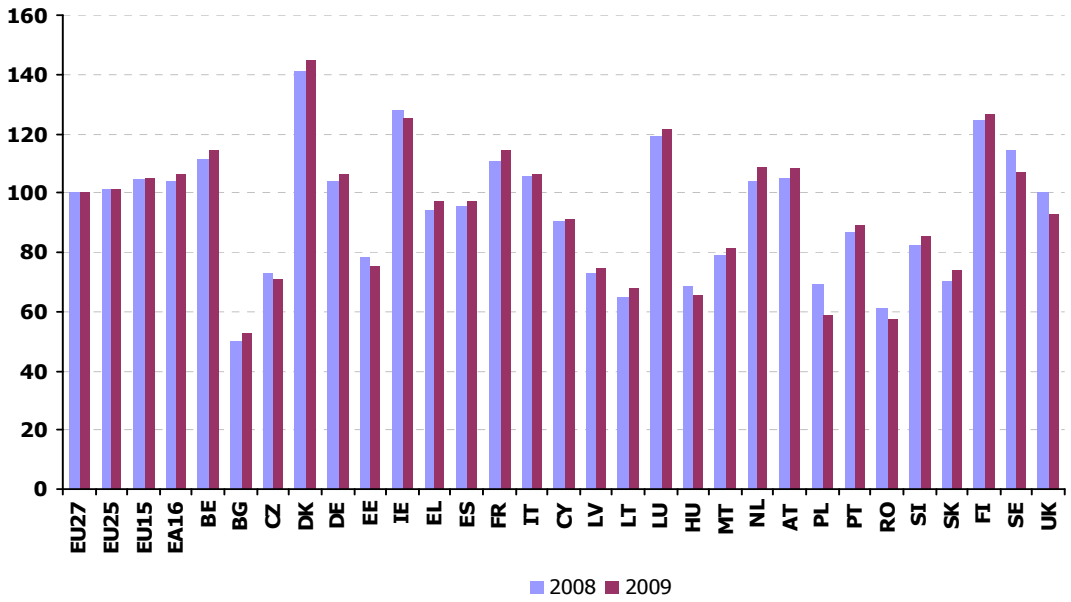
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	76,6	76,7	76,9	77,1	77,5	77,9	78,1	78,4	78,6
EU25	76,5	76,7	77	77,3	77,6	77,9	78	78,3	78,5
EU15	73,6	73,7	74,1	74,4	74,7	75	75,2	75,7	76,1
EA16	73,2	73,4	73,5	74	74,2	74,5	74,9	75,5	75,6
EL	80,2	81,1	81,7	83	84,1	81	82,1	82,1	82,2
Males									
EU27	74,0	74,0	74,4	74,4	74,8	75,0	75,4	75,6	75,9
EU25	73,7	74,0	74,4	74,3	74,8	74,9	75,2	75,3	75,6
EU15	70,5	70,9	71,3	71,2	71,8	71,7	72,2	72,5	72,9
EA16	69,9	70,1	70,2	70,5	70,8	70,9	71,5	72,0	72,3
EL	75,3	76,1	76,6	79,2	79,7	75,5	77,5	78,0	77,8
Females									
EU27	79,2	79,3	79,4	80,0	80,2	80,8	80,8	81,3	81,4
EU25	79,3	79,4	79,7	80,2	80,4	81,0	80,9	81,4	81,5
EU15	76,6	76,6	76,9	77,5	77,8	78,4	78,3	79,0	79,3
EA16	76,4	76,6	76,7	77,6	77,7	78,1	78,4	79,0	79,0
EL	84,8	86,0	86,8	86,8	88,5	86,6	87,0	86,6	86,9

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)

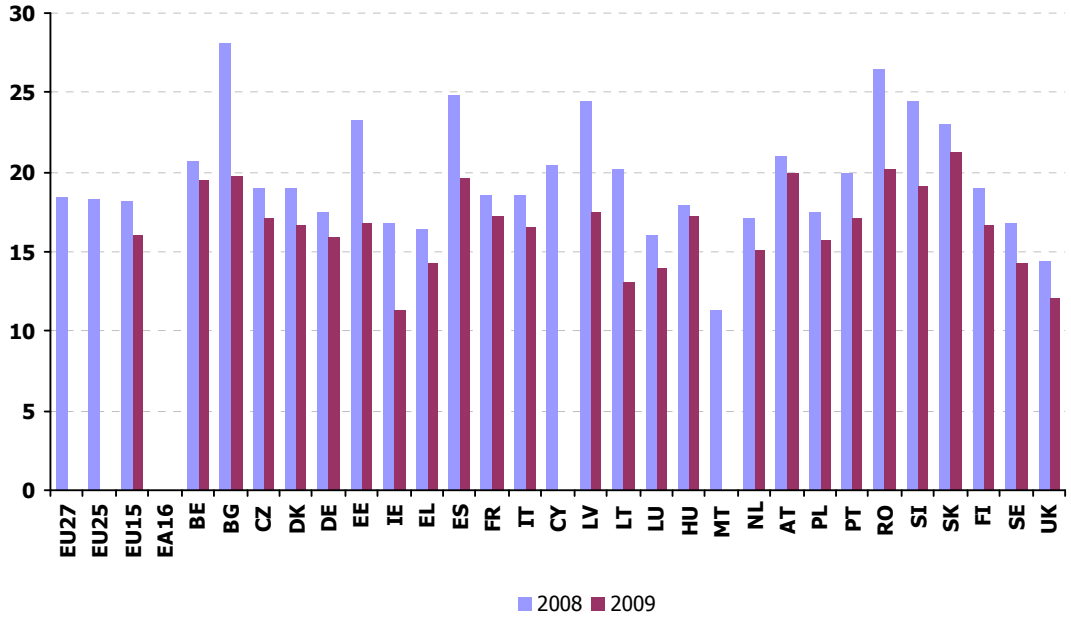


	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	100	100	100	100	100	100	100	100	100
EU25	101,1	101,1	101,1	101,2	101,1	101,1	101	101,2	101,1
EU15	104,7	104,8	105,2	105,4	104,8	104,8	104,8	104,4	104,9
EA16	100,5	100,5	103	103,1	102,1	101,9	101,6	104,0	106,5
EL	82,3	80,2	85,9	87,6	88,2	89,0	90,7	94,0	97,4

Source: Eurostat

IV-2a. Business investment

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



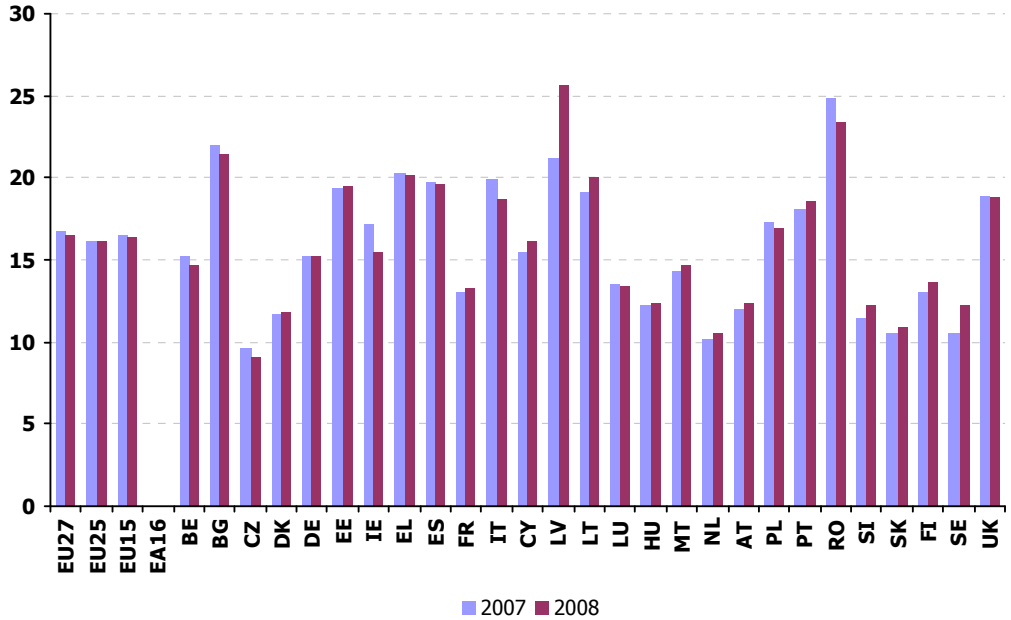
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	17,9	17,3	17,1	17,2	17,7	18,2	18,7	18,4	:
EU25	17,9	17,3	17,1	17,2	17,7	18,2	18,6	18,3	:
EU15	17,8	17,3	17	17,2	17,7	18,2	18,6	18,2	16,1
EA16	:	:	:	:	:	:	:	:	:
EL	18,1	19,1	19,8	18,5	17,1	18,1	18,1	16,4	14,3

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)

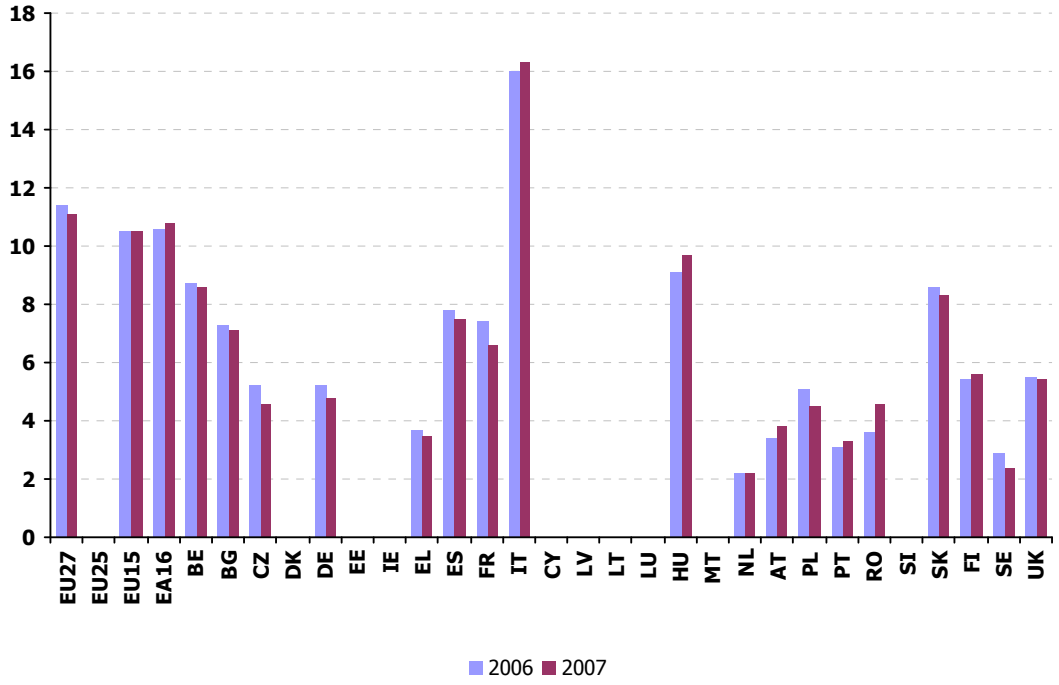


	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	:	:	:	:	:	15,9	16,1	16,7	16,5
EU25	16,0	16,0	:	15,0	16,0	15,9	16,1	16,2	16,1
EU15	15,0	15,0	:	15,0	17,0	15,7	15,9	16,5	16,4
EA16	:	:	:	:	:	:	:	:	:
EL	20,0	20,0	:	20,7	19,9	19,6	20,5	20,3	20,1
Males									
EU27	:	:	:	:	:	15,2	15,3	15,9	15,6
EU25	15,0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

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

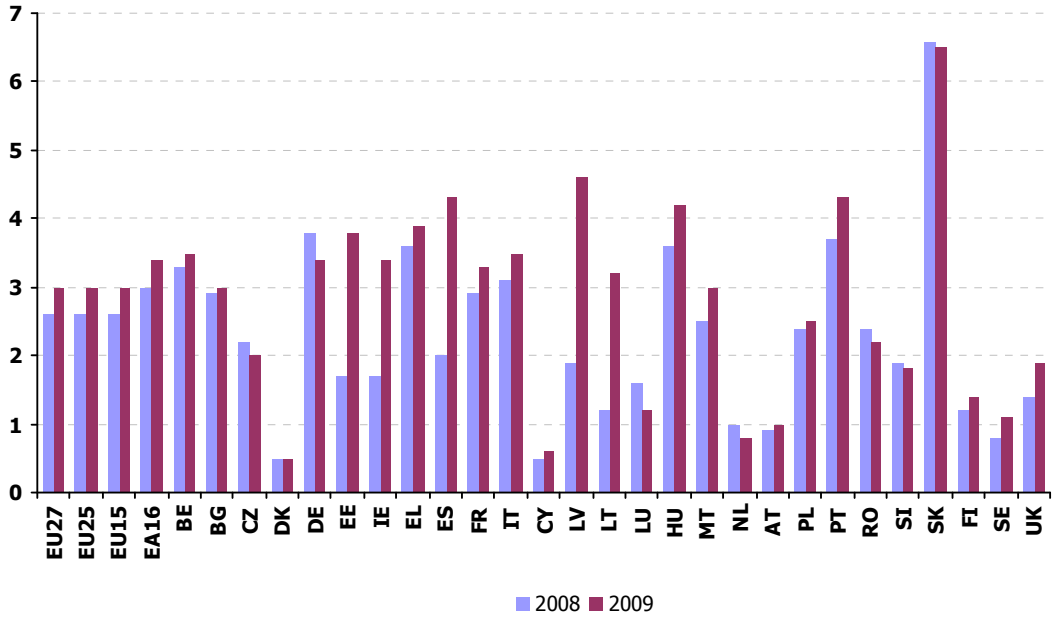
*There are no available data for the Euroarea -16

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).



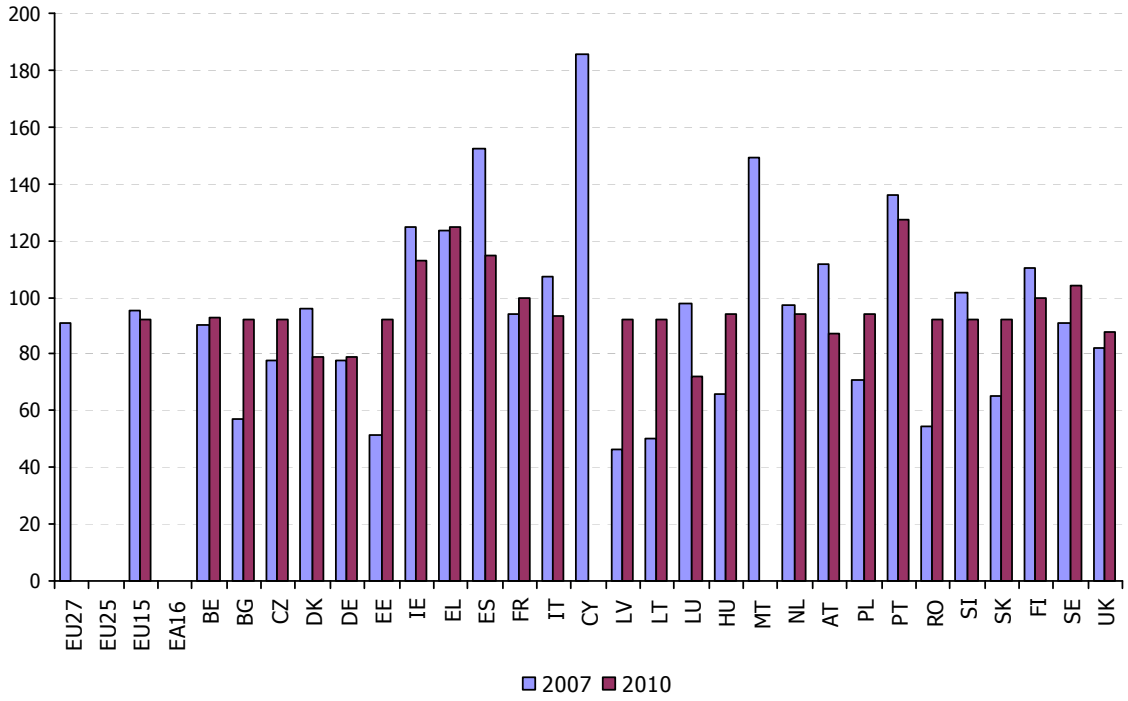
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	3,9	4	4,1	4,2	:	3,7	3,1	2,6	3,0
EU25	3,8	3,9	4	4,1	:	3,7	3	2,6	3,0
EU15	3,1	3,1	3,3	3,4	:	3,2	2,8	2,6	3,0
EA16	3,7	3,7	4	4,2	4,1	3,9	3,3	3	3,4
EL	5,5	5,3	5,3	5,6	5,1	4,8	4,1	3,6	3,9
Males									
EU27	3,5	3,6	3,8	3,9	:	3,5	2,8	2,4	2,9
EU25	3,3	3,4	3,7	3,7	:	3,4	2,8	2,4	2,9
EU15	2,7	2,7	3,0	3,1	:	3,0	2,6	2,4	2,9
EA16	3,1	3,2	3,5	3,7	3,7	3,5	2,9	2,7	3,1
EL	3,2	3,1	3,0	3,0	2,6	2,6	2,2	2,1	2,4
Females									
EU27	4,4	4,5	4,5	4,6	:	4,0	3,3	2,8	3,1
EU25	4,4	4,4	4,5	4,6	:	4,0	3,3	2,8	3,1
EU15	3,6	3,6	3,7	3,8	:	3,5	3,1	2,8	3,1
EA16	4,5	4,4	4,6	4,8	4,6	4,3	3,8	3,3	3,6
EL	9,0	8,6	8,9	9,4	8,9	8,1	7,0	6,0	6,0

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)

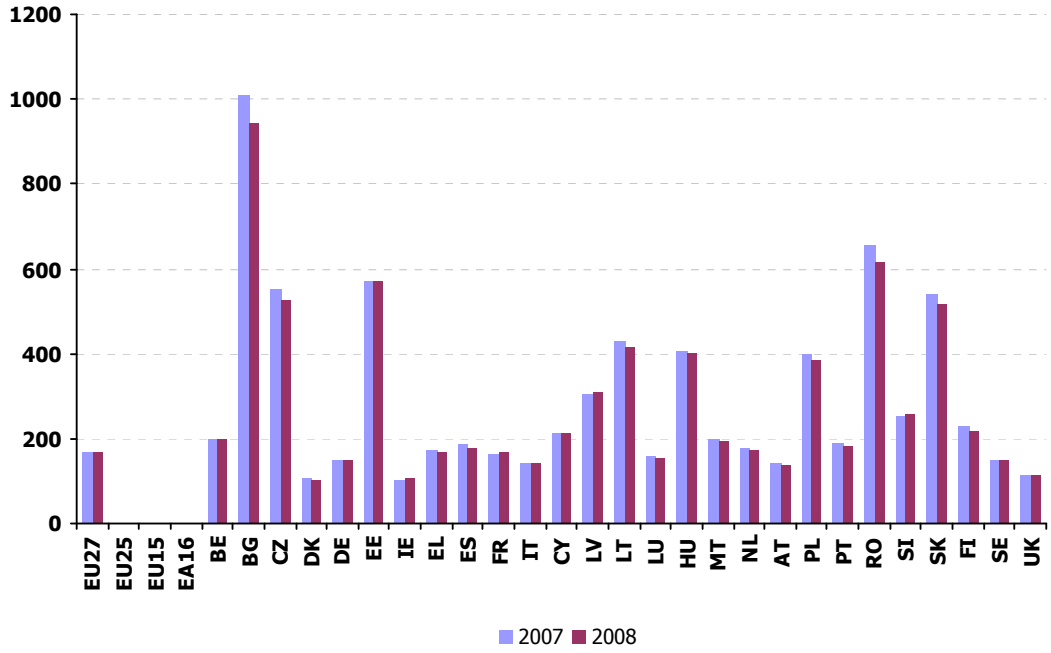


	2000	2001	2002	2003	2004	2005	2006	2007	2010
EU27	90,8	91,8	91,0	92,6	92,6	91,9	91,8	90,7	:
EU25	:	:	:	:	:	:	:	:	:
EU15	96,3	97,4	96,8	98,0	98,0	97,1	96,5	95,0	92,0
EA16	:	:	:	:	:	:	:	:	:
EL	118,8	119,8	119,4	122,7	122,8	123,2	119,7	123,2	125,0

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]

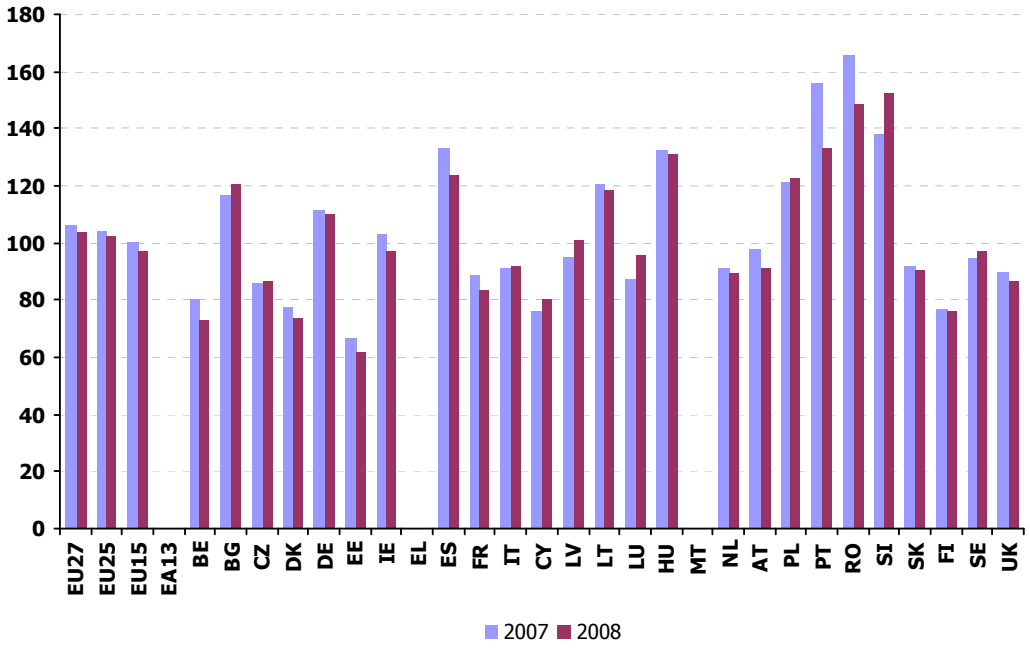


	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	187,3	187,8	185,1	187,18	184,8	181,3	175,7	169,1	167,1
EL	204,5	202,2	200,8	192,4	186,8	186,1	179,0	171,4	169,9

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	99	100,2	99,3	105,4	105,4	106	106,5	104
EU25	100	98,8	99,7	98,6	104,2	103,5	104,1	104,6	102,2
EU15	100	99,1	99,6	97,7	103,2	101,7	101,2	100,5	97,2
EA16	:	:	:	:	:	:	:	:	:
EL	100	:	:	:	:	:	:	:	:

(s): Eurostat estimation

Source**:** Eurostat

PART B

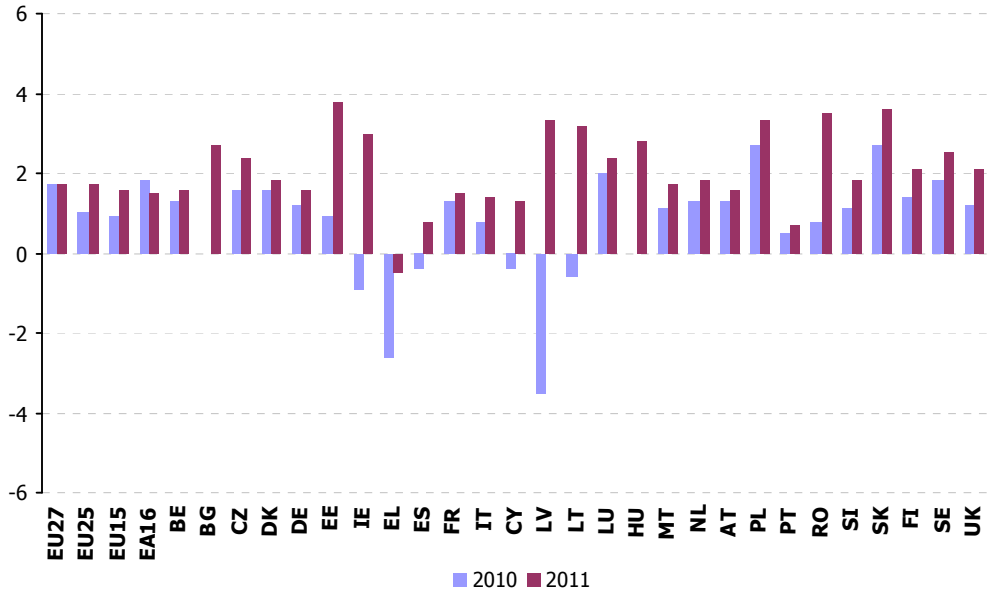
(OTHER STRUCTURAL INDICATORS)

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.



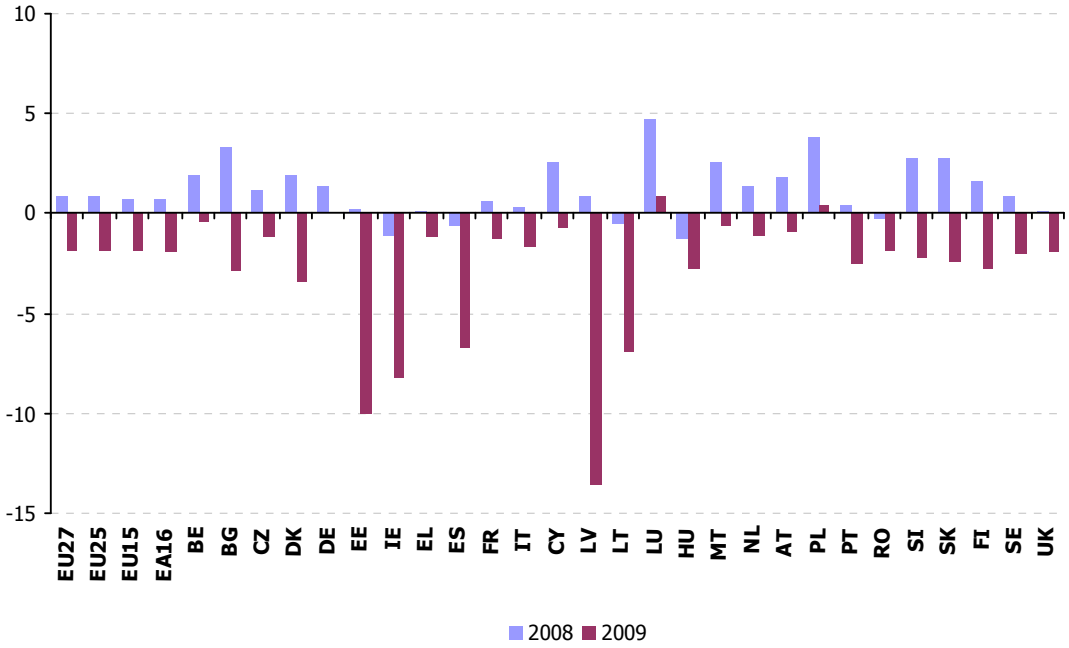
	2003	2004	2005	2006	2007	2008	2009	2010	2011
EU27	1,3	2,5	2	3,2	3	0,5	-4,2	1,8[f]	1,7[f]
EU25	1,3	2,5	1,9	3,2	3	0,5	-4,2	1,7[f]	1,7[f]
EU15	1,2	2,3	1,8	3	2,8	0,3	-4,2	:	:
EA16	0,8	2,2	1,7	3	2,9	0,5	-4,1	1,7[f]	1,5[f]
EL	5,9	4,4	2,3	4,5	4,3	1,3	-2,3	-4[f]	-2,6[f]

(f): forecast

Source: Eurostat, Interim Forecast-EC September 2010, European Economy, Occasional papers, no.68, EC August 2010

I-2b. Total employment growth

(annual percentage change in total employed population)



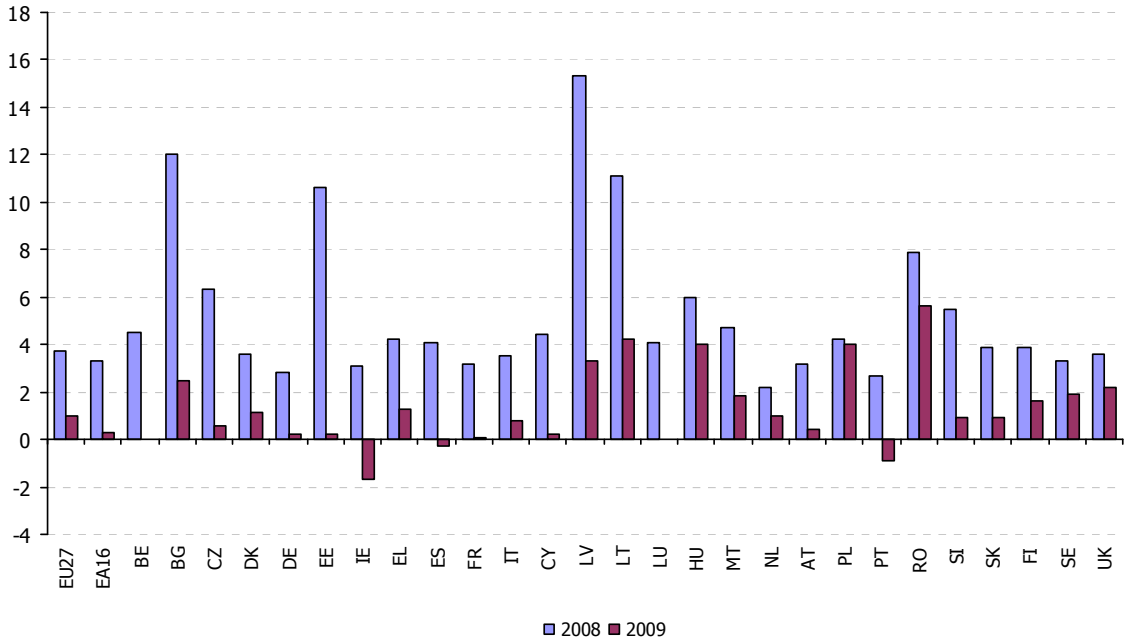
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	0,9	0,4	0,3	0,7	0,9	1,6	1,8	0,9	-1,8
EU25	1	0,4	0,3	0,8	1	1,6	1,8	0,9	-1,8
EU15	1,4	0,7	0,5	0,8	0,9	1,5	1,6	0,7	-1,8
EA16	1,5	0,7	0,4	0,8	1	1,6	1,8	0,7	-1,9
EL	0,1	2,3	1,2	2,2	0,9	2	1,4	0,1	-1,2
Males									
EU27	0.6	0.0	0.0	0.3	0.7	1.4	1.6	0.5	-2.7
EU25	0.6	-0.1	-0.1	0.3	0.7	1.4	1.6	0.5	-2.8
EU15	1.0	0.1	0.0	0.2	0.4	1.2	1.3	0.2	-2.8
EA16	1.0	0.0	-0.2	0.2	0.4	1.3	1.4	0.1	-2.9
EL	0.2	1.6	0.7	1.6	0.6	1.3	1.3	-0.4	-2.1
Females									
EU27	1.5	0.8	0.8	1.2	1.3	1.9	2.1	1.5	-0.7
EU25	1.6	1.1	0.9	1.3	1.5	1.9	2.2	1.5	-0.6
EU15	2.0	1.5	1.1	1.5	1.6	1.8	2.0	1.4	-0.6
EA16	2.2	1.6	1.3	1.6	1.7	2.0	2.4	1.6	-0.6
EL	0.0	3.3	2.0	3.2	1.5	3.3	1.5	1.0	0.3

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

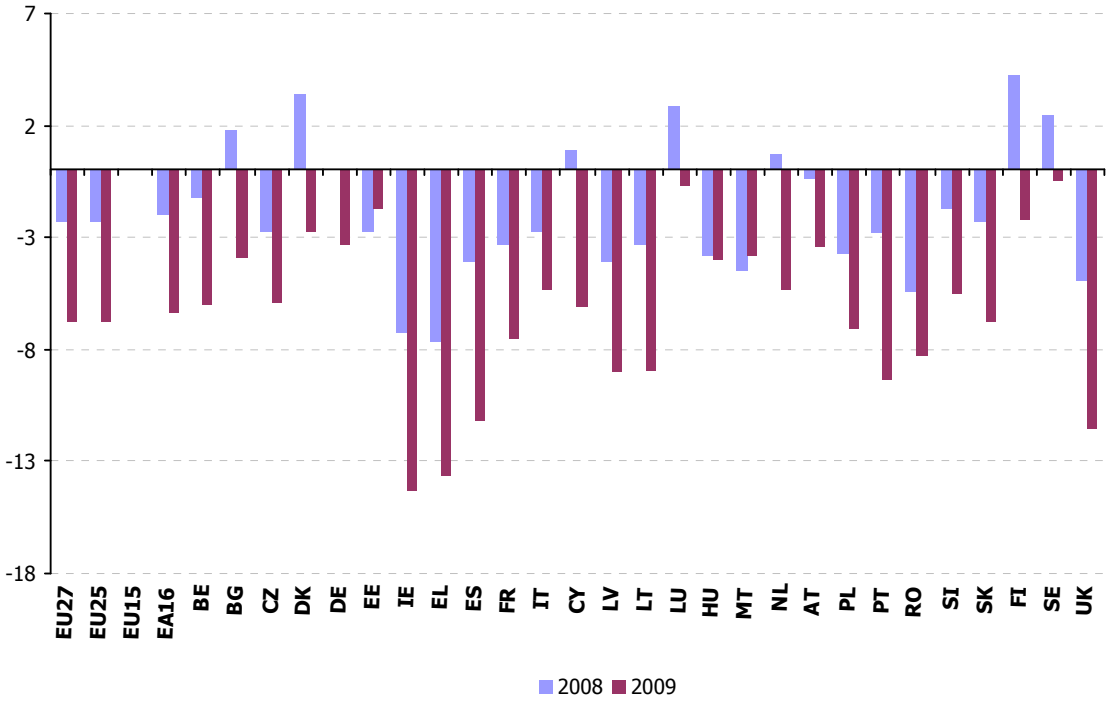


	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	:	:	:	:	2,3	2,2	2,3	3,7	1,0
EU25	:	:	:	:	:	:	:	:	:
EU15	:	:	:	:	:	:	:	:	:
EA16	2,4	2,3	2,1	2,2	2,2	2,2	2,1	3,3	0,3
EL	3,7	3,9	3,4	3,0	3,5	3,3	3,0	4,2	1,3

Source: Eurostat

I-4b. Public balance

(% of GDP)



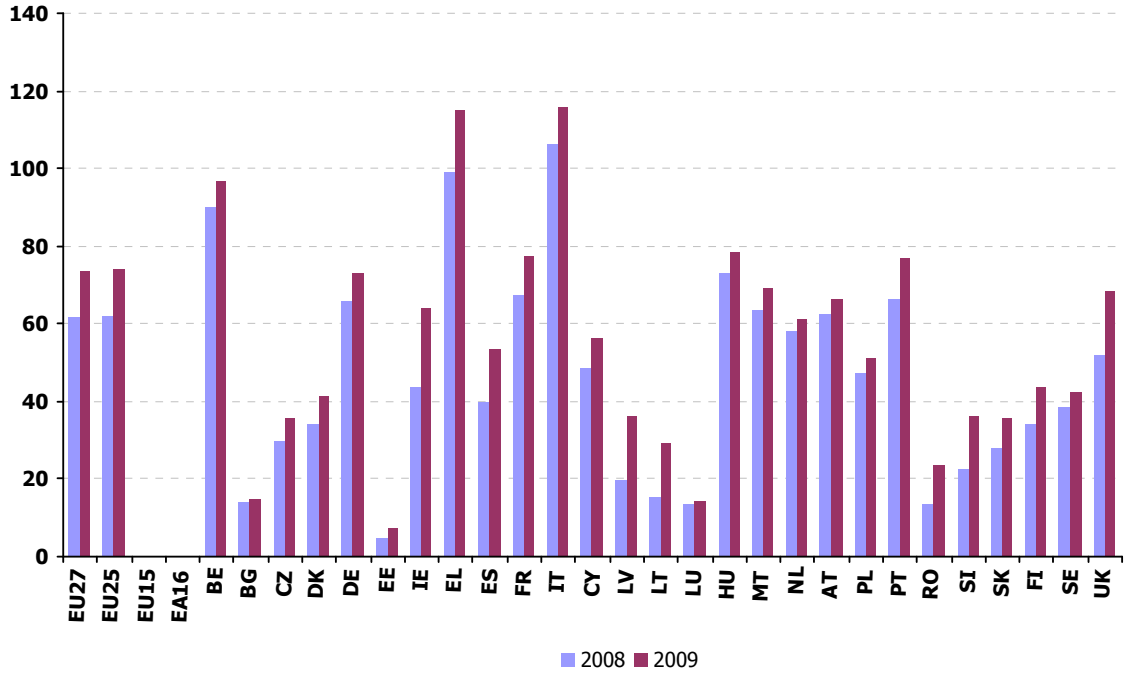
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	-1,4	-2,5	-3,1	-2,9	-2,5	-1,4	-0,8	-2,3	-6,8
EU25	-1,4	-2,5	-3,1	-2,9	-2,5	-1,4	-0,8	-2,3	-6,8
EU15	-1,3	-2,4	-3	-2,8	-2,4	-1,3	-0,8	:	:
EA16	-1,9	-2,6	-3,1	-2,9	-2,5	-1,3	-0,6	-2	-6,3
EL	-4,5	-4,8	-5,6	-7,5	-5,2	-3,6	-5,1	-7,7	-13,6

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



	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	61	60,4	61,9	62,2	62,8	61,4	58,8	61,6	73,6
EU25	61,2	60,6	62,1	62,5	63,2	61,9	59,4	62,3	74,3
EU15	62,3	61,6	63,1	63,4	64,3	62,8	60,4	:	:
EA16	:	:	:	:	:	:	:	:	:
EL	103,7	101,7	97,4	98,6	100	97,8	95,7	99,2	115,1

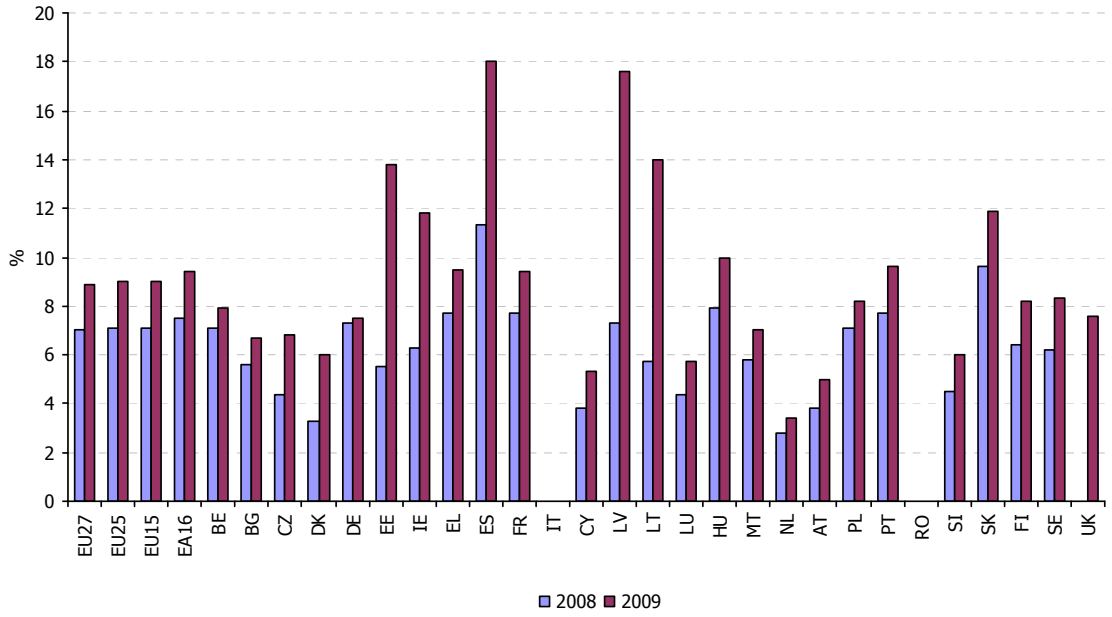
Source: Eurostat

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



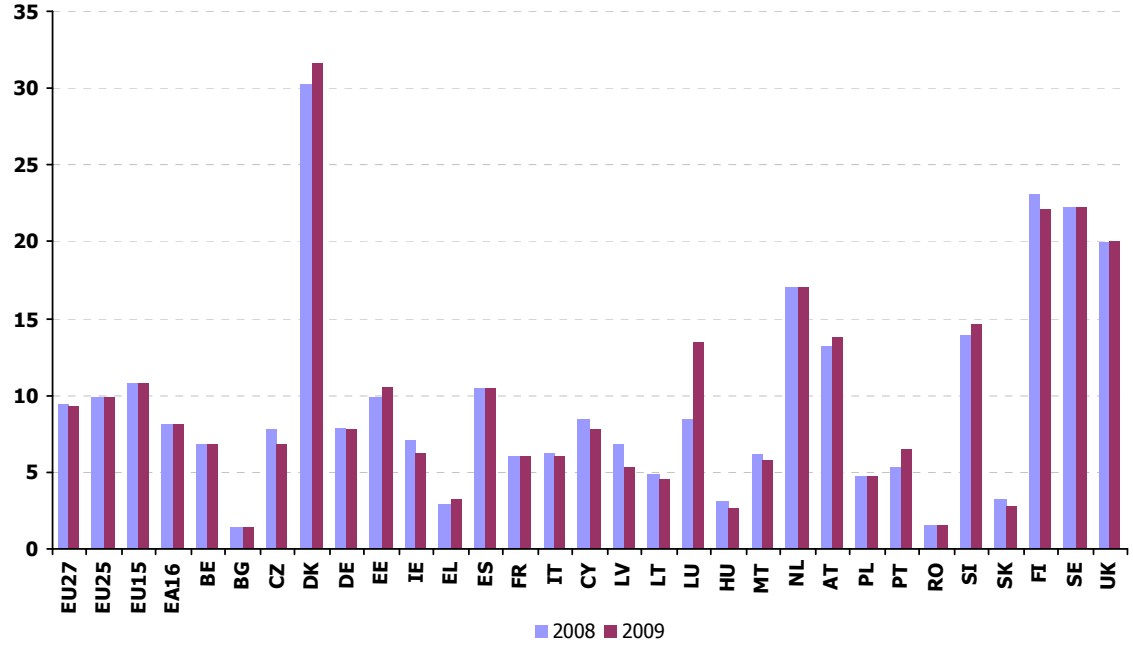
	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total									
EU27	8,5	8,9	9,0	9,0	8,9	8,2	7,1	7	8,9
EU25	8,4	8,8	9,0	9,0	8,9	8,2	7,2	7,1	9,0
EU15	7,2	7,6	7,9	8,1	8,1	7,7	7	7,1	9,0
EA16	8,0	8,4	8,8	9,0	9,0	8,3	7,5	7,5	9,4
EL	10,7	10,3	9,7	10,5	9,9	8,9	8,3	7,7	9,5
Males									
EU27	7,7	8,3	8,4	8,5	8,3	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.



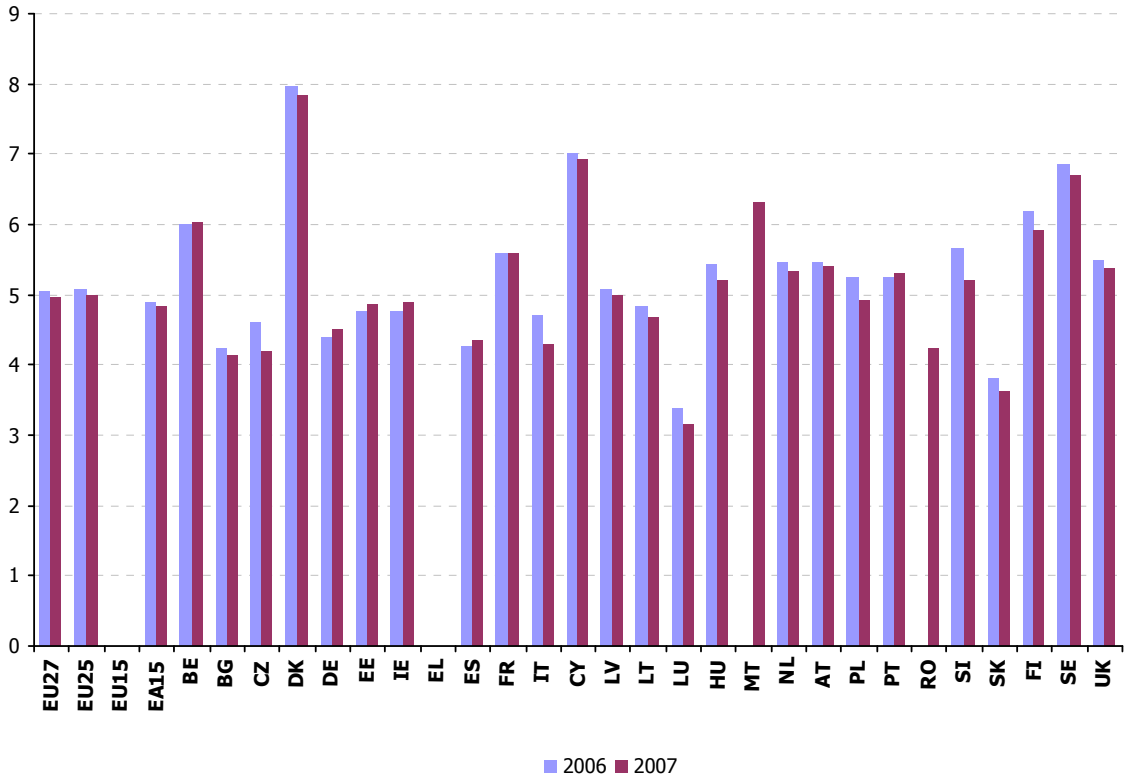
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	7,1	7,2	8,5	9,3	9,8	9,7	9,5	9,4	9,3[p]
EU25	7,5	7,6	9	9,8	10,3	10,2	10	9,9	9,8[p]
U15	8,0	8,1	9,8	10,7	11,3	11,2	10,9	10,8	10,8[p]
EA16	5,3[e]	5,4	6,5	7,3	8,1	8,2	8,3	8,1	8,1 [p]
EL	1,2	1,1	2,6	1,8	1,9	1,9	2,1	2,9	3,3
Males									
EU27	6,6[e]	6,6	7,9	8,7	9,0	8,8	8,6	8,5	8,5[p]
EU25	7,0[e]	7	8,4	9,1	9,5	9,3	9,0	8,9	8,9 [p]
EU15	7,5[e]	7,5	9,1	10	10,4	10,2	9,9	9,8	9,7 [p]
EA16	5,3[e]	5,3	6,3	7,2	7,9	7,8	7,9	7,8	7,7 [p]
EL	1,2	1,1	2,6	1,8	1,9	2,0	2,2	2,8	3,2 [p]
Females									
EU27	7,6[e]	7,8	9,1	10	10,5	10,5	10,4	10,2	10,2[p]
EU25	8,0[e]	8,2	9,6	10,6	11,1	11,1	10,9	10,8	10,8[p]
EU15	8,5[e]	8,8	10,4	11,4	12,1	12,2	11,9	11,8	11,8[p]
EA16	5,3[e]	5,5	6,6	7,5	8,4	8,6	8,7	8,5	8,5[p]
EL	1,1	1,1	2,7	1,8	1,8	1,8	2,1	3,1	3,3[p]

(e): estimation (p): provisional data
Source: Eurostat

III-B. INNOVATION & RESEARCH

III-1b. Public expenditure on education

(% of GDP)



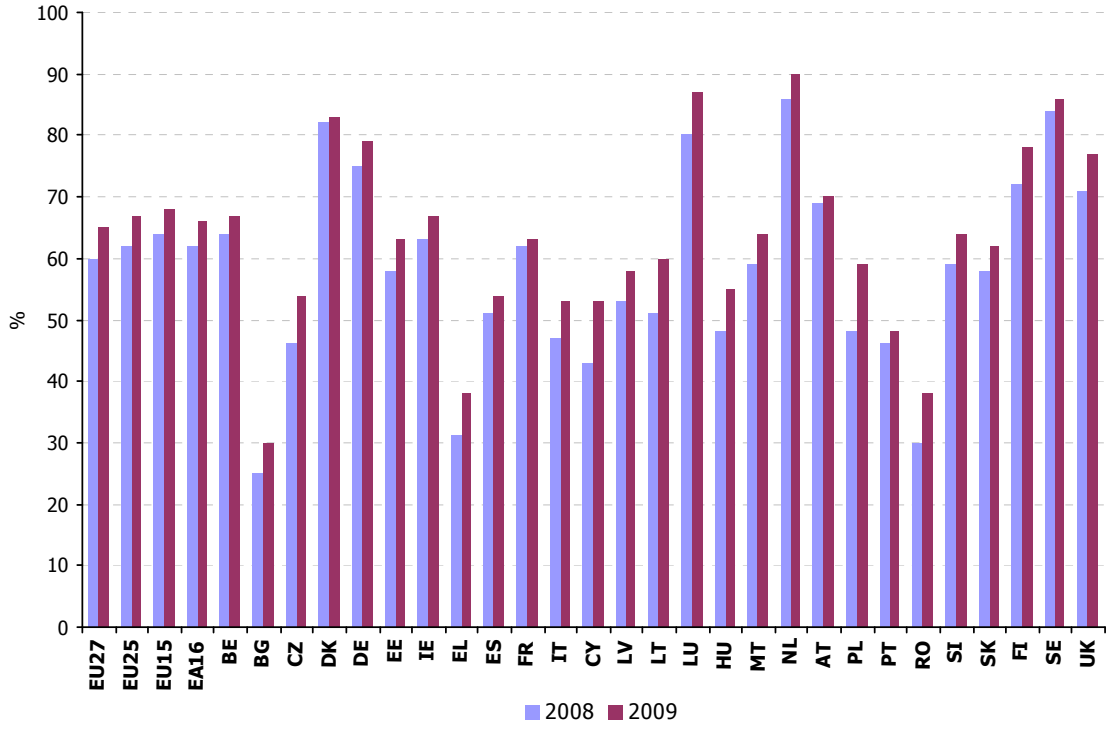
	1999	2000	2001	2002	2003	2004	2005	2006	2007
EU27	4,9	4,9	5,0	5,1	5,1	5,1	5,0	5,0	5,0
EU25	:	:	:	:	:	:	:	5,1	5,0
EU15	:	:	:	:	:	:	:	:	:
EA15*	:	:	5,0	5,0	5,0	5,0	4,9	4,9	4,8
EL	3,3	3,4	3,5	3,6	3,6	3,8	4,0	:	:

*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)



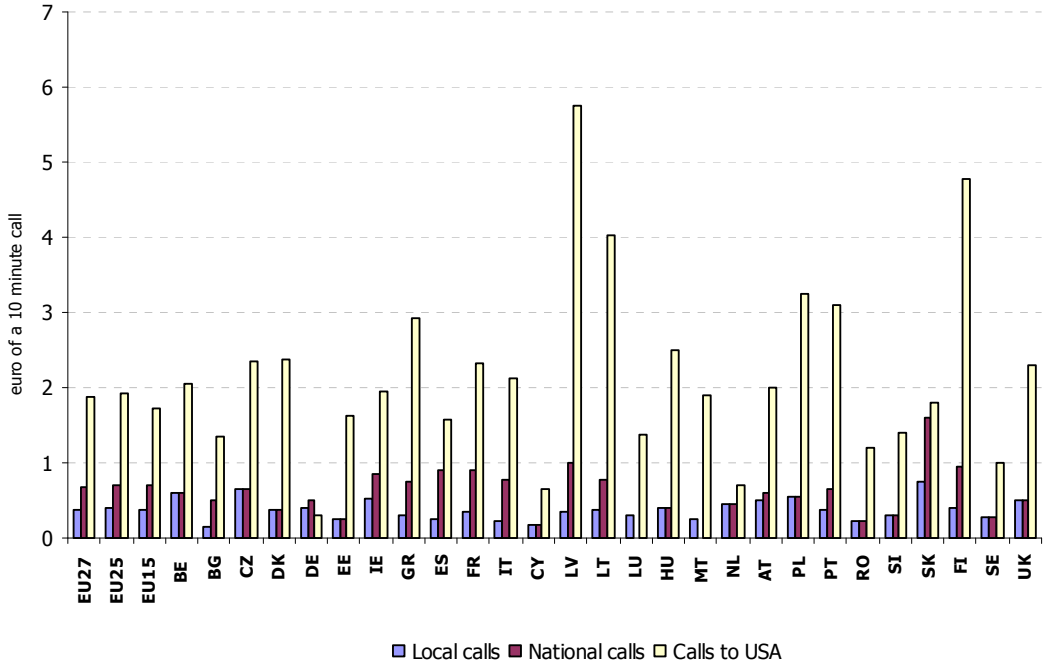
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	:	:	:	40	48	49	54	60	65
EU25	:	:	:	42	48	51	56	62	67
EU15	:	39	43	45	53	54	59	64	68
EA16	:	:	:	:	:	:	:	:	:
EL	:	12	16	17	22	23	25	31	38

Source: Eurostat

IV-B. ECONOMIC REFORM

IV-1b. Price of telecommunications, 2008

(Euro per 10 min call)

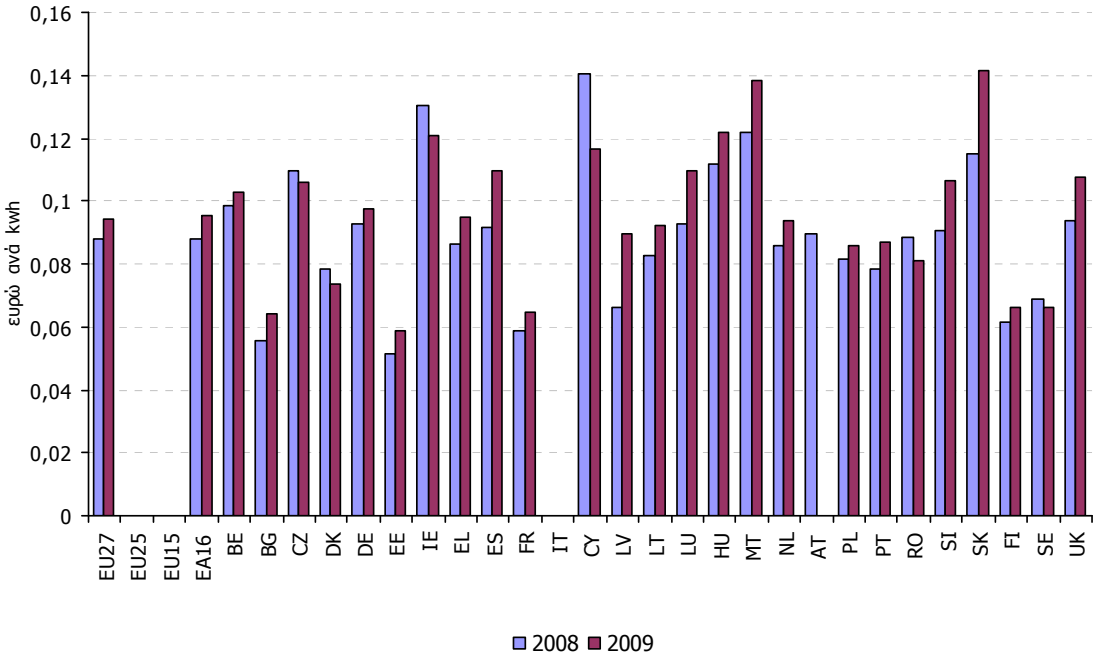


	2000	2001	2002	2003	2004	2005	2006	2007	2008
Local calls									
EU27	:	:	:	0,38	0,37	0,35	0,35	0,36	0,38
EU25	0,39	0,39	0,39	0,39	0,37	0,35	0,35	0,36	0,39
EU15	0,4	0,4	0,39	0,39	0,37	0,35	0,33	0,35	0,37
EA16	:	:	:	:	:	:	:	:	:
EL	0,31	0,36	0,31	0,31	0,31	0,31	0,31	0,31	0,31
National calls									
EU27	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)

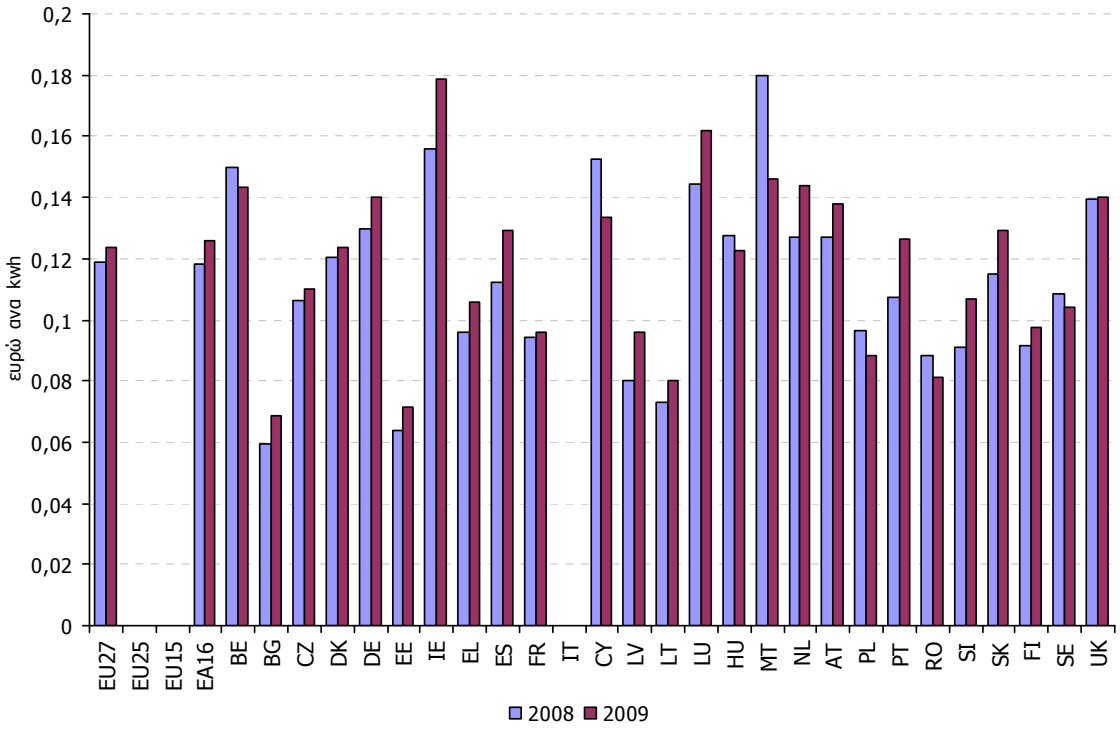


	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	:	:	:	:	0,0672	0,0752	0,0820	0,0876	0,0952
EU25	:	:	:	0,0623	0,0672	0,0755	0,0825	:	:
EU15	0,0644	0,0620	0,0648	0,0634	0,0682	0,0766	0,0837	:	:
EA16	:	:	:	0,0667	0,0713	0,0774	0,0837	0,0880	0,0951
EL	0,0571	0,059	0,0614	0,063	0,0645	0,0668	0,0698	0,0861	0,0948

Source: Eurostat

IV-3b. Electricity prices – Households

(Euro per kWh)

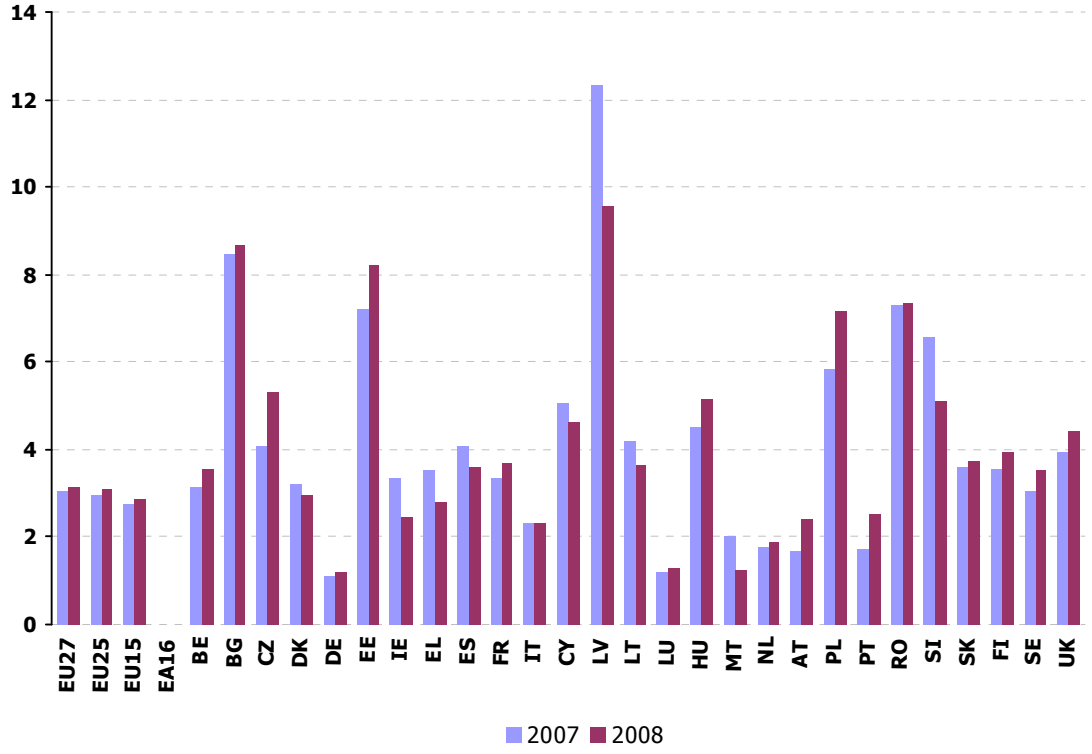


	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	:	:	:	:	0,1013	0,1068	0,1173	0,1175	0,1227
EU25	:	:	:	0,1002	0,1023	0,1077	0,1183	:	:
EU15	0,1027	0,1032	0,1036	0,1027	0,1042	0,1094	0,1205	:	:
EA16	:	:	:	0,108	0,1103	0,1137	0,1203	0,1184	0,1259
EL	0,0564	0,058	0,0606	0,0621	0,0637	0,0643	0,0661	0,0957	0,1055

Source: Eurostat

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

(% of GDP)

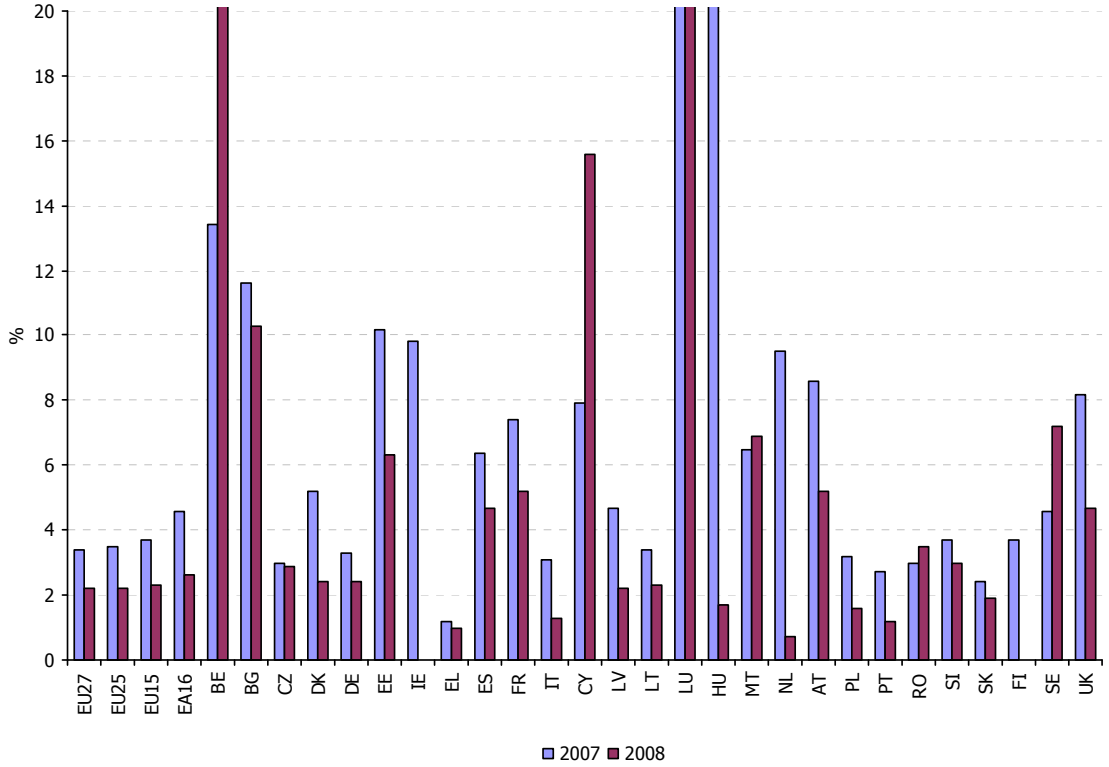


	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	:	:	:	:	:	:	:	3,0	3,1
EU25	:	:	:	:	2,7	2,9	3,3	2,9	3,1
EU15	2,3	2,4	2,6	3,4	2,7	2,8	3,1	2,8	2,9
EA16	:	:	:	:	:	:	:	:	:
EL	3,9	4,1	5,2	4,4	3,7	4,9	5,6	3,5	2,8

Source: Eurostat

IV-5b. Foreign Direct Investment intensity

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



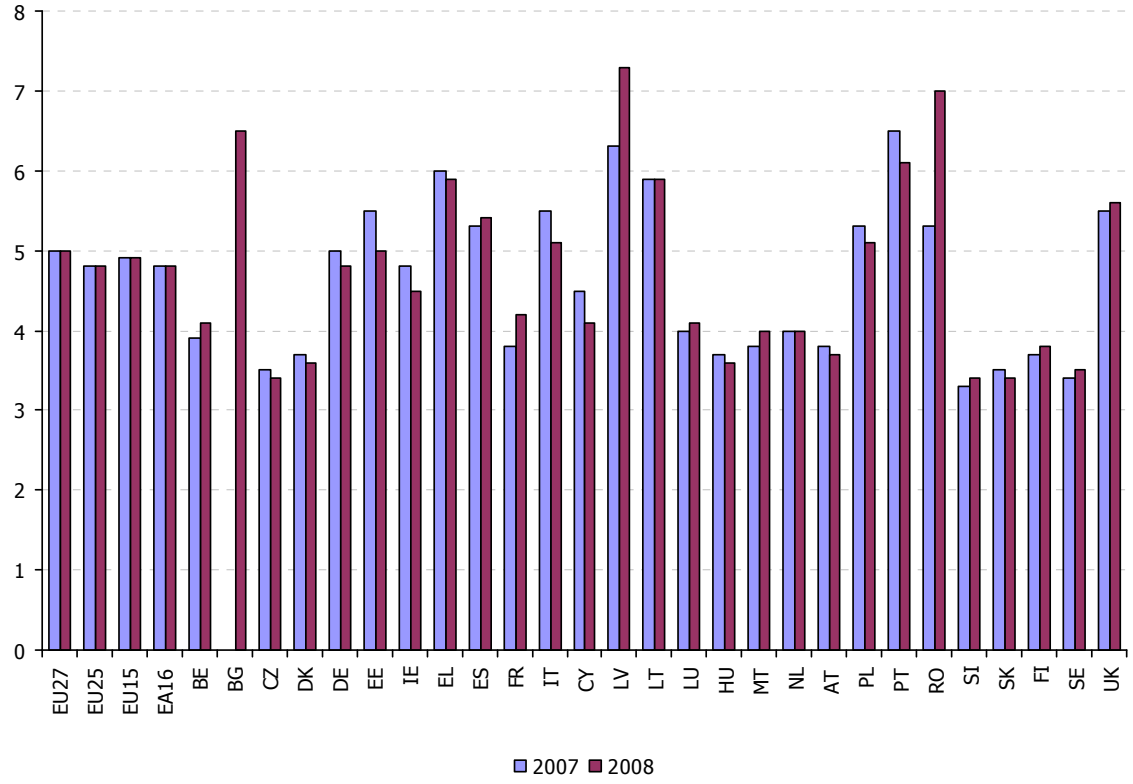
	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	:	:	:	:	0,9	1,7	2,2	3,4	2,2
EU25	:	2,4	1,3	1,3	1	1,7	2,3	3,5	2,2
EU15	3,6	2,6	1,4	1,4	1,1	2	2,5	3,7	2,3
EA16	:	:	:	:	:	:	:	4,6	2,6
EL	1,3	0,8	:	:	0,7	0,4	1,8	1,2	1

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)]

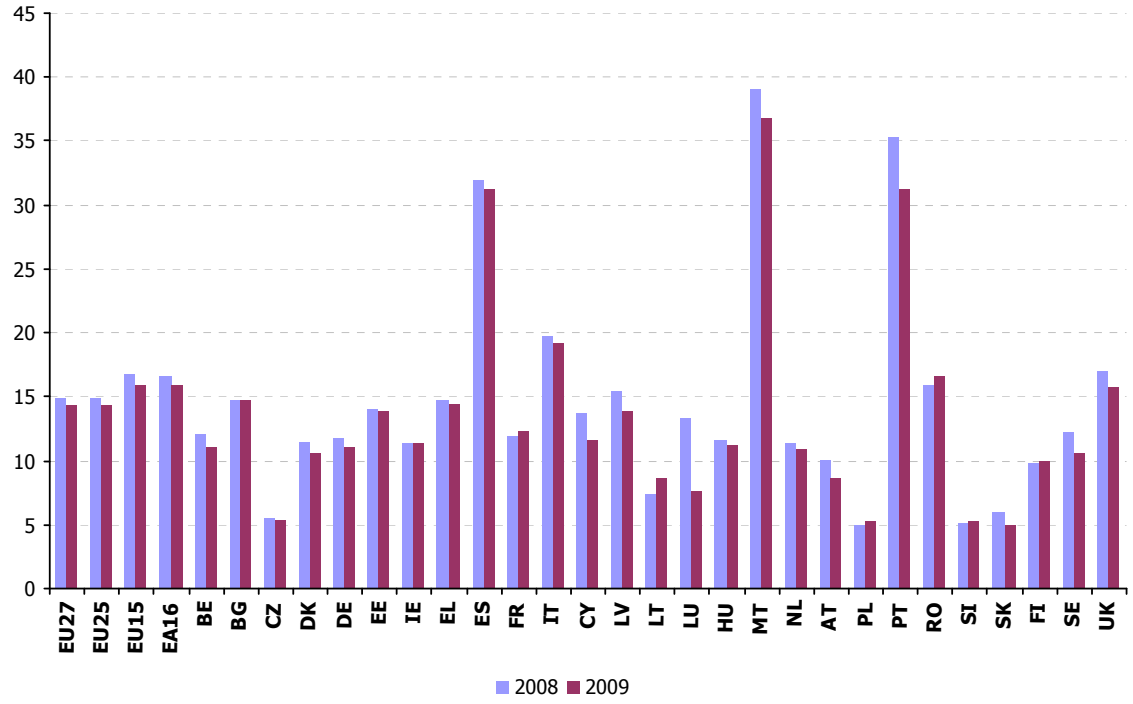


	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	:	:	:	:	:	4,9(s)	4,8(s)	5(s)	5(p)
EU25	4,5(s)	4,5(s)	:	4,6(s)	4,8(s)	4,9	4,8	4,8	4,8
EU15	4,5(s)	4,5(s)	:	4,6(s)	4,8(s)	4,8	4,7	4,9	4,9
EA16	:	:	:	:	:	4,6	4,6	4,8	4,8
EL	5,8	5,7	:	6,4	5,9	5,8	6,1	6,0	5,9

(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)



	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	17,2	17	16,6	16,1	15,8	15,5	15,1	14,9	14,4
EU25	16,8	16,6	16,1	15,7	15,5	15,4	14,9	14,9	14,3
EU15	18,8	18,6	18,2	17,7	17,5	17,3	16,9	16,7	15,9
EA16	19,1	18,9	18,5	18	17,7	17,4	16,8	16,6	15,9
EL	17,1	16,5	16,0	14,7	13,6	15,5	14,6	14,8	14,5
Males									
EU27	19,2	19,1	18,7b	18,4	17,8	17,6	17,1	16,9	16,3
EU25	19,0	18,8	18,3b	18,1	17,6	17,6	17,2	17	16,3
EU15	21,2	21	20,6b	20,3	19,8	19,7	19,3	19,1	18,1
EA16	21,8	21,6	21,3	20,9	20,3	20,1	19,5	19,1	18,3
EL	21	20,6	20,0b	18,1	17,6	20,2	18,6	18,5	18,3
Females									
EU27	15,2	14,9	14,5b	13,8	13,7	13,4	13	12,9	12,5
EU25	14,7	14,4	13,9b	13,3	13,3	13,1	12,7	12,7	12,2
EU15	16,5	16,3	15,8b	15,1	15,2	14,9	14,4	14,3	13,7
EA16	16,5	16,2	15,8	15	15,1	14,7	14,1	13,9	13,5
EL	13,2	12,5	11,9b	11,3	9,7	10,8	10,6	10,9	10,6

Source: Eurostat