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Editorial Policy

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FOREWORD

This is the last report that IOBE is publishing in 2010 as part of its periodic series on the Greek economy. This publication takes place at a critical time for Greek economy, when its course over 2011 and the years to follow is being determined, as: a) the state budget is being finalised and voted at the midst of sharp deepening of the recession in Greece; b) the implementation of the core of the structural measures, contained in the support agreement, begins; and c) the setup of the European Stability Mechanism that will cover all countries with fiscal problems in the Euro area is being finalised. As all IOBE quarterly bulletins, 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 16/12/2010. However, in a few cases newer data were also taken into account. The **first section** contains **IOBE's proposal on initiatives for economic development**, together with a **brief overview** of the report's main points. The **second section** examines the more general economic conditions, starting with an analysis of the **global economic environment** based on the latest reports of the European Commission, OECD and IMF. Thereafter, the report presents the domestic economic environment through: a) presentation of the **economic climate** in Greece, as outlined in IOBE's business surveys, and b) **fiscal outlook**, based on the fiscal developments in 2010 and the Budget for 2011. The section concludes with **an evaluation of the effectiveness of the fiscal policy in Greece**, estimating the long-term consequences of alternative fiscal measures.

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, **developments** in **key sectors of the economy**, the **export performance** of the Greek economy in 2010, developments in the labour market (**employment** and **unemployment**), the course and the factors that shape **inflation** and, finally, developments regarding the **balance of payments**.

Lastly, the **fourth** section of the report presents key findings from a study carried out by IOBE on the problems and the potential solutions concerning investment spatial planning in Greece.

IOBE's next quarterly report on the Greek economy will be published in late March 2011.

1. BRIEF OVERVIEW

Beyond the Memorandum: Proposal for Short-term and Long-term Development Initiatives

General Findings

The agreement between the Greek government and IMF-EC-ECB, together with the measures that have been adopted as part of this agreement, is essential for restoring fiscal stability and for improving the competitiveness of the Greek economy. In some way, this agreement offered a needed therapy to Greek economy and society, which the political system was not in the position to provide, due to its commitments to various interest groups. From this perspective, the current crisis can be considered as an opportunity to correct serious past faults, related mostly to the establishment of a large, cumbersome and inefficient public sector. Without the agreement and the € 110 billion loan Greece would have already declared debt moratorium with catastrophic consequences for its economy and cohesion in society.

Today, Greece has the opportunity to fight for the restructuring of its economy with serious chances of success. Already, it is almost certain that if Greece accomplishes the targets at the end of the three-year reform period and the markets are not in the position to provide sufficient liquidity, then the duration of the repayment of the 110 billion will be extended to 11 years, from 5 years agreed initially. Moreover, it seems that the leading powers in the Euro area realise that the survival of the Euro requires strengthened economic governance. The discussion on this has already started, yet it is still early to draw any conclusions on the form of this governance. As a first step, the temporary European Financial Stability Facility was turned into a permanent European Stability Mechanism. The discussion for the creation of a more federal Euro area touches upon the establishment of a Public Debt Management Agency and the issue of common euro area bonds.

In any case, to overcome the crisis in Greece we need to restore fiscal discipline and to implement a series of reforms in order to boost the economy's competitiveness. In this regard, the measures of the agreement that are being implemented are absolutely essential. However, they cannot be considered sufficient for the economic recovery of the country for a number of reasons. First, the agreement does not include measures with significant potential benefits in terms of economic development in either short or long-term horizon, such as reallocation of the Public Investment Programme's funds, utilisation of state-owned real estate, etc. Second, it does not deal with the issue of the optimal model of development, i.e. with the structure of aggregate demand and supply one decade from today and mainly with the strategy of how to achieve it. Third, the already adopted stabilisation and restructuring measures have significant gaps

(e.g. social security reform) and must be augmented. Fourth, the extent to which fiscal adjustment is achievable, at least based on recent Greek experience, is not made sufficiently clear to the public, which creates lack of confidence, uncertainty and speculation. Fifth, even fully sufficient measures require appropriate vision, effective organisation and resolute management for their successful implementation.

A. Development Dimension: Ten-year Horizon

Research from IOBE and other domestic and international research organisations have shown that the liberalisation of closed-shop professions and markets and the abolition of obsolete obstacles to entrepreneurship could bring increase of GDP by 17% (once-off) in the long-term, 10% of which would come within five years, provided that the regulatory framework in Greece converges to that of the Euro area average. These benefits have not been taken into account by the participants in the markets, as they are not included in the official scenarios that are published in the reviews of the stand-by arrangement. As such, the market participants remain exceptionally sceptical about the development prospect of the Greek economy. The same holds for the utilisation of state-owned property and real estate in particular. Its appraisal, together with an unambiguous and specific pledge by the Government on its utilisation within ten years, would create totally different expectations in the markets regarding the course of public debt and consequently in the loan interest spreads. Despite this, both the liberalisation of markets and professions and the utilisation of state-owned property are delayed excessively, given their importance and the graveness of the current economic conditions in Greece.

B. Model of Development: Aggregate Demand and Supply

Today, the structure of aggregate demand is distorted. Private consumption in 2009 represented 75% of GDP, while the share of public consumption stood at 18% of GDP. Meanwhile, in EU-27 the corresponding shares stood at 60% and 21%. Overall, we consume about 93% of GDP, compared to 81% EU average, or alternatively we save only 7% of GDP, compared to about 20% in the European Union. Furthermore, Greece exports goods and services, whose value does not surpass 18.5% of GDP, when the next country in this ranking (Portugal) exports 30% of its GDP. By the end of the decade, in order to restore the current account balance without reducing investment, total consumption should fall by at least 10% of GDP and exports should increase by at least 10% of GDP, while imports should fall too or in the worst-case scenario should remain unchanged (as a percentage of GDP). In the latter case, the share of capital good imports should increase, replacing imports of consumption goods. **In the immediate future IOBE will attempt to examine the feasibility of such an adjustment up to 2020, using appropriate economic modelling techniques.**

Similar distortion is observed on the supply side. Production is inward looking,

aimed at satisfying domestic consumption and not exports. Exports include products and services with relatively low or medium quality / technological content, while the share of innovative products and services is small. Greece is lagging behind in terms of "knowledge triangle" performance (Education – Research – Innovation), which is reflected in the structure of its production and exports.

The stabilisation and restructuring measures of the support agreement certainly facilitate the transition from the current to the new model of development, i.e. to the new structure of demand and supply (with more competitive and innovative products and services). These measures, however, are not sufficient. The labour market should "transfer" hundreds of thousands of employees (about 10% of the labour force) from sectors with non-tradable goods and services to export-oriented sectors. The preponderance of company-level over branch-level labour contracts provides flexibility to the system, but this is not sufficient. Active employment policies, such as those applied in the Scandinavian countries and Germany are also needed, together with new investment in branches, which benefit from the new model of development. It is estimated that in the next three years € 50 billion can be invested in road infrastructure, sea ports, marinas, airports, hotels, other tourist establishments, green energy, mineral wealth, telecommunications and other sectors. This requires, however, "fast track" mentality by the authorities, in combination with a more flexible use of concession contracts, extended privatisation effort, utilisation of state-owned real estate with the use of the appropriate instrument for each case, reallocation of the funds of the Public Investment Programme (PIP) in favour of more mature projects, increase of PIP in parallel with inter-temporal reallocation of its EU co-financing, increased participation of the European Investment Bank and the Greek banks in projects in the aforementioned sectors and other similar measures. In this regard, the Greek banks should raise equity capital, following the example set recently by the National Bank of Greece, or to utilise the €10 billion Financial Stability Fund in case that the capital markets fail to respond favourably. International experience shows that in periods of crisis stronger capital adequacy of the banks is essential.

Both in the short and in the long run, investment (public and private) and exports can serve as counterweight to the reduction of private and public consumption that inevitably accompanies fiscal consolidation. However, given the difficult economic conditions and various sources of uncertainty, the materialisation of private investment requires the resolution of acute long-standing problems of land-use planning and licensing, together with continuous consultation and coordination between the government, the banks and the private sector. Solutions for these problems are available and can be summarised as follows:

1. Establishment of general spatial and environmental regulations on the terms and conditions of land use for business activities for the

whole country, consolidation of the special planning licences in a single environmental licence, and introduction of exclusive deadlines for the granting of the licences and approvals. After the expiry of the deadlines, the licences and approvals should be considered implicitly issued.

2. More flexible use of the infrastructure concession contracts (transport corridors, airports, seaports, marinas), e.g. by extending the duration of the current contracts. Another example is to give the construction companies the option to use what the state owns them as down payment for new concessions.

3. Introduction of competitive mechanisms in sectors which are yet to be liberalised by, for example, subcontracting and providing concession contracts of transport projects to private companies (in urban transport, railways, etc.). It should be noted that in the transport sector the Greek state maintains absolute dominance, discouraging investment and entry from private companies, in contrast to practices adopted in other EU countries. In relation to the optimal (long-term) market architecture, the public sector should fully withdraw from sectors and markets that function under conditions of free competition (e.g. telecommunications, banks, energy, etc.). For example, as part of the effort to reach common ground between the various approaches on adopting the EU directives in the power sector, 40% of the lignite and hydro generation capacity of the Public Power Company (PPC) could be transferred to one or more subsidiaries. Initially, these companies could have PPC as a sole shareholder, but they can be made to function independently of PPC. Gradually, private companies and individuals could become shareholders too.

Lastly, for innovation activity to strengthen we need: (a) coordination of state-owned and private enterprises with universities (graduate schools, in particular) and research centres, (b) redirection of applied research to sectors and activities that will lead the new model of development of the country (organic agriculture, agronomy, green energy technologies, mineral wealth, water resource management, sea water desalination, waste management, digital technology, telecommunications, public health, food technology, applied social and economic research, cultural heritage research), (c) proper "networking" of the academic and business communities, (d) strengthening of competition and entrepreneurship, as opposed to effort to create "national champions", (e) introduction of innovation (technological and otherwise) in every aspect of the activities of every private and state-owned company: in management, in research and development (in order to create new products and services, competitive in the

domestic and international markets), in employee training, in investment in new systems of manufacturing, distribution and operation.

C. Supplementing the Stabilisation and Structural Measures of the Agreement

In this regard, we additionally propose:

a) Abolishment of all tax exemptions and discounts to private individuals and their replacement with targeted direct expenditure.

b) Creation of an electronic system to track tax evasion, with integration of the collection mechanisms for tax and social security revenues and data crosschecking capabilities (business intelligence system).

c) Revision of all social transfers/benefits, using income and social criteria. This concerns third-party resources, particularly those of special social security funds, which were regrettably exempted by the latest social security reform (Law No. 3863/10), as well as assets that public institutions, banks and enterprises dedicate to cover the deficits in main and subsidiary social insurance funds (not to be confused with the regular employer contribution).

d) Merger of state-owned hospitals and specialisation based on their comparative advantages. Privatisation of redundant hospitals. Abolishment of regulations that prevent the establishment of private clinics and, in particular, diagnostic centres.

e) Merger and closure of military bases. Utilisation of redundant bases for repayment of military loans.

f) Merger of tertiary education institutions.

g) Design of a new reform in the social security system with reduction of contributions and uptake of the relevant expense by the state budget through reduction of expenses and/or increase of taxation. Establishment of account-based second pillar for those who would like to have additional pension and health insurance, beyond what is offered by the redistributive system. (The reduction of social security contribution improves competitiveness.)

h) Codification and simplification of the legislative and regulatory framework.

i) Establishment of quantitative targets for institutional advancement, aiming to improve the position of Greece (by x places) in the global rankings that measure its performance in terms of transparency, corruption, education, innovation, competitiveness, entrepreneurship, speed of the judiciary process, etc.

j) Connection of the policies supporting research and innovation with the energy policy targets (20-20-20), in order to boost domestic value added of the "green" technologies and improve competitiveness.

k) Utilisation of recognised managers for the implementation of the truly difficult targets set for the government.

D. Historical Precedent of the Fiscal Consolidation Effort

During the 1990s Greece achieved fiscal consolidation of similar magnitude, compared with what is required today under the Agreement, in about the same time span. The general government deficit reached 14.5% of GDP in 1993 and subsequently fell to 3.1% in 1999. During this period, the real exchange rate of the drachma appreciated (i.e. competitiveness fell) by about 15% as a result of the disinflationary foreign exchange policy. Despite this the growth of GDP gradually accelerated, mainly as a result of three factors: *first*, liberalisation of the banking sector; *second*, reduction of nominal market interest rates due to nominal conversion; *third*, co-financing of infrastructure projects by EU structural funds. It is worth mentioning that business investment by the private sector, reflecting mainly the confidence boost, was the key growth driver during this period.

Similar forces could be unearthed today too with one and only difference that the interest rate cannot follow the 1990s path. However, today we can have important competitiveness boost from the reforms under implementation in the markets for products, services and labour and from a strict incomes policy.

E. Modern vision, planning, organisation and administration

The effort undertaken to avoid debt moratorium and to take the country out of the crisis has significant chances to succeed, given (a) the "fat" that the body of the Greek economy has accumulated and the underutilised opportunities it has, (b) the experience gained in the 1990s, (c) the support of the European Union and the International Monetary Fund, together with the evident trend toward a more federal Euro area compared with today. To ensure success we need in addition:

- Formation, explanation and communication of a contemporary vision of development for the coming decade, i.e. a new model of social and economic development, freed from the vestiges of past ideological stereotypes. The convergence of the performance of the domestic institutions to that of the Euro area average ("institutional convergence") is a key ingredient of this vision.

- Strengthening of the administrative sufficiency of implementation and monitoring systems, with upgrade of public administration's effectiveness, extended use of experienced external advisors and establishment of a special Project Management Office in the Prime Minister's Office to oversee the reforms. In this regard we should investigate: first, the ability and willingness of private companies to provide paid leave of absence to experienced employees, who could provide their services to the effort of economic revival of the country; second, the possibility of engaging experienced and

recognised retired public servants in the reform of the Public Administration.

- Greatest possible mobilisation, greatest possible social and political consensus and restoration of trust.

The main conclusions from the analysis performed in the remaining of this quarterly bulletin are as follows:

The turmoil in the public finances of the developed countries restrains the recovery of the global economy

Confirming the forecasts from the beginning of the second half of 2010, the rate of recovery of the world economy slowed down during this period. The slowdown, however, was weaker than expected. The loss of growth momentum came, on the one hand, due to weakening of its main driver – high mobility in international trade flows – and, on the other, from the intense imbalances in the public finances of countries mainly in the periphery of the Euro area, accompanied with misgivings about their fiscal sustainability. The second issue returned amplified to the centre of international attention with Ireland's recourse to the EU – IMF support mechanism. The prolonged stagnation in the US economy contributed further to the weakening of world growth. The restraining influence of the above factors is expected to gradually vanish by mid 2011. Thus, the return of the world economy to the higher rates of growth recorded earlier in 2010 is expected to come after the end of the first half of 2011.

New escalation of the recession in Greece, as the fiscal consolidation effort intensifies

The recession of the Greek economy in 2010 has been deeper that initially anticipated, according to the revised data from ELSTAT. The fall in GDP reached 4.6% in the third quarter of the year and 3.8% in the first nine months of 2010, from 2.5% and 2.0% respectively in 2009. The sharp and accelerating fall in investment constituted the key cause of GDP's contraction. The fall in private and mainly in public consumption, as a result of the effort to limit the fiscal deficit within the (recently revised) target of the support agreement provided further contractionary pressures. In contrast, the external sector's performance has been constantly improving, as its deficit was reduced by almost four percentage points year-on-year to reach 8.6% of GDP, due to slump in imports.

The performance of the key sectors of the Greek economy during this period is varied. In some of them the reduction in the activity indicators accelerates (e.g. Construction, Wholesale Trade), while in others the contraction continues but at a slower rate (Industry, Retail Trade). It is likely that the recession has begun to acquire sectoral characteristics and "spikes", no longer affecting uniformly all sectors across the economy. Agriculture – Forestry – Fishing is the only sector whose product has been constantly growing, moving in the opposite direction compared with the rest. The economic climate indicator and its sectoral constituents present similar pattern of variation with the activity figures. Business sentiment in most sectors

stabilised in the period September – November, at small distance from its lowest values in history.

Satisfactory fiscal performance in 2010, which however should not lead to complacency

The recent revision by Eurostat of the data on the fiscal deficit and debt of Greece in the period from 2005 to 2009 expanded the size of the debt, leading in parallel to a revision of the 2010 target for the General Government deficit. According to the Explanatory Report of the 2011 State Budget, the deficit will be reduced by €14.3 billion in 2010, surpassing the original target indicated in the Memorandum of Economic and Financial Policies at the time of its adoption (€13.7 billion). Meanwhile, primary deficit is expected to stand at less than half of its 2009 level. The two deficits fall by six and almost five percentage points of GDP correspondingly. Independently of the impact from subsequent revisions / reclassifications of fiscal data and GDP, such a reduction, if achieved with success would constitute a decisive first step toward fiscal consolidation. About half of the distance to the final targets of primary surplus and General Government deficit below 3% of GDP would be covered within one year.

On the other hand, success should not create complacency, especially given the problems that the execution of the 2010 budget faced (following its revision with the Economic Policies Program adopted in May). Special attention should be given to the significant gap in ordinary budget revenues (before tax refunds), which are expected to increase by 5.7%, against the target of 12.7% in the initial Memorandum, despite the extended tax collection measures. The explosion of debt above 140% of GDP already from 2010 heightens the urgency of measures, such as utilisation of state-owned property and implementation of structural reforms, which will be the main catalyst of the Greek economy's recovery.

Recession is expected to continue to deepen until the end of 2010…

The fall in GDP is expected to be even more abrupt in the last quarter of 2010. The underlying causes of this development are: a) further weakening of private consumption, mainly due to increase in unemployment and cut in the largest benefit for public sector employees and pensioners (Christmas allowance); b) very cautious consumption spending by the state in order to achieve the deficit target; c) sluggish investment activity, in view of the new "landscape" that will be formed in this area following the completion of the relevant legislation initiatives by the government in early 2011. As a result, for all of 2010 GDP is expected to contract by **4.2%**.

… which implies that the pressures on the labour market will intensify

The renewed rise in unemployment in the third quarter to 12.4%, following its stabilisation around 11.8% in the first half of the year, despite history of seasonal reduction in the summer months, vividly reflects the comprehensive contraction of (tourist) demand and economic activity in

general. This explanation is confirmed by the accelerating fall in employment by 3.0%, which constituted the key cause of the rise in unemployment. As noted in the previous quarterly bulletin of IOBE, unemployment has also risen due to labour force enlargement, which however has been slowing down over time. As the recession is expected to deepen in the final quarter, the pressures on employment and unemployment are expected to intensify. As a result, unemployment is expected to stand at levels close to 13% during this quarter, reaching **12.2%** for all of 2010.

Inflation is slowing down, yet in certain markets price rigidities remain

Inflation has not accelerated since May, when the gradual rollout of the third package of tax collection measures began, but until October it had not decelerated substantially either. In September the inflation rate stood at its highest level in 13 years. In addition, the first mild weakening of the inflationary pressures that occurred in October and inflation's distinct drop in November were mainly caused by high levels of the consumer price index in the corresponding months of 2009, in relation to the preceding months of the same year. Thus, the resilience of long standing distortions in many markets has remained strong. Nevertheless, the "base effect" just described, together with the continuous fall in private and public demand, are expected to ease the inflationary pressures that will come from the increase in the low VAT categories from 5.5% to 11% and from 6.5% to 13%, starting from 1/1/2011. The recent agreement between the Ministry of Regional Development and Competitiveness and enterprises for reduction in retail prices is also expected to contribute to the containment of inflationary pressures. Until the end of 2010 the inflation rate, which stood at 4.9% in November, is expected to continue to fall. For all of 2010 it is expected to remain at the average for the first 11 months of the year (**4.7%**).

IOBE special study: Investment spatial planning in Greece

Land use planning is one of the key factors for the implementation of investment projects. It has been given little attention, compared to other factors, yet it can cause significant delays and even cancellation of investment projects. This study records the main obstacles to investment land planning in Greece and their causes, together with, usually ad-hoc, practices to overcome them (e.g. for the 2004 Olympic Games). The study describes the methods applied in other countries for addressing similar planning problems. Given international experience and domestic long-standing mismanagement, a number of solutions are proposed to overcome these problems. In the current circumstances, when the need for immediate boost of the growth process is more pressing than ever, this issue acquires special importance.

2. ECONOMIC ENVIRONMENT

2.1 Trends and Prospects of the Global Economy

The Global Economic Environment

The global economy continued its recovery in the second half of 2010, but at substantially lower rate compared with the first half. The loss of growing momentum was due, on the one hand, to milder growth of international trade, which was the key driver of recovery for the developed economies, and, on the other, to turmoil in the sovereign bond markets due to instability of public finances in certain countries of the Euro area. The long-standing uncertainty on the sustainability of public finances of states, mainly in the periphery of the Euro area, was recently invigorated with the apparent incapacity of Ireland to service its debt in 2011 through the markets, which led to activation of the EU support mechanism. The prolonged stagnation in the US economy during the midterm election period and in the aftermath of the election results restrained further the recovery of the world economy. However, these confining forces and in particular the sluggish trade flows, are expected to gradually weaken after mid 2011.

The largest economies of Asia have continued to lead the growth effort in the region and globally. Still, they have lost part of the vigour exhibited in early 2010. High rates of growth are also observed in the Latin American economies, with Brazil at the most prominent position. The economies of Africa and the Middle East, which were only mildly affected by the financial crisis and the subsequent recession, are growing at a stable rate. The international trade flows increased by 20% since mid 2009, registering the highest rate of growth in a decade, which reveals the importance of trade for the recovery of the global economy. According to IMF's forecast,[1] the volume of world trade is expected to increase by 11.4% in 2010 (in contrast to -11% in 2009).

The interplay of the above trends in the global economy led to slower growth in the second half of 2010, even though the extent of the slowdown has been milder than initially anticipated. As a result, the international organisations in their latest reports appeared slightly more optimistic on the growth rate of the global economy for all of 2010. The IMF estimate stood at 4.8% (from 4.6%), while the European Commission revised the growth forecast to 4.5% (from 4.0%).[2] However, as recovery in the first half of 2011 is expected to remain subdued, the estimates for that year's total were revised downward. IMF was expecting increase of global GDP by 4.2%, against 4.3% anticipated previously, while the EC reduced its estimate from 4.0% to 3.9%.

[1]World Economic Outlook, IMF, November 2010
[2]World Economic Outlook, IMF, November 2010 – European Economic Forecast,Autumn 2010, European Commission, November 2010

In more detail, **the fortunes of the global economy's recovery are now tightly connected with the course of financial consolidation that many developed economies follow** (mainly in the EU) in order to neutralise the fiscal imbalances caused by the programmes aimed at tackling the global financial crisis. According to IMF, the fiscal deficit in the developed economies was higher by 5% of GDP on average in 2009, compared to 2008. The course of the economies of the Euro area and the instability in the markets for sovereign bonds – which is spreading over to the interbank market and the stock exchanges – continue to constitute factors of uncertainty and concern. Meanwhile, the banks try emphatically to restore liquidity without state intervention. Additional concerns over the financial stability come from the need to refinance large section of the debt of both states and banks.

The volatility of the financial markets has affected the provision of credit by the banks and as a consequence it has restrained investment. On the other hand, the buoyant demand in the developing countries for certain categories of tradable goods and services has limited the difficulties of drawing funds that businesses encounter, benefiting the national economies of the countries which produce these goods and services. Germany and USA are the main countries in the developed world that have benefitted from this development, yet the positive impact on their labour markets is yet to be felt. In addition, property demand in the developed countries has remained sluggish. As a result, **the likelihood that the real estate market, mainly in the US, but also in the UK, will relapse into a new crisis can no longer be dismissed**.

Given the uncertain conditions that continue to prevail, the central banks, in an attempt to strengthen recovery, have postponed the withdrawal of the extraordinary measures of monetary "easing". Despite this, credit expansion has remainedsluggish with some improvement observed in USA and Japan. Despite the efforts of many banks to streamline their balance sheets, **frequent execution of strict stress tests, tightening of the regulatory framework, financing problems and the implementation of the Basil III rules are likely to dampen the growth of loans in the near future**.

Additional source of uncertainty resides in the debt crisis in the Euro area and the debate on the European Stability Mechanism, aimed at establishing a framework for the management of future fiscal crises in the European economic area. The debate on issues, such as the likelihood of orderly default of fiscally weak countries, the private sector participation in the cost of restructuring, the introduction of Collective Action Clauses (CACs) in the terms and conditions of the sovereign euro bonds, the issuance of common European bonds, the establishment of a European Monetary Fund, in parallel with a European Public Debt Management Agency, and the initiatives for broader coordination of fiscal policy, causes uncertainty and turmoil in the bond markets and the stock exchanges,

aggravating the cost of borrowing for a number of countries.

Consumption growth is expected to decelerate due to slow rate of unemployment reduction, sluggish wage growth and termination of various tax incentive programmes. In addition, inventory accumulation, which contributed decisively to the higher growth rates of the developed economies earlier this year, appears to have lost its vigour, as the growth of industrial production and manufacturing has weakened.

Specifically in relation to the major world economies, **the US economy continued its recovery**, reducing the likelihood of a double dip recession. The growth rate in the third quarter was revised upward to 2.5% (from the initially estimated 2%). The decisive factor behind this upgrade was acceleration of private consumption (by 2.8%). The replenishment of business inventories continued to contribute to growth, even though the inventory accumulation seems to be slowing down toward the end of the year. The loose fiscal and monetary policy continues to boost the US and the global economy, but it is leading to further increase in the US deficits, aggravating the global macroeconomic imbalances.[3]

Then again, the external sector continued to impede growth, as imports grew at a higher rate (17%) than exports (6%). As a result, the Fed resorted to new quantitative easing measures, aiming at both preservation of the long-term interest rates at low levels and export-boosting dollar depreciation. The upcoming dollar depreciation and the increase in imported inflation have suppressed the concern about the likelihood of deflation, yet inflation has continued to be low at levels slightly above 1%. Meanwhile, business investment increased at a decelerating rate by 10%, while investment in dwellings contracted as the government support measures in this market expired. On the unemployment front, the labour market is expected to commence its gradual recovery, despite the fact that the unemployment rate remained constant at 9.6% in October.

For all of 2010, the European Commission slightly downgraded the growth rate of the US economy to 2.7% (from previous growth forecast of 2.8%). Meanwhile, the US government is taking important initiatives to steer debt on a sustainability path in the next few years (anticipated to reach 110% of GDP until 2015)[4] and to reduce the deficit of general government (anticipated to stand at 10% of GDP in 2010 and 2011), attempting in the meantime to limit the negative impact on domestic demand.

In **Japan** the growth rate in the third quarter increased to 4.5% in annual terms, mainly due to positive contribution from private consumption (due to fiscal stimulus),[5] increase of inventory formation and growth of capital expenditure. Output

[3] The increase in government debt and deficits, as a result of expansionary fiscal policy, has increased the volatility in the capital markets, despite the fact that the discount rates of government bonds have decreased significantly.

[4] IMF – World Economic Outlook – October 2010

[5] The main measure of fiscal support was tax discount for the purchase of environmentally friendly cars. Other measures included increase of public expenditure on public works, subsidies of "green" investment and increase of unemployment benefits.

growth is expected to slow down in the last quarter of 2010, due to expiry of fiscal stimulus measures and subsequent negative impact on consumption, appreciation of the yen and weakening of global demand. More specifically, the latest data indicate contraction of manufacturing and decrease of new orders from abroad to their lowest level in 19 months. The appreciation of the yen led to reduction of the trade surplus in October (by 5.5%), as the vigour of net exports weakened.[6] In addition, unemployment has been steadily above 5%. The economy is still operating in a deflationary environment,[7] while research indicates that the business climate has been worsening. Capital expenditure for all of 2010 is expected to increase at a lower rate, compared with 2009, as production capacity has been falling, while the enterprises are expected to postpone capital investment for mid 2011, when exports are anticipated to recover. Regarding monetary policy, Japan's central bank is also implementing monetary easing measures by setting the base interest rate to zero, which is expected to remain unchanged until early 2012. Output is expected to grow at 3.5% for all of 2010, while in 2011 it is expected to slow down to 1.3%, due to developments in the emerging markets and in China. Uncertainty is expected to increase due to measures to limit budget deficit (from 7.7% in 2010 to 7.5% in 2011)[8] and developments in the foreign exchange markets.

For **China** OECD revised the 2010 GDP growth forecast to 10.5% (from the previous estimate of 11.1%), anticipating growth to slowdown to 9.7% in 2011. Growth will depend mainly on domestic consumption and to a lesser extent on exports.[9]Inflation is expected to stand at 3.3% in 2010 and 2011, while heightened inflationary pressures (4.4% in October) compelled the central bank to raise again the reserve requirements in an attempt to withdraw liquidity from the economy. Meanwhile, the declared intent of the monetary authorities to appreciate the yuan does not seem to be accompanied with measures to that effect, as its real exchange rate has fallen against the dollar. It is worth mentioning that foreign direct investment in the first 10 months of the year registered its highest increase on record by 15.7%, which has revealed the confidence of the foreign investors in the prospects of the country's economy.

In **India** the annual growth rate of economic activity in the third quarter remained high (8.9%), but the vigour of the economy seems to have weakened here too. The European Commission predicted that the growth rate would stand at 8.5% for all of 2010. The growth rate of investment fell to 1.1% in the third quarter (from 19% in the previous quarter), while private consumption accelerated to 9.3% growth rate. The fiscal stimulus is gradually being withdrawn, but consumption expenditure, agriculture wages, domestic demand and business investment are ex-

[6]Net exports had contributed positively to the economy's growth for 5 consecutive quarters.
[7]The inflation rate stood at -0.6% in September.
[8]OECD Economic Outlook – Volume 2010/2 – 2010

[9]The rate of growth of exports fell to 18% in the third quarter of 2010, while in 2011 it is expected to slow down to 13.2% (from 30.2% initially anticipatedfor 2010) according to OECD estimates. OECD Economic Outlook – Volume 2010/2 – 2010

pected to have positive impact on production in the upcoming period. Acceleration of inflation, expected to reach 9.1% for all of 2010, causes concern.[10]In addition, the slowdown of industrial production (to 4.4% in September) raises concern about the pace of economic growth, postponing the increase of interest rates in the upcoming period. On the fiscal consolidation front, the target to reduce central government deficit to 5.5% of GDP in 2010 seems within reach.[11]

Output in the region of the Commonwealth of Independent States (which represents **ex USSR states**) is expected to grow at lower rates in comparison with other developing economies. GDP is expected to increase by 3.7% in 2010 and 4.1% in 2011, according to EC forecasts, due to increase in commodity prices, capital inflow and recovery of the Russian economy. It should be noted that most countries are net exporters of energy goods. As such, they are expected to benefit from both the increase of commodity prices and the rise in the volume of natural gas exports. In addition, the establishment of customs union between some of the countries in the region will boost trade and capital flows. Despite this, the fact that most countries in the region are vulnerable to possible adverse developments in the external environment (and mainly in Russia) causes concern. The pace of inflation has been alarming too, standing at about 7.5%. The restructuring and fortification of the banking sector (mainly in Kazakhstan) is considered critical for restoring the robustness of the financial system and to improve the investment climate.

The economic recovery in **Russia** has been solid, but not spectacular. In the third quarter output decelerated to 2.7% in annual terms, mainly due to the summer drought and fires, together with rising cost of capital and investment freeze. For all of 2010, output is expected to grow at 3.5%, accelerating slightly to 3.8% in 2011, according to EC forecasts. Inflation was boosted by the growth in food prices and is expected to reach 6.8% in 2010 and 7.7% in 2011. The business confidence indicators have continued to improve, while credit expansion has increased significantly due to the significant fall of the interest rates. Unemployment has declined, while the process of accession to WTO is expected to bring long-term benefits. The reduction in public expenditure is expected to lead to eradication of budget deficit by 2012.[12]

In the region of SE Europe particularly interesting is the momentum of the **Turkish** economy, which is quickly recovering from the 2009 contraction (-4.7%). Increase in domestic demand and investment have constituted the main drivers of growth in 2010, while loose monetary policy,[13] fiscal expansion[14] and vigorous

[10]OECD Economic Outlook – Volume 2010/2 – 2010

[11]According to OECD forecasts, the deficit of general government is expected to fall to 8.3% of GDP in 2010 (from 10.2% in 2009) and to 7.6% of GDP in 2011. OECD Economic Outlook – Volume 2010/2 – 2010

[12]According to OECD forecasts, the deficit of general government is expected to stand at 2.7% of GDP in 2010 and to fall to 2% of GDP in 2011 and 0.9% in 2012. OECD Economic Outlook – Volume 2010/2 – 2010

[13]The central bank has reduced significantly the base interest rate in the last two years (7% in November 2010). Interest rates are not expected to increase before the last quarter of 2011.

[14] In 2009 the government resorted to fiscal stimulus measures, limiting significantly the impact of the

banking sector[15]have contributed to the moderation of the impact from the financial crisis. After the sizeable drop in GDP by 14.5% in the first quarter of 2009, its growth rate is accelerating continuously. In the first half of 2010 output grew by 11%, while according to EC forecasts the Turkish economy will expand by 7.5% in 2010 and by about 5% in the following years. It should be noted that the business cycle in Turkey is very sensitive to variations in the external environment and the course of exports. Meanwhile, the uncertainty regarding the recovery of the EU economy and the 2011 parliamentary elections are expected to affect significantly the performance of the domestic economy and the extent of economic growth.[16] Despite the fact that exports recovered in the first half of 2010, continued appreciation of the domestic currency and high inflation (9% in October, 6.5% expected for all of 2010) are undermining the contribution of the external sector. As a result, the current account deficit is expected to record increase for all of 2010.

In an attempt to contain inflation, in November the central bank decided to limit money supply by raising the obligatory reserve requirements in domestic currency by 50 base points to 6%. Unemployment seems to be falling to 12.2% for all of 2010, remaining however at high levels.

It is worth mentioning that Turkey is implementing a programme of reforms as part of the EU pre-accession process.[17] The overall impact of the envisaged reforms is expected to reach 1.2% of GDP (in total for the three-year period 2010-2012).[18] In any case, the Turkish economy seems to be recovering quicker in comparison with the remaining European economies. The positive prospects of the Turkish economy are reflected in the upgrade of its score by the global credit rating agencies.

crisis, but aggravating budget deficit (6.7% of GDP in 2009 from 2.2% of GDP in 2008) and public debt (45.4% of GDP in 2009 from 39.5% of GDP in 2008).

[15]In contrast to other countries in the region, the banking sector in Turkey proved to be particularly resilient to the financial crisis due to improvement in the regulatory framework that were instituted in the aftermath of the banking crisis in 2001. In addition, the increase in non-performing loans was limited, while credit expansion reached double digits in the previous year.

[16]Elections for the national assembly are scheduled for July 2011.

[17]According to EC evaluation, the reforms contained in the programme aim at competitiveness boost, strengthening of the regulatory framework and correction of imbalances in the labour market. 2010 Pre-accession Economic Programmes of candidate countries: EU Commission Assessments – Directorate-General for Economic and Financial Affairs – Occasional Papers 69 – September 2010.

[18] 2010 Pre-accession Economic Programmes of candidate countries: EU Commission Assessments – Directorate-General for Economic and Financial Affairs – Occasional Papers 69 – September 2010

Table 2.1

International Environment – European Commission (real annual % change)

	2009	2010	2011
GDP			
USA	-2,7	2,7	2,1
Japan	-5,2	3,5	1,3
Developing Asia	5,8	8,5	7,6
China	8,7	10,5	9,2
India	7,4	8,5	8,3
Euro area	-4,1	1,7	1,5
EE-27	-4,2	1,8	1,7
EU Ascension Countries	-4,8	6,3	5,1
Commonwealth of Independent States (CIS)	-7,0	3,7	4,1
Russia	-7,9	3,5	3,8
Middle East and North Africa (MENA)	2,1	3,8	4,0
Latin America	-1,9	5,6	4,0
Brazil	-0,2	7,4	4,8
Sub-Saharan Africa	2,1	5,0	5,5
Global Economy	-0,7	4,5	3,9
World Trade			
International imports	-13,8	13,8	7,4
Export market (non EU-27)	-11,0	13,7	7,9

Middle East & North Africa: Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Syria, Sudan, Yemen, Tunisia, United Arab Emirates.
Subsaharian Africa: All African countries, excluding MENA.
Source: European Economic Forecast, Autumn 2010, European Commission, November 2010

Table 2.2

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

Quarter /Year	IV/08	I/09	II/09	III/09	IV/09	I/10	II/10	III/10	IV/10
Economic Climate	60,6	50,7	65,2	79,6	91,4	99,5	104,1	103,2	98,6
Current Situation	69,2	46,7	39,3	43,0	54,2	67,3	80,4	93,5	95,3
Expectations	52,6	54,4	89,5	114,0	126,3	129,8	126,3	112,3	101,8

Source: IFO, World Economic Survey, WES 04/2010

Table 2.3

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

Quarter/Year	IV/08	I/09	II/09	III/09	IV/09	I/10	II/10	III/10	IV/10
North America	51,0	46,0	66,9	78,7	85,4	90,4	95,4	88,7	82,8
Western Europe	59,6	52,6	64,5	76,4	89,3	98,3	99,3	102,2	105,2
Asia	57,9	47,4	69,3	89,5	101,8	108,8	113,2	107,9	95,6

Source: IFO, World Economic Survey, WES 04/2010

Further weakening of the economic climate, in correspondence with the indications for slowdown of the global economy's recovery, is revealed by the analysis of the business confidence indicators. The indicators contained in the "World Economic Survey", conducted by the German institute IFO, deteriorated for a second consecutive quarter.

More specifically, the world economic climate indicator experienced a further quarter-on-quarter drop in the fourth quarter of 2010 (Table 2.2). Despite the fact that

it remained above its long-run average (96.9), its slight retreat has signified weakening of the expectations about the state of the economy in the next six months, which implies that the recovery of the world economy should be expected to be more modest than previously anticipated. Taking into account the continuous and intense improvement of expectations until the first quarter of 2010, the weakening that they experienced could be considered as correction of excessive optimism. Continuing the trend observed in the previous quarters, the evaluation on the current state of the economy marginally improved, yet the growth rate of this indicator was significantly lower in comparison with the preceding periods.

Regarding the economic regions (Table 2.3), the economic climate deteriorated for a second consecutive quarter in **North America** and **Asia**. In these regions, the evaluation of the current situation worsened, while the expectations for the next six months remained stable in North America, but deteriorated in Asia. In contrast with these two areas, the economic climate indicator in Western Europe marginally increased in the final quarter of the year. In this region, the evaluation of the current situation improved, while the expectations for the upcoming six months slightly weakened.

The Economies of the EU and the Euro area

The growth rates in EU-27 and the Euro area in the third quarter of 2010 remained at about the same levels with the preceding quarter. More specifically, **GDP in EU-27 increased by 2.2% in the third quarter (in annual terms), while in the Euro area the growth rate of output fell slightly to 1.9%**.[19] Despite heightened uncertainty regarding the sustainability of the public finances of the Euro area countries and renewed outbreak of the debt crisis in the peripheral countries, with Ireland joining the support mechanism and the remaining countries adopting contractionary fiscal measures, the European Commission significantly upped the 2010 GDP growth forecast in the autumn (compared to the spring edition of its forecasts). In such a way, the European economy seems to have grown quite satisfactorily in the first half of the year (1.4% in EU-27 and Euro area) due to the recovery of global GDP and global trade, but also due to normalisation of the financial system. As a result, **the increase of GDP for 2010 in EU-27 is expected to stand at 1.8%** (against the previous forecast for 1% growth), **while in the Euro area the rate of growth has been revised to 1.7%** (from 0.9% anticipated previously).

It should be noted, however, that the economic recovery in Europe has remained weaker compared to other developed economies, which signifies that the exit of the European economy from the crisis will be relatively belated. Meanwhile, there has been a significant deviation among the economies of the Euro area in 2010, with Germany recording 3.7% growth, while the domestic product of Ireland (-0.2%), Spain (-0.2%) and Greece (-4.2%) contracted. **EC is expecting**

[19]News Release Euro Indicators, EUROSTAT, 182/2010, 02/12/10, as for all the remaining national accounts figures that follow.

slowdown of the recovery in 2011, as weak labour market (double-digit unemployment rate in the Euro area) and limited capacity for credit expansion, as a result of the financial crisis and the pervasive uncertainty, will not allow demand to rejuvenate significantly. Spain and UK are worth mentioning, as they are expected to register positive growth rates in 2011 (0.7% and 2.2% correspondingly), despite the implementation of strict austerity programmes. In contrast, the recession is expected to continue in Greece (-3%) and Portugal (-1%). **The significant growth rate differentiation among the Euro area countries is due to structural weaknesses**, such as sluggish domestic demand (in the surplus countries) and low competitiveness, in combination with high levels of public debt (in the deficit countries).

The contractionary fiscal policies, adopted by many Euro area countries, are expected to lead to a **reduction of the fiscal deficit in the Euro area, which is anticipated to reach 4.6% of GDP in 2011 (from 6.3% of GDP in 2010).** Meanwhile, public debt is expected to reach 86.5% of GDP (from 84.1% of GDP in 2010).

Net exports once more have emerged as key driver of growth, especially in the case of Germany. In the third quarter of 2010 the **exports** in both EU-27 and the Euro area registered double-digit growth rates for a second consecutive quarter (10.7% for EU-27, 11.3% for the Euro area).[20] As a consequence, the forecast for 2010 was revised upward significantly to 10.7% for EU-27 and 10.2% for the Euro area. The export boost was caused mainly by rise in demand from Asian countries, which traditionally have constituted a strong export destination, particularly for Germany. In 2011, the export sector will continue to support growth, albeit to a smaller extent compared with 2010, due to more modest rates of growth in USA and Asia. With the growth rate of **imports** falling due to sluggish consumption, net exports are expected to continue their positive contribution to the growth of the European economy, but to a smaller extent compared with 2010.

The exports in the Euro area are being stimulated by the slide of the **euro** against the dollar. The depreciation of the euro has strengthened substantially the development of surplus countries (e.g. Germany, Netherlands). Net exports and investment, rather than consumption, drove the growth of Germany to 3.9% in the third quarter of 2010. Nevertheless, the concern over likely appreciation of the common currency has persisted, which together with the adopted fiscal policy, may suppress the momentum of the European economy.

Private consumption increased, on an annual basis, by 1.3% in EU-27 and by 1% in the Euro area in the third quarter of 2010.[21] Meanwhile, the Commission revised upward its forecast for the year total to 0.7% for the EU-27 and 0.6% for the Euro area. Despite the positive revision of

[20] News Release Euro Indicators, EUROSTAT, 182/2010, 02/12/10.

[21] News Release Euro Indicators, EUROSTAT, 182/2010, 02/12/10.

the estimates, **demand has continued to be sluggish in the last quarter of the year**. This development was to be expected, given the contractionary measures adopted in many countries and the fact that the unemployment rate has persistently stood at double-digit levels. In addition, due to the adopted fiscal policy, **public consumption** remained stagnant (+1 in EU-27) or decelerated (+0.5% in the Euro area). Despite this, EC estimates that it will reach 1.2% in EU-27 and 1% in the Euro area for the year's total. The consumption trends are confirmed by the significant improvement in the November consumer confidence indicators, which reflected relative optimism on the part of consumers, despite the fact that unemployment has remained high, while the problems from the debt crisis in the Euro area have intensified. For 2011 consumption expenditure is not expected to receive strong boost, as the prospect of euro devaluation and the austerity measures adopted in quite a few countries are likely to have negative impact on demand. In addition, low rates of credit expansion (+1.4% in October) inhibit a stronger boost to consumption expenditure, as the banks remain cautious despite their adequate profitability.[22]

Fixed capital formation increased in the third quarter, for the first time in at least 3 quarters. In EU-27 investment increased by 0.6%, while in the Euro area it was up by 0.3%. According to EC's autumn forecast, the fall in fixed capital formation for all of 2010 would be much less pronounced than initially anticipated (-0.6% in EU-27). Overall, the 2010 reduction has been caused by large drop in investment in Construction by 3.6%, mainly in Spain, Ireland and Greece.[23] In 2011 investment is expected to increase (+2.2% in the Euro area, +2.8% in EU-27), due mainly to investment in equipment as a result of adequate profitability and recovery in the exporting industries. On the other hand, the reduction in public investment, caused by the measures of fiscal consolidation in the Euro area, is expected to act as a significant restraining factor.

Unemployment has remained one of the most significant problems for the European economy. For all of 2010 the unemployment rate in the Euro area is expected to reach 10.1% and to remain at about the same level in 2011. Still, the conditions in the labour markets in Germany and Netherlands have gradually improved lately, while in contrast unemployment is getting worse in Spain, Ireland and Italy.[24] The weak prospects in the labour market have appeared for the following reasons: 1) usually a time lag of 2-3 quarters is observed between the economic activity and the labour market cycles; 2) the measures to tackle the crisis have not yet had the expected impact to the full extent; 3) struc-

[22] Let's not forget that most European banks passed the July 2010 stress tests with success, proving that they have sufficient capital adequacy. Moreover, in the third quarter of the year the rise in the banks' financing cost and the difficult access to the capital markets were weaker factors in comparison to the second quarter.

[23] Economic Developments, Weekly Bulletin – Economic Studies Division – Alpha Bank – 02/12/2010

[24] The differentiation in the course of unemployment among the European countries is due to differences in the production structure of their economies, the utilisation rate of their production capacity, the profitability of their enterprises, the structural characteristics of their labour market and relevant policy measures.

tural reforms are taking place, while the fiscal consolidation measures in various member-countries are expected to lead to redundancies in the public sector in the upcoming period. Despite the fact that economic recovery without significant increase in employment is possible, the structural measures for more flexibility in the labour markets, adopted in the EU in the previous decade, create optimism that the high rates of unemployment will not be as persistent as observed in the past.

Regarding **inflation**, the EC forecasts indicate that the likelihood of **strong inflationary pressures is limited**,[25] as the annual rate of change of CPI in the Euro area is expected to stand at 1.5% in 2010 and 1.8% in 2011, allowing ECB to keep interest rates low at 1%. The sluggish rise in wages and unit labour cost will contribute to the containment of inflation to low rates, despite the increase of indirect taxation in quite a few countries. In general terms, the increase of inflation in 2010 has been caused by increase in prices of food, energy and commodities.

[25] On the other hand, faster than anticipated growth rate acceleration in the developing countries is likely to lead to higher commodity prices, which together with further monetary expansion in the US economy is likely to create concern over inflationary pressures.

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	0,7	1,2	-1,1	0,6	0,9
Public Consumption	2,0	1,2	-0,2	2,4	1,0	-0,1
Investment	-12,1	-0,6	2,8	-11,4	-0,8	2,2
Employment	-1,9	-0,6	0,4	-2,0	-0,7	0,3
Unemployment	8,9	9,6	9,5	9,5	10,1	10,0
Inflation	1,0	2,0	2,1	0,3	1,5	1,8
Goods and Services Exports	-13,2	10,7	6,1	-12,5	10,2	6,4
Goods and Services Imports	-12,0	8,7	5,1	-12,4	8,9	5,4
General Govern. Balance (% of GDP)	-6,8	-6,8	-5,1	-6,3	-6,3	-4,6
General Govern. Dept (% of GDP)	74,0	79,1	81,8	79,1	84,1	86,5
Current account balance (% of GDP)	-1,0	-0,9	-0,5	:	:	:

Source: European Economic Forecast, Autumn 2010, European Commission, November 2010

Without a doubt, the event that marked the latest development in the Euro area economy was the induction of Ireland to the European support mechanism. The size of the loan that was agreed between the EU-27 authorities, IMF and the Irish government amounted to €85 billion, with an annual interest rate of 5.8% and repayment duration 7.5 years.[26] Amid political and social unrest, the Irish state is preparing to rescue the last non-state-owned bank (Bank of Ireland), while the credit rating agencies (Fitch, Standard & Poor's) have reduced the credit worthiness score of the country, with negative outlook. Meanwhile, Ireland has committed to fiscal consolidation of the order of €15.8 billion (or about 9% of GDP) until 2015, out of which €5.3 billion should be saved in 2011. Under the planned fiscal consolidation, the deficit is expected to stand at 10.3% of GDP in 2011 (from 32.3% of GDP in 2010) and below 3% of GDP by 2015. Public debt is expected to rise to 107% of GDP in 2011 (from 97.4% of GDP in 2010). Nevertheless, it should be noted that EC anticipated the drop of GDP to reach only 0.2% in 2010, while output is expected to grow by 0.9% and 1.9% in 2011 and 2012 respectively. Thus, **the aforementioned fiscal consolidation will have limited impact on private consumption**, which is expected to fall by 1.8%, while equipment investment is expected to drop by only 3.2% in 2011. Likewise, unemployment is expected to fall in 2011 (the year with the most intense fiscal adjustment) to 13.5% from 13.7% in 2010.

The gradual recovery of production and the small improvement of the forecast on the course of the European economy are

[26] Out of the total loan amount, €35 billion will be allocated for covering the need to finance the banking sector, while the remaining €50 billion are earmarked for meeting the needs to finance fiscal deficits and for refinancing public debt, as the borrowing costs have soared to prohibitive levels.

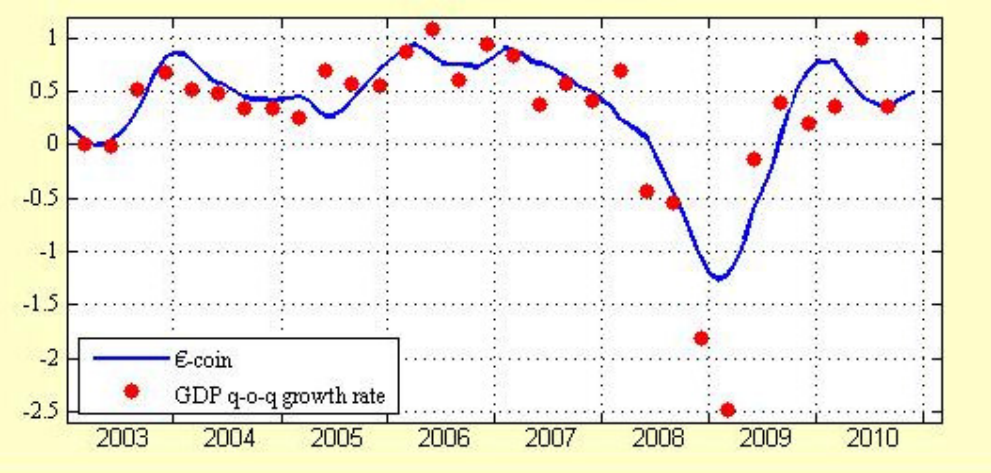
reflected in weakening of pessimism in the EU business and consumer expectations. **The leading indicators, such as the indicator of economic activity calculated by CEPR[27] and the economic sentiment indicators of the European Commission (DG ECFIN) improved, according to the latest estimates.** More specifically, the economic activity indicator for the Euro area returned on a growing path in October and November, following a continuous fall that lasted for 6 months. The increase in this index was mainly due to improvement of business and consumer confidence. The fact that the indicator has taken positive values signifies that GDP in the euro area is expected to increase in the final quarter of 2010 (quarter-on-quarter).

Improvement in the **economic climate** in Europe can also be seen in the European Commission's economic sentiment indicators for the Euro area and EU-27, which in Greece are compiled by IOBE. The indicators improved in November, compared to October, signifying a recovery of the economic sentiment, mainly due to significant improvement in the economic environment in Germany. As for the individual sectors, the largest improvement was recorded in Services. Business expectations marginally improved in Industry, while in Retail Trade this index increased in EU-27, but marginally fell in the Euro area. In contrast, in Construction the sentiment deteriorated, which contributed to the large fall of the index in Spain. The improvement in business expectations essentially signifies that the concern over the likelihood of slowdown of the recovery of the global economy and revaluation of the Euro has subsided since the beginning of November. The subsequent depreciation of the Euro and the weakening of the negative indications on economic growth in 2011 seem to have restored business optimism. **Consumer confidence** also improved slightly, month-on-month, in November in EU-27 and the Euro area, mainly due to positive expectations about the economic situation at country level and marginal fall in the negative expectations about the financial situation in the upcoming 12 months at household level.

[27] 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	Jan-10	Feb-10	Mar-10	Apr-10	May-10*	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10
EU-27	97,2	97,6	99,8	101,9	100,2	100,3	102,1	103,2	103,6	103,9	105,2
Euro-Area	96,0	95,9	97,9	100,6	98,5	99,0	101,1	102,3	103,3	103,8	105,3

* 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), November 2010

2.2 The Economic Environment in Greece

A) 2010 Fiscal Developments & 2011 Budget

A1. General government deficit and debt

According to the data indicated in the 2011 State Budget, the deficit of General Government decreased by 6% of GDP in 2010 year-on-year (from 15.4% to 9.4% of GDP), while in 2011 it is anticipated to decrease by further 2% to reach 7.4% (see Table 2.6).

Following the latest revision by Eurostat, in 2010 the deficit is expected to fall by €14,250 million,[28] reaching €21,900 million. The shortfall from the Economic Policy Programme (EPP) is expected to reach €3.2 billion, which comes from a shortfall in the State Budget by €2.6 billion and €2.6 billion in other entities, partly compensated by additional reduction of €2.9 billion from national accounting differences. In 2011 the deficit is expected to fall by €5,067 million, totalling €16,833 million, slightly lower than the amount anticipated in the initial EPP (€17 billion or 7.6% of GDP). In 2010 the deficit reduction came by ¾ from the state budget, while in 2011 the contribution of the state budget falls to less than ½ (Figure 2.2).

[28] The initial economic policy programme anticipated a reduction by € 13.7 billion.

Table 2.6

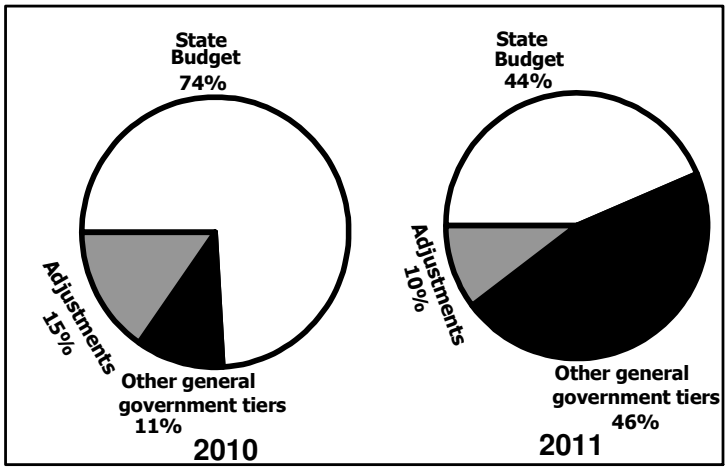
General Government Deficit

mil. €	2009	2010 E.P.P.	2010	2011
1. Central Administration	**-35.858**	**-17.822**	**-24.320**	**-20.327**
State Budget	-33.629	-20.491	-23.067	-20.857
Legal Entities	125		102	230
Hospitals	-611		-815	
Public Utilities	-1.743	2.669	-540	300
2. RAO	**-65**		**20**	**500**
3. SSF	**-71**		**382**	**461**
4. NATIONAL ACCOUNTS ADJUSTMENTS	**-156**	**-900**	**2.018**	**2.533**
5. GENERAL GOVERNMENT (=1+2+3+4)	**-36.150**	**-18.722**	**-21.900**	**-16.833**
(% of GDP)	*-15,4%*	*-8,1%*	*-9,4%*	*-7,4%*

Source: 2011 Budget

Figure 2.2

Sources of the General Government Deficit Reduce



Source: 2011 Budget

Table 2.7

General Government Debt

mil. €	2008	2009	2010	2011
General Government (=1+2-3)	**261.396**	**298.032**	**330.400**	**348.500**
(% of GDP)	*110,3%*	*126,8%*	*142,5%*	*152,6%*
1. Central Administration	287.374	326.289	361.336	379.611
2. SSF & RAO	1.795	2.010	2.050	1.866
3. Intra-Government debt	27.773	30.267	32.986	32.977
General Government (EPP)	**237.250**	**273.410**	**307.460**	**324.830**
(% of GDP)	*98,8%*	*115,0%*	*133,2%*	*145,2%*

Source: 2011 Budget

Table 2.8

State Budget Main Figures

mil. €	2009	2010 EPP	2010	2011	*2010EPP*	*2010/09*	*2011/10*
1. REVENUES (=1.1+1.2)	**50.585**	**58.434**	**54.326**	**59.482**	***15,5%***	***7,4%***	***9,5%***
1.1 O.B. Revenues (=a+b+c+d-e)	53.498	60.276	56.534	59.360	*12,7%*	*5,7%*	*5,0%*
a. Ordinary Revenues	52.308	58.744	54.853	57.520	*12,3%*	*4,9%*	*4,9%*
b. Revenues form the abolishment of special accounts	1.088	1.200	1.150	1.157	*10,3%*	*5,7%*	*0,6%*
c. Revenues from the bank support scheme	47	280	485	643	*495,7%*	*931,9%*	*32,6%*
d. Revenues from NATO	55	52	46	40	*-5,5%*	*-16,4%*	*-13,0%*
e. Tax Returns	4.952	5.100	5.100	3.800	*3,0%*	*3,0%*	*-25,5%*
1.2 P.I.P.	2.040	3.258	2.892	3.922	*59,7%*	*41,8%*	*35,6%*
2. EXPENDITURES (=2.1+2.2+2.3+2.4)	**89.165**	**84.025**	**82.493**	**84.139**	***-5,8%***	***-7,5%***	***2,0%***
2.1 O.B. Primary Expenditures	57.992	54.611	52.798	52.053	*-5,8%*	*-9,0%*	*-1,4%*
2.2 Other Expenditures	9.260	7.197	7.935	7.666	*-22,3%*	*-14,3%*	*-3,4%*
a. Subsidies to hospitals for the repayment of old debts	1.498	245	345	450	*-83,6%*	*-77,0%*	*30,4%*
b. Expenditures for NATO	51	52	46	40	*2,0%*	*-9,8%*	*-13,0%*
c. Military Expenditures	2.175	1.800	1.500	1.600	*-17,2%*	*-31,0%*	*6,7%*
d. Guarantees called	584		944	1.196	*-100,0%*	*61,6%*	*26,7%*
e. Inventories				580			
2.3 P.I.P. Expenditure	9.588	9.200	8.500	8.500	*-4,0%*	*-11,3%*	*0,0%*
2.4 Interest Payments	12.325	13.017	13.260	15.920	*5,6%*	*7,6%*	*20,1%*
3. NET RESULT (=1-2)	**-33.629**	**-20.491**	**-23.067**	**-20.857**	***-39,1%***	***-31,4%***	***-9,6%***
(% of GDP)	*-14,3%*	*-8,9%*	*-9,9%*	*-9,1%*	*-38,0%*	*-30,5%*	*-8,2%*
4. PRIMARY RESULT (=3+2.4)	**-21.304**	**-7.474**	**-9.807**	**-4.937**	***-64,9%***	***-54,0%***	***-49,7%***
(% of GDP)	*-9,1%*	*-3,2%*	*-4,2%*	*-2,2%*	*-64,3%*	*-53,3%*	*-48,9%*

Source: 2011 Budget

In 2010 public debt increased by €32.4 billion, out of which €15.8 billion corresponds to the integration of the debt of loss-making state-owned enterprises. Debt amounted to 142.5% of GDP, against 133.2% anticipated in EPP (Table 2.7). In 2011, the debt is expected to increase by €18.1 billion, approaching 153% against the initial target of 145.2%.

A2. State Budget

The net deficit of the State Budget fell by €13.1 billion in 2010, from 14.3% to 9.9% of GDP (Table 2.8). The shortfall from EPP reached €2.6 billion or 1% of GDP (taking into account the difference in GDP estimates). The corresponding reduction in the primary deficit amounted to €13.8 billion or 4.9% of GDP, with a shortfall of € 2.3 billion from EPP.

The shortfall in the net deficit in 2010 is due mainly to deviation of €3.7 billion in Ordinary Budget's total revenue (€3.9 billion shortfall of ordinary revenue), which increased by 5.7% year-on-year, against 12.7% target. In addition, Public Investment Budget's revenue had a shortfall of €366 million. On the other hand, Ordinary Budget's primary expenditure fell by 9% (€5.2 billion), 5.8% more than the target, saving €1.8 billion. Remaining expenditure, despite its fall by €1.3 billion, ex-

ceeded the target by €738 million, mainly due to activation of guarantees that absorbed the €300 million reduction in military expenditure. In an attempt to compensate for the shortfall in revenue, PIB's expenditure was lower by about €1 billion year-on-year, by €700 million lower than the EPP target. Lastly, interest payments were higher by €935 million year-on-year, exceeding EPP's estimate by €243 million.

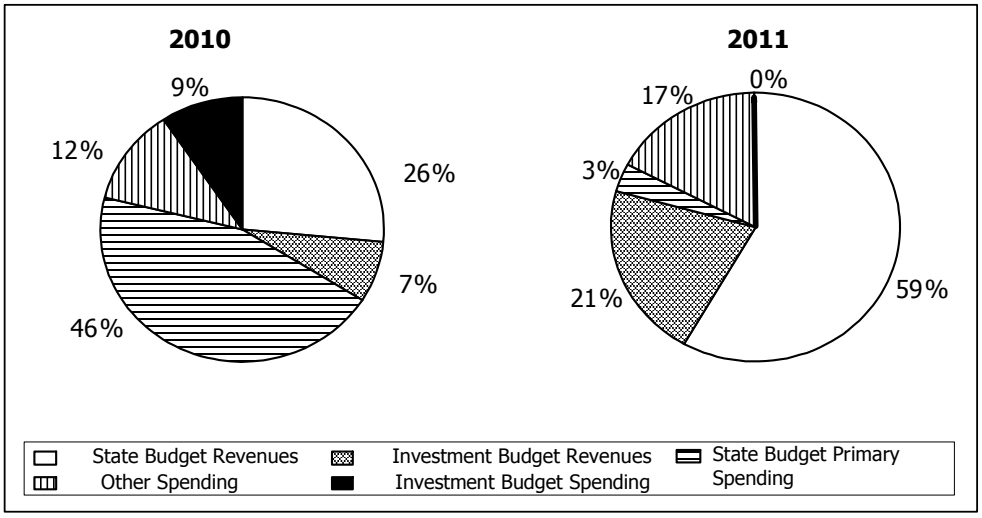
For 2011 the Budget anticipates that the net deficit will amount to 9.1% of GDP, slightly reduced by 0.8%. Given that interest payments are expected to increase by 20.1% (or €2.2 billion) there is significant pressure to reduce the primary deficit, which is anticipated to decline by 2% of GDP, reaching 2.2%. This reduction is significantly smaller, compared to 2010, which would have a corresponding impact on public debt's momentum.

The reduction in primary deficit comes mainly from increase of revenue (ordinary revenue is anticipated to increase by as much as in 2010) and less from reduction of expenditure (expenditure before interest payments is anticipated to fall by 1.5% against 9.9% in 2010).

As illustrated in Figure 2.3, 67% of the reduction in primary deficit in 2010 came from the expenditure side, while in 2011 80% of the reduction is estimated to come from the revenue side. Ordinary budget's total revenue contributed to the reduction of the deficit by 26% in 2010, while for 2011 this contribution is anticipated to reach 59%.

The increase of revenues is undoubtedly desirable, especially when it comes from broadening of the tax base, rather than increase of the tax rates. There is, however, risk of complacency from considering that there are no margins to improve budget performance on the expenditure side. The ordinary budget is analysed in more detail in a following section of the text, but we should note that even though "ordinary" primary expenditure falls by 1.4%, other expenditure (notably military) increases significantly.

Figure 2.3
Sources of the State Budget Primary Result Adjustment



Source: 2011 Budget

The emphasis on the revenue side was evident in the 2011 Draft Budget, which reflected EPP's approach (let's not forget that similar was the emphasis of the 2010 Stability and Growth Programme, which was subsequently revised by EPP). For that reason, in light also of the 2010 deficit shortfall, further policy measures, emphasising expenditure reduction, were added in the final draft of the 2011 budget. These measures, however, concern mainly the remaining public entities and not the State Budget (see the following section). By no means should this signify that the effort to reduce expenditure at central level has been exhausted.

A.3. The 2011 policies

Policy measures, totalling €14.3 billion (6.3% of GDP) are envisaged in the Budget for 2011. Out of this, €8,030 million (3.5% of GDP) act on the revenue side and € 6,300 million (2.8% of GDP) on the expenditure side (Table 2.8).[29] EPP initially anticipated measures earning €9,150 million in 2011, revised to €8,200 million (EPP 2010 + EPP 2011 measures in Table 2.8). Given the 2010 deficit shortfall, which obviously also increased the deficit of the baseline scenario (no measures) for 2011, new package of measures, totalling € 6,130 million, was adopted. As already mentioned, the new measures emphasise expenditure reduction (€3,850 million), mainly of public institutions outside the State Budget, while the increase of revenue is more modest (€2,280 million).

[29] This includes impact from measures adopted in 2010, whose effect carries over to 2011. This should be included in the impact from policies, compared with the hypothetical baseline scenario (no policy measures). See for example the estimation in Table 8 of European Commission-DG ECFIN (2010) *The Economic Adjustment Programme for Greece* Occasional Papers 61, p. 41.

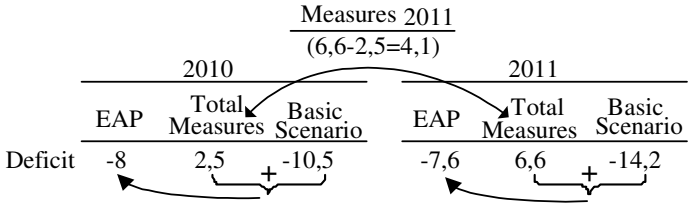


Table 2.9

Performance of 2011 Fiscal Measures

REVENUES	**8.030**	**6.300**	**EXPENDITURES**
2010 EPP	**1.500**	**1.150**	**2010 EPP**
Excise Tax on fuels	250	500	Reductions of salaries and incomes
Excise Tax on tobacco	250	500	Reductions of pensions and benefits
Excise Tax on alcohol	50	150	Reductions of high pensions
Luxury tax	50		
V.A.T.	750		
Illegal Establishments	150		
2011 EPP	**4.250**	**1.300**	**2011 EPP**
V.A.T. base broadening	100	500	"Kallikrates" Savings
Increase of V.A.T. lower tax rate	800	300	Intermediate consumption cut
Reduction in V.A.T.	-250	100	Single Payment Authority wage bill cleanup
Unification of tax rates in diesel and heating oil	600	100	Nominal pension freeze
Special levy on highly profitable firms	1.000	500	P.I.P. reduction
Reduction in CIT on retained profits	-320	-200	Heating benefit cut
Presumptive taxation	700		
Taxation of wages in kind	150		
Book specification of incomes	50		
Gaming royalties	200		
Gaming licenses	500		
Special tax on unauthorized establishments	300		
Increase legal value of real estate	270		
Green Taxes	150		
2011 New Measures	**2.280**	**3.850**	**2011 New Measures**
Measures against fuel smuggling	190	1.400	Lower SSF drug expenditure
Collection of tax arrears	200	700	Hospital procurements cut
Tax fines collection	400	800	Savings in Public Enterprises
New framework for tax disputes and trials	300	150	Means testing of family benefits
Tax settlement	100	100	Reduction in short term contracts in the public sector
Settlement of social security contributions	300	500	Reduction in military deliveries
Increase in court trial fees	100	200	Further Reduction in operational expenditures
Telecom licenses renewal	350		
Extension of Athens airport concession	250		
Receipts from guarantees	90		

Source: 2011 Budget

As shown in Table 2.9, the emphasis on the revenue side is placed on tax administration issues and collection of arrears, while significant revenue (€600 million) is envisaged from renewal of telecommunication licences and extension of the Athens Airport concession contract. On the expenditure side, measures in the health sector are expected to save €2.1 billion, while the expenditure reduction in state-owned enterprises is expected to reach €800 million. Significant savings (€500 million) are also anticipated from reduction in military expenditures, although it is not clear how this can be achieved in case of contractual obligations taken up in previous years.

Table 2.10

Differences in the Performance of 2011 Fiscal Measures in Comparison to the Initial Targets

	EPP	2011 Budget	Difference
REVENUES	**6.600**	**5.750**	**-850**
2010 EPP	**2.200**	**1.500**	**-700**
Excise Tax on fuels	250	250	0
Excise Tax on tobacco	300	250	-50
Excise Tax on alcohol	50	50	0
Luxury tax	100	50	-50
V.A.T.	1.000	750	-250
Illegal Establishments	500	150	-350
2011 EPP	**4.400**	**4.250**	**-150**
V.A.T. base broadening	1000	100	-900
Increase of V.A.T. lower tax rate		800	800
Reduction in V.A.T.		-250	-250
Unification of tax rates in diesel and heating oil		600	600
Special levy on highly profitable firms	600	1.000	400
Reduction in CIT on retained profits		-320	-320
Presumptive Taxation	400	700	300
Taxation of wages in kind	150	150	0
Book specification of incomes	50	50	0
Gaming royalties	200	200	0
Gaming licenses	500	500	0
Special tax on unauthorized establishments	800	300	-500
Increase legal value of real estate	400	270	-130
Green Taxes	300	150	-150
EXPENDITURES	**2.550**	**2.450**	**-100**
2010 EPP	**1.050**	**1.150**	**100**
Reductions of salaries and incomes	400	500	100
Reductions of pensions and benefits	500	500	0
Reductions of high pensions	150	150	0
2011 EPP	**1.500**	**1.300**	**-200**
"Kallikrates" Savings	500	500	0
Intermediate consumption cut	300	300	0
Single Payment Authority wage bill cleanup	100	100	0
Nominal pension freeze	100	100	0
P.I.P. reduction	500	500	0
Heating benefit cut		-200	-200
Total measures yield	**9.150**	**8.200**	**-950**

Source: 2011 Budget

The savings and the additional revenue from the measures in some cases can be considered as estimates and in other as targets. To what extent the desired results will be accomplished depends on both the realism of the estimates and on the speed and effectiveness of the implementation of the measures. The policy revision indicates that in the initial EPP there were discrepancies that could have been avoided. In any case, the substitution or extension of measures, even though envisaged in Council's decision 2010/486/EU/7-9-2010 (see IOBE 3/2010) should take place only for good reasons (e.g. *force majore* events), otherwise there could be negative impact on the economy. Table 2.10 contains a comparison of the new targets for 2011, as formulated in the Budget, with the initial targets in the EPP.

We can see that the revenue expected from measures adopted in 2010 has been revised downward by €700 million (or -32%). The largest reduction (€350 million) comes from revision of the revenue from the regularisation of land-use violations, which implies that either the initial forecast was overambitious or that management and administration were not capable to perform as expected. VAT revenues were also revised significantly downward by 25%, which can be attributed to incapacity to collect and/or underestimation of the income and price elasticities of demand. Lastly, tax revenues from tobacco and luxury goods were also reduced, obviously due to overoptimistic initial estimates on demand elasticities and substitution effects.

The performance of the measures that will be adopted in 2011 were adjusted slightly downward (-150 million euro). The move of 30% of goods and services from the reduced to the standard VAT rate, which was expected to bring €1 billion, was replaced by a number of other measures. In particular, the reduced rate will be increased from 11% to 13% (+800 million euro), the excise tax on heating oil and motor diesel will be equalised (+600 million euro), the VAT base on previously exempted services will be broadened (+100 million), but also drugs and tourist services will be moved to the reduced rate (-250 million euro). The total revenue from the new measures, which are more reasonable than the measure they replace (especially the equalisation of fuel excise taxes), is higher by €250 million, but if we take into account the layout for heating allowance, amounting to €200 million, then the overall effect from the substitution of the measure is almost neutral (+50 million euro). In contrast, the special levy on profitable firms had been planned to bring €600 million, but in the Budget this number was increased by about 70% to reach €1 billion. Meanwhile, corporate tax was reduced from 24% to 20%, which is expected to reduce tax revenue by €320 million, implying that the net outcome of this change amounts to +80 million euro. Given that corporate profits in 2010 are expected to be very limited (indicatively, more than half of the companies listed on the Athens Stock Exchange are expected to report losses), the performance of this measure is questionable, and so is its impact in the present conditions of limited liquidity. Meanwhile, in the overall estimate we should also take into account the

reduction in revenue from taxing dividends as a result of this measure.

In the Budget it is estimated, without additional explanation, that presumptive taxation will bring almost twice the revenue anticipated initially (€700 million against €400 million). Meanwhile, the revenue from a special tax on unauthorised property, increase in real estate legal values and green taxes is spectacularly reduced (by about 50%) with a total loss of €780 million. Lastly, there are no major revisions on the expenditure side, except the additional saving of €100 million expected to occur from reducing short-term employment in the public sector. Nevertheless, there are still some doubts on the feasibility of some savings, such as the €500 million cost reduction from the Kallikrates reform.

Expenditure and revenue of ordinary budget

Revenues

Taking into account the measures presented in the previous section, the revenues in the Ordinary Budget are expected to increase by 5% in 2011, against 5.7% in 2010 (Table 2.11). Tax revenue is anticipated to increase by 1.8% (less then €1 billion), while the expected increase in non-tax revenue totals 40.6% (€1.9 billion), mainly from gaming royalties and licences, renewal of telecommunication licences and extension of the Athens Airport concession contract. In comparison with the Draft Budget, 2011 tax revenues are reduced by about €3 billion, which attests that the estimates have become less optimistic. This difference is partly due to downward revision of the revenue estimate for 2010 by €1.2 billion.

This serves as an indication that the "easy" solution of inflating the revenues in the Budget drafting phase should be avoided, as later on shortfall from the deficit target is likely to appear, making it harder to achieve the deficit target in the short time left until the end of the year. For this purpose non-tax revenue measures were augmented by €1.2 billion in comparison with the Draft Budget.

In 2011 direct taxation is expected to increase by 2.2%. The increase is mostly due to property tax increase following adjustment of real estate legal values. The income taxation of individuals is expected to increase by 6.5% (€650 million), due to the broadening of the tax base that comes with the new tax system, which should compensate for the loss of revenue from the incomes policy in private and public sectors and the 2.6% reduction in employment. This raises the question to what extent the effort to broaden the tax base has been exhausted, given that there is still a large number of tax exemptions, rebates and flat taxes (not only regarding income tax of private individuals, but across all tax categories), which could be re-examined.

Indirect taxation is expected to increase by 1.6% reflecting slump in consumption and structural changes, such as modification in fuel tax administration (lower revenue from scrapping advance payment of fuel tax, accompanied, however, with lower expenditure in terms of lower tax refund). Reduction in the vehicle use tax rates is also envisaged, while reduction in

the vehicle registration tax rates is under consideration. The revenue from vehicle registration taxes in the budget is augmented by 4%, reflecting expectations on recovery of the car market. Even though the reduction of the vehicle registration tax rates is expected to stimulate the market, particularly for medium and small-class vehicles, it is not certain that the demand boost will be sufficient to compensate for the reduction in the tax rates.

The significance of revenue from past fiscal years and other indirect taxation for the budget should also be stressed. From these sources the state expects to collect about €700 million from the €950 million increase in tax revenues. This can only be achieved with effective implementation of the measures for speedier tax collection.

Table 2.11
Ordinary Budget Revenues (mil. €)

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
	2009	**2010**	**2010**	**2011**	**2010**	**2010/09**	**2010/09**	**2011/10**
Direct Taxes	**21.431**	**21.859**	**20.440**	**20.880**	**2,0%**	**-4,6%**	**-1.419**	**2,2%**
Income Tax	16.589	15.704	14.900	14.820	-5,3%	-10,2%	-804	-0,5%
Personal Income Tax	*10.841*	*10.760*	*9.950*	*10.600*	*-0,7%*	*-8,2%*	*-810*	*6,5%*
Corporate Income Tax	*3.813*	*3.044*	*3.335*	*2.800*	*-20,2%*	*-12,5%*	*291*	*-16,0%*
Other categories	*1.935*	*1.900*	*1.615*	*1.420*	*-1,8%*	*-16,5%*	*-285*	*-12,1%*
Property Taxes	526	895	600	910	70,2%	14,1%	-295	51,7%
Direct Tax Arrears	2.446	2.430	2.310	2.700	-0,7%	-5,6%	-120	16,9%
Other Direct Taxes	1.870	2.830	2.630	2.450	51,3%	40,6%	-200	-6,8%
Indirect Taxes	**28.293**	**33.810**	**31.472**	**31.980**	**19,5%**	**11,2%**	**-2.338**	**1,6%**
V.A.T.	16.582	19.015	17.680	18.030	14,7%	6,6%	-1.335	2,0%
On Fuels	*1.907*	*2.535*	*2.600*	*2.410*	*32,9%*	*36,3%*	*65*	*-7,3%*
On Tobacco	*681*	*930*	*820*	*972*	*36,6%*	*20,4%*	*-110*	*18,5%*
Other	*13.994*	*15.550*	*14.260*	*14.648*	*11,1%*	*1,9%*	*-1.290*	*2,7%*
Other Transaction Taxes	1.292	1.185	1.130	1.260	-8,3%	-12,5%	-55	11,5%
Consumption Taxes	9.569	12.830	11.918	11.640	34,1%	24,5%	-912	-2,3%
On Insurance Premiums	*358*	*380*	*401*	*410*	*6,1%*	*12,0%*	*21*	*2,2%*
On Vehicles	*473*	*490*	*274*	*285*	*3,6%*	*-42,1%*	*-216*	*4,0%*
Excise Tax on Fuel	*4.374*	*5.700*	*5.900*	*5.240*	*30,3%*	*34,9%*	*200*	*-11,2%*
Other Excise Taxes	*2.924*	*4.090*	*3.500*	*3.911*	*39,9%*	*19,7%*	*-590*	*11,7%*
Road duties	*1.046*	*1.400*	*1.300*	*1.212*	*33,8%*	*24,3%*	*-100*	*-6,8%*
Other Consumption Taxes	*394*	*770*	*543*	*582*	*95,4%*	*37,8%*	*-227*	*7,2%*
Indirect Tax Arrears	434	390	376	530	-10,1%	-13,4%	-14	41,0%
Other Indirect Taxes	416	390	368	520	-6,3%	-11,5%	-22	41,3%
Total Tax Revenues	**49.724**	**55.669**	**51.912**	**52.860**	**12,0%**	**4,4%**	**-3.757**	**1,8%**
Non-Tax Revenues	**3.773**	**4.607**	**4.622**	**6.500**	**22,1%**	**22,5%**	**15**	**40,6%**
TOTAL Revenues	**53.497**	**60.276**	**56.534**	**59.360**	**12,7%**	**5,7%**	**-3.742**	**5,0%**

Source: 2011 Budget

Expenditure

Despite the marginal reduction in primary expenditure by 0.3% (€165 million), the Ordinary Budget expenditures are expected to increase by 3.8% in 2011, due to hike in interest payments by 20.1% (€243 million) (Table 2.12).[30] In 2010 primary expenditure fell significantly by €5.2 billion (-9%), which, however, is not envisaged to continue. The reason for this is the provision for €580 million reserve, together with the newly introduced heating allowance, which will partly compensate the households for the equalisation of the fuel excise taxes. Still, even without these measures, the reduction would have amounted to 1.8%, less than €1 billion.

Regarding specific expenditure items, **wages** are planned to decline by 2.8% in 2011, evidently due to the impact of the 2010 cuts (which did not occur in the beginning of the year) and the exit of quite a few employees caused by the social security reform. If we take into account that this item includes additional burden of €132 million due to transfers of Olympic Airlines employees, the reduction is expected to reach 4%. **Pensions** are expected to increase slightly, evidently for the aforementioned reason.

Social benefits, which are the second largest item (about 30% of the total), are higher by 3.5% (€540 million), mainly due to the newly introduced heating allowance and increase in Other Expenditure (item 2.4). The latter item refers mainly to payments attending to the deficits of hospitals, which are higher by 48.1%. They replace part of the subsidies to the social security funds, which is considered reasonable practice in order to avoid the debt accumulation observed in the past.

The remaining expenditure is expected to fall by 1.8% (€271 million), despite increase by 77.7% of subsidies to cover the losses of the transport companies, which are now part of General Government. The remaining subsidies are reduced by 21.1%, while consumption expenditure is down by 15.4%.

Overall, the Ordinary Budget contains an effort to limit expenditure, which probably could have been more penetrating, but a more specific proposal here cannot be stated, as detailed data on this are not publicly available. The outline of only the eight major categories of expenditure in the Budget, according to the new legislation, inhibits the careful examination of expenditure and transparency in general. Lastly, the presence of reserve account amounting to 1.1% of primary expenditure is a good fiscal practice, provided that it is used to cover extraordinary expenses and not various other overflows.

[30] The funds to be expended under category 2.4 Other Expenditure are not included.

Table 2.12

Ordinary Budget Expenditures (mil. €)

	(1)	*(2)*	*(3)*	*(4)*	*(5) = (3)/(1)-1*	*(6) = (3)-(2)*	*(7) = (4)/(3)-1*
	2009	**2010 EPP**	**2010**	**2011**	**2010/09**	**2010/09 distance from target**	**2011/10**
1. Salaries and Pensions	**24.486**	**22.401**	**22.027**	**21.593**	**-10,0%**	**-375**	**-2,0%**
1.1 Salaries	18.000	16.101	15.782	15.335	-12,3%	-320	-2,8%
for Central Government	*14.446*	*12.840*	*12.536*	*12.185*	*-13,2%*	*-305*	*-2,8%*
for Other Government Bodies	*3.554*	*3.261*	*3.246*	*3.099*	*-8,7%*	*-15*	*-4,5%*
for New Recruitment				*50*			
1.2 Pensions	6.487	6.300	6.245	6.258	-3,7%	-55	0,2%
2. Grants to SSFs, Medical Care, Social Protection	**17.020**	**16.156**	**15.512**	**16.052**	**-8,9%**	**-644**	**3,5%**
2.1 Medical Care	1.383	1.511	1.306	1.312	-5,6%	-205	0,5%
2.2 Social Protection	3.403	2.688	2.866	3.041	-15,8%	178	6,1%
CPA [1]	*1.034*	*1.040*	*889*	*940*	*-14,0%*	*-151*	*5,7%*
Allowances ti families with many children	*790*	*792*	*792*	*675*	*0,3%*		*-14,8%*
NFSC[2]	*311*						
GISF[3]	*140*	*630*	*370*	*500*	*164,3%*	*-260*	*35,1%*
Greek Manpower Employment Organisation	*522*		*560*	*606*		560	*8,2%*
Social Solidarity Special Allowance	*488*	*100*	*111*		*-77,2%*	*11*	
Other social protection allowances	*119*	*126*	*144*	*320*	*21,5%*	*18*	*122,2%*
2.3 Grants to Social Security Funds	12.234	10.118	10.530	10.500	-13,9%	412	-0,3%
2.4 Other social insurance and health expenditures		1.839	810	1.200		*-1.029*	*48,1%*
3. Other Expenditures	**16.486**	**16.053**	**15.259**	**14.988**	***-7,4%***	***-794***	***-1,8%***
3.1 Grants to other entities	2.619	2.946	2.490	2.213	*-4,9%*	*-456*	*-11,1%*
Urban Transports	*273*	*247*	*251*	*446*	*-8,1%*	*4*	*77,7%*
Other Grants	*2.346*	*2.699*	*2.239*	*1.767*	*-4,6%*	*-460*	*-21,1%*
3.2 Consumption Expenditures	3.209	2.695	2.665	2.255	*-16,9%*	*-30*	*-15,4%*
3.3 Conditional & n.a.[4]	3.448	3.558	3.350	3.361	*-2,8%*	*-208*	*0,3%*
3.4 Earmarked	6.452	6.215	6.149	5.978	*-4,7%*	*-66*	*-2,8%*
3.5 PIF/Public Electricity Company	758	639	604	600	-20,3%	-35	-0,7%
3.6 Inventories				580			
Primary Expenditures (=1+2+3)	***57.992***	***54.610***	***52.798***	***52.633***	***-9,0%***	***-1.813***	***-0,3%***
4. Interest Payments	**12.325**	**13.017**	**13.260**	**15.920**	**7,6%**	**243**	**20,1%**
TOTAL (=1+2+3+4)	**70.318**	**67.627**	**66.058**	**68.553**	**-6,1%**	**-1.570**	**3,8%**

[1] *Complementary Pension Allowance* [2] *National Fund for Social Cohesion* [3] Grant to Intergenerational Solidarity Fund [4] non allocated

Source: Budget 2011

Conclusions - Proposals

Taking into account the momentum of public debt, assuming that the expectations for 2011 will be fulfilled and using a simple base scenario[31] for the time period

[31] According to this scenario, EPP's fiscal targets will be achieved, while from 2014 there will be a primary surplus of 5% of GDP. Nominal GDP will increase by 1.5% in 2012, 2.5% in 2013, 3.5% in 2014, 4% in 2015 and 5% from 2016. No privatisation revenue is envisaged from 2012 onwards.

until 2020, public debt is estimated to peak at 159.2% of GDP in 2013. From this very high level, it gradually is expected to descend to 131.2% in 2020. The final level of the debt, despite the substantial fiscal consolidation effort expended in the mean time, remains very high, while in absolute terms it is higher than today.

A rough sensitivity analysis shows that return of the debt in the region of 100% requires stronger GDP growth, higher primary surpluses and extended privatisation effort. In scenario 2 (Figure 2.4), higher growth rate by 1% from 2012 onwards reduces the debt to 118.4% in the final year of the period. If this is combined with higher primary surplus by 1% of GDP in the same period, as in scenario 3, then debt falls to 109.9%, while in scenario 4 €10 billion privatisation revenue in the period 2012-2016 (allocated 1+2+3+3+1) reduces the debt to 106.6%. In the last two cases, public debt falls in absolute terms too.

The measures in the Budget are in the right direction, but from the above it is evident that the structural reforms should be intensified and accelerated. On the fiscal front, the effort should also be intensified. Some of the points of intervention are analysed below:

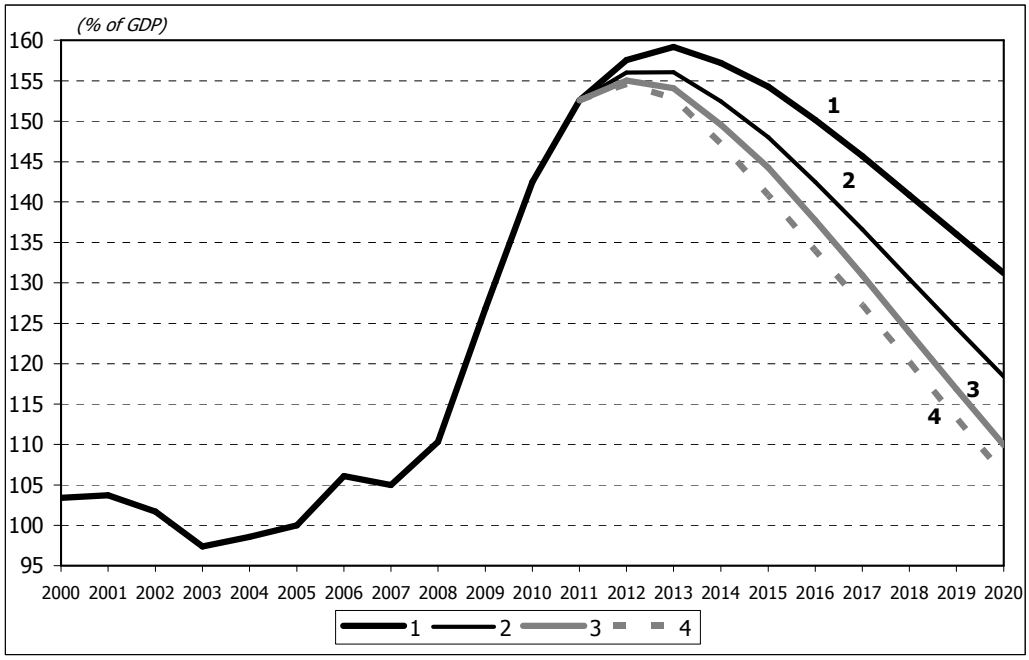
Ten-year programme

It is likely that, based on the analysis presented earlier, the investors in the markets will be rather reluctant to finance the Greek economy, which most probably will transpire as prohibitively high discount rates. This, together with the volatile conditions in the Euro area, heightens the need for additional reduction of public debt before 2014, together with its fast de-escalation after that. Meanwhile the short-term and medium-term refinancing needs should be contained. Greece should develop a strategic plan with comprehensive policies and objectives for the period 2011-2020, which should be approved by our partners, avoiding the need for its imposition externally.

Larger debt reduction through lower deficit and extensive privatisation programme in the period from 2011 to 2014

Additional debt reduction can be achieved with faster than the anticipated in EPP reduction in deficits and quicker return to high economic growth rates. This can be achieved through higher primary surpluses, as well as through intensification and acceleration of the structural reforms. The restructuring of the public sector will play primary role. The authorities should intensify the effort to examine the need for the existence of a large number of state institutions, closing or merging many of them. Indicatively, it is probably overindulgent to have four state-owned TV channels or to finance with state funds the losses of horserace betting.

Figure 2.4
Public Debt Dynamics



Source:IOBE estimations

Meanwhile, the large ad-hoc debt increases should be compensated with analogous reduction through privatisation. This includes the sale of (stakes in) state-owned enterprises, outsourcing of activities to the private sector, utilisation of state-owned real estate and sale of a range of business and professional licences (e.g. radio and TV frequency rights, certification and licensing of professionals, etc.).

The state should establish immediately a centralised institution for the management of state-owned property.

Extension of the repayment period of the support mechanism's loan

The containment of the need to (re)finance the debt should not take place with any kind of restructuring. This can be achieved simply with a substantial extension of the repayment period of the loan, taken up as part of the Support Mechanism, and careful planning of the repayment schedule and its terms.

Decisive reorientation of fiscal policy

Fiscal policy in the next decade should follow six directions: a) reduction of expenditure, b) reallocation of expenditure, c) broader tax base and containment of tax and contribution evasion, d) fairer distribution of income and the tax burden, e) effective public administration and management, achieved through structural reforms. The expenditure reduction should be a priority in 2011 and 2012, until the effort to reduce tax evasion starts to deliver and the economic activity begins its recovery.

Reduction of expenditure

Expenditure should be reduced in the next two years in order to create primary sur-

plus and limit public debt accumulation. Afterwards, when the conditions allow for a considerable revenue increase, expenditure can increase at a rate not higher than that of the revenue increase, converging to the European average. The required reduction of expenditure can be achieved with a drastic reduction and restructuring of the public sector institutions, reallocation of public sector employees, restructuring of remuneration and pensions in the public sector, significant reduction of operation and procurement costs (particularly in public administration, defence and state-owned enterprises) and comprehensive control of the effectiveness of the direct transfers to households and enterprises in the private and public sectors.

Until the new remuneration system in the public sector is adopted, the elimination of the inequity in benefits and allowances will enhance the degree of acceptability of the adopted policies. The new remuneration system will have to come with radical modifications, such as complete eradication of benefits (apart from the family allowance) and appointment of the public sector employees to consolidated branches and not particular institutions. Based on this, every branch should have exclusive remuneration system, where the skills, experience, level of responsibility and efficiency will be reflected in the basic ordinary earnings.

The subsidies to all institutions should be cut back in proportion to their cash reserve. According to the Budget, the cash reserve of various state institutions (except social security funds, local authorities and state-owned corporations) amounts to €2.3 billion, most of which probably comes from past subsidies that have not been spent.

The regime of attributing tax revenue to third parties and to (abolished!) special accounts should be radically revised. These funds (in most cases) come from past gratuitous arrangements that burden taxation and the prices of goods and production factors. In this regard, the effectiveness of the local authority funding system should be reviewed, in order to alleviate its potential conflict with national fiscal policy (see IOBE 3/10).

The expenditure for the procurement of goods and services should be further reduced, not indiscriminately and proportionately, but taking into account factors, such as necessity, availability of cheaper substitutes and how they grew in 2008 and 2009.

In this spirit, further reduction should also be carried out in the remaining expenditure categories (travel, various compensation payments, etc.).

Reallocation of expenses

At least part of the savings from the reduction of expenditure should gradually return to the public sector and the general public in the form of increase of investment expenditure and more funds for targeted social benefits. Sectors, such as health and education, in which we lag compared to the rest of Europe, should be effectively strengthened, but certainly not in the manner followed until recently.

Fairer income distribution and tax burden sharing

Fairer income distribution can be achieved partly through reallocation of expenditure, but the authorities can also alter the tax system accordingly, which would also contribute to consumption rejuvenation. Gradually, the proportion of direct to indirect taxation should be improved, perhaps by reducing or abolishing some of the taxes on consumption and transactions.

The degree of homogeneity of the tax system should be improved. In addition, the introduction of some degree of progressivity in the social security contribution system should also be examined. Similar initiatives should be appraised for the funding of the health system (where, for example, the contribution level does vary, without, however, taking into account the number of people covered by the policy).

All the various tax expenses should be reexamined, in view of their rationale and effecitiveness, and where applicable replaced with direct expenditure. Many of these, established using geographical, sectoral or social criteria, have become notorious for their lack of transparency and efficiency.

All social benefits and income transfers, apart from pensions, should be reexamined in view of their effectiveness and congruency with the goal of fair income distribution and where applicable reallocated through targeted policies. The redesign should be radical and swift.

Increase of tax revenue

The above measures, in combination with the policies that are already under implementation, are expected to contribute to the broadening of the tax base. In order to achieve comprehensive reduction of tax and contribution evasion, the audit and penalty systems should expand, become simpler and objective and start functioning effectively and indiscriminately, while they should also be supplemented with an efficient tax collection system.

The requirement to keep books and tax records and the elimination of flat taxation should be extended to all economic activities. Agriculture constitutes an example where the current regime encourages tax evasion, not so much in production, but in the trade of agricultural products.

The fight against the illicit trade of fuels could generate substantial funds. The positive steps that have already being taken should be supplemented with the abolishment of the tax discounts that encourage illicit trade, particularly in the agriculture sector. In addition, the cooperation between the persecution agencies and the security services on this issue should be institutionally strengthened.

The shortfall of revenue from consumption taxes, in comparison with the targets, could be reduced through a rationalisation of the tax burden (e.g. restructuring of the tobacco taxation with substantial increase of the fixed component of the excise tax, reduction of car registration taxes, etc.), easing the pressure on the markets.

More intensive investment activity

The Public Investment Programme (PIP) should be substantially boosted, in parallel with instituting strict control of the invoicing of projects and services. The PIP project budgets should be reduced by an amount, established through comparison with similar past projects.

The impact of PIP on economic development should be strengthened through activation of PPPs, especially regarding large projects (e.g. road infrastructure, airports, seaports, prison reconstruction and modernisation programme, etc.)

Structural policies

The structural policies refer to both the internal functioning of the public sector and its regulatory role for the economy. Many of these measures are envisaged in the current Economic Policy Programme. The reforms that are already underway should move at a quicker, more decisive pace. These reforms should be considered as the least that can happen and to be significantly extended to the whole economic spectre and all other activities that either impact the economy or depend on it.

B) Fiscal multipliers

B1. Introduction

The global financial turmoil that commenced in mid 2007 left deep scars on the fiscal deficit and public debt of the developed economies. The governments of European countries, USA and Japan, apart from adopting non-conventional monetary policies, implemented a range of expansionary fiscal measures of unprecedented extent. These measures included programmes for systemic support of the Banking sector and direct (transitionary) fiscal intervention to boost economic activity. Meanwhile, the inability to collect sufficient revenue due to the subdued economic activity and the insufficient adoption of structural policies in certain countries (mainly in the tax system, but also regarding social security funds), together with the pressure from population aging, contributed to the aggravation of the fiscal conditions globally. These developments led to significant increase of public debt. For example, in the period from 2006 to 2010 public debt as percentage of GDP increased by 16 percentage points in the Euro area and 18 percentage points in the European Union as a whole.

The steep rise in public debt shifted the centre of attention from the public measures to support economic activity to the issue of drastic fiscal consolidation in order to limit the negative impact of high debt on GDP growth and employment. This issue took the special name of "exit strategy from the support measures" in the international fora.

In this regard, the quantification of the impact of fiscal interventions on economic activity and the issue of the effectiveness of fiscal policy are among the hottest topics of discussion and research for the international economic organisations and the academic community. Indicatively, IMF, EC and OECD have included in their latest reports special extended chapters containing estimates on the size of fiscal multipliers of various expenditure and

revenue categories.[32] Moreover, these reports contain evaluations and proposals for the design of contractionary fiscal policies[33] that should be adopted in order to curb deficits and debt, aiming at the least possible cost in terms of loss of income and jobs.

In Greece, the recent fiscal derailment and the public debt upsurge to unsustainable levels made the issue of fiscal consolidation of the Greek economy, due to its severity, the major problem that the economic policy should tackle. The radical reduction of deficit and debt that should be achieved in a relatively short period of time, according to the schedule set in the Economic Policy Programme, is expected to have adverse short-run impact on the GDP growth rate and to increase unemployment.[34] In the long-run, of course, the gradual reduction of public debt and deficits will have clear beneficial effects on the economy, as confirmed by the international literature on the subject.

The aforementioned studies of the international organisations focus on large economies that usually have independent monetary policy. For small economies that operate within a monetary union, however, the international bibliography is very limited.

The Greek economy should acquire its own exit strategy from the crisis. The big challenge for the current economic policy is the design of fiscal policy that is sustainable in the medium term, while assisting recovery by minimising short-run adjustment costs. This study contributes to this by providing guidance for the design of a fiscal policy mix that is as growth-friendly as possible.

For this purpose, the study focuses on the issue of fiscal instrument evaluation, attempting to provide quantitative estimates on the impact of fiscal instruments on key macroeconomic variables. More specifically, the paper attempts to evaluate and prioritise the macroeconomic impact of various fiscal instruments in terms of equivalent outcome for the fiscal deficit. For example, a typical question that is being asked is: "What would be the impact on GDP, other demand components, current account and prices from a permanent reduction of fiscal deficit by 1% of GDP, to be achieved through reduction of public consumption, reduction of public investment or increase of indirect taxation?" The short-run impact of the measures differs significantly and the variation intensifies in the long run. This impact is quantified with the multiplier method. The multipliers are defined as the ratio of the change in the macro variable (say GDP) over the change in the fiscal instrument (say public consumption). Subsequently, the paper examines the issue of fiscal intervention's permanent and transitory effects, as well as the role of fiscal policy's credibility and how it is perceived by the private sector. The credibility of announced policies is an issue of particular

[32] The central banks also participate in this dialogue. For example, ECB's Monthly Bulleting for July 2010 contains special study on the subject, containing multiplier estimates.

[33] It is worth noting that a large volume of technical papers support these reports. These papers are available as part of the working paper series of these organisations.

[34] A section of the literature on the subject claims that contractionary fiscal policy can boost GDP growth rate even in the short term. However, this hypothesis is based on extreme assumptions, which clearly do not currently hold for Greece.

significance for the reduction of short-run adjustment cost.

The methodology that was followed and the estimates of the multipliers are presented in the following section.

B2. Methodology and empirical results

The answer to the questions posed in the preceding section is provided through simulation runs, using the neo-Keynesian general equilibrium model GIMF,[35] which was calibrated, using a two-country version (Greece and the Euro area). The detailed fiscal configuration of GIMF allows it to be used to answer the questions posed by the study for the set-up of a small economy (Greece) operating within a monetary union (Euro area). In particular, while most dynamic general equilibrium models with rational expectations assume that Ricardian equivalence holds,[36] GIMF violates the equivalence assumption without shedding the rational expectations hypothesis. This feature makes GIMF well suited for the examination of fiscal policy issues. Several features of the model, such as significant share of consumers with constrained liquidity, economic agents with finite planning horizon (overlapping generations) and distortionary taxation (e.g. direct tax on individuals with elastic labour supply) provide strongly non-Ricardian characteristics of the model, making fiscal policy effective and interesting.

The first step in the analysis is to formulate a simulation of long-run equilibrium, which is taken as base or reference scenario. Subsequently, various scenarios of fiscal consolidation are formulated, adjusting various fiscal instruments both on the expenditure and revenue sides. The results are compared with the reference scenario and are presented as percentage or absolute deviation from it.

B.2.1. Reduction of public consumption so that fiscal deficit falls permanently by 1% of GDP

In this scenario the permanent fiscal adjustment is **achieved through reduction in public consumption**. This section also attempts to illustrate how the factors that determine fiscal adjustment operate on the economy.

It is assumed that the adopted policy is fully credible, i.e. the private sector perceives the fiscal intervention as permanent from the start and incorporates it in its expectations. The nominal interest rates remain constant due to the common monetary policy in the Euro area, while the real interest rates are determined endogenously. As a result, the crowding-in effect is confined. The results are illustrated as deviation from the baseline scenario in Figure 2.5.

The reduction of public expenditure affects all components of demand. In the

[35] More information on the configuration of GIMF and its calibration for Greece and the Euro area can be found in the two preceding quarterly bulletins of IOBE.

[36] The term Ricardian equivalence describes a hypothesis within rational expectations theory, according to which when public expenditure is financed through public debt, the total wealth of the households is not affected by the additional taxation that the consumers are expected to pay in the future. As a result, the consumers do not change their expenditure, saving the additional income to pay future taxes, which renders fiscal policy ineffective. This idea is in full contrast with the Keynesian approach of strong fiscal multipliers.

first year GDP contracts by about 0.6% compared with the baseline scenario. However, in the sixth year it approaches the baseline and in the long run it is higher by 0.35% from the baseline. Consumption marginally falls in the beginning of the period, while in the long run it is higher by almost 2%, due mainly to expected tax reduction and subsequent boost in disposable income. As debt converges to a new equilibrium, some kind of fiscal comfort occurs, which allows direct tax rates to fall, provided that debt level is maintained within the set bounds. The reduction of these distortionary taxes has beneficial effect on GDP. It should be noted that if in parallel reduction of the corporate tax rate (also a distortionary tax) is allowed, then GDP is higher by 0.6% from the baseline in the long run. This result indicates the importance of a tax reform that puts the emphasis on taxation that is less distortionary to economic activity.

Private investment, after a small fall, is higher by 0.45% from the baseline in the long run. The initial fall in demand curbs the increase in prices, which improves competitiveness with beneficial impact on imports, exports and the trade balance. However, as demand strengthens imports recover and the trade balance as percentage of GDP returns to baseline. The increase in public saving is not fully compensated by the fall in private consumption due to the limited strength of the Ricardian equivalence hypothesis. Total saving increases, which is reflected in a permanent improvement in the current account balance. The path of these variables, expressed as percentage of GDP, is illustrated in Figure 2.5. As a result of this fiscal intervention, public debt falls by about 22 percentage points of GDP in the new long-run equilibrium.

B.2.2. Transitory reduction of public consumption so that fiscal deficit falls by 1% of GDP only for one period

This section of the study attempts to illustrate both the superiority of permanent over transitory adjustments of fiscal instruments (in terms of lower short-term fiscal adjustment cost) and the importance of the credibility of the adopted policies. **Public consumption is reduced only for one period by an amount such that the deficit falls by 1% of GDP.** Subsequently, public consumption returns to its baseline level. Table 2.13 contains a summary of the estimates of the "impact multipliers" (in terms of GDP and working hours). For comparison purposes, the first column presents the impact multipliers from the permanent adjustment described in section B.2.1. In the second column the multipliers refer to a transitory adjustment of public consumption for one year only, where the private sector believes from the start of the adjustment period that the measure will be reversed in the second period. As in section B.2.1, economic policy enjoys full credibility. In the third column, the multipliers refer again to a transitory change in consumption for one year, however here the private sector adjusts its behaviour only after seeing in practice that the policy is implemented as announced.

Table 2.13

Public Consumption "impact multipliers"

	Permanent Reduction full credibility	*Transitory Reduction full credibility*	*Transitory Reduction limited credibility*
GDP	-0.6	-0.78	-1.1
Working Hours	-0.5	-0.66	-0.94

Source:IOBE estimation

The results for the multipliers presented in Table 2.13 reveal the importance of both the credibility of the implementation of the fiscal adjustment policies and the permanence of the deficit reduction for the moderation of the short-run adverse effects. The impact multipliers of public consumption in the case of permanent and credible fiscal intervention are substantially smaller (almost by half), compared with the values that come from simulation with transitory intervention in a limited credibility environment. In the case of transitory change with full credibility, the multipliers take intermediate values.

B.2.3. Contribution to public saving of other fiscal measures with equivalent effect

This section presents five alternative scenarios of fiscal adjustment, where public saving, expressed as percentage of GDP, is increased permanently by 1%. The increase of saving – reduction of deficit – is achieved through discrete permanent shocks of the following fiscal policy instruments: public consumption, public investment, income tax, consumption tax and transfer payments. Next, we compare the effects of the shocks on key macro variables within a 50-year period. The results are presented diagrammatically in Figure 2.6 and 2.6a (which has a different scale) and numerically in tables 2.14 and 2.15.

The following conclusions can be made based on the results of the analysis: The reduction of public consumption and general transfer payments causes the smallest contraction of GDP in the short-term and the largest benefit in the long term. It should be noted that the transfer payments have a general character and are not targeted at consumers facing liquidity constraints. The increase in public saving through reduction in public investment has permanent and exceptionally strong negative impact on GDP. In the medium term, GDP falls below the baseline by more than 5%, while its rate of change remains negative. The distortionary taxes on personal income have permanent impact on GDP level, which is lower than the baseline by 0.5% and affect significantly labour supply. The less distortionary taxes on consumption also have permanent negative impact as they affect the marginal propensity to consume. However, their negative impact is smaller.

B.3. Conclusions

Based on the estimations of the multipliers derived in these simulations, certain key conclusions can be drawn, which could assist to improve fiscal policy design

so that it is growth-friendly and sustainable in the medium term. In the current circumstances it is feasible to limit the short-run costs and maximise long-run benefits. However, this implies that fiscal policy is designed in a manner consistent with the macroeconomic environment, taking into account all the interactions, which was attempted in this study. Concise summary of the main conclusion is presented below.

The design of a sustainable fiscal adjustment that in parallel maintains the sustainability of the current account balance should focus on reduction of expenditure and in particular of public consumption. The increase in taxation should be limited, particularly income taxation of individuals and corporate taxation. Soon, as deficit and debt decline, the rates of taxes that inhibit the growth of production factors (labour income and corporate taxes) should be lowered. Indirect taxation has clearly less adverse impact both in the short and in the long run on the growth rate of GDP. This raises the issue of tax reform in this direction. A few non-distortionary ad-hoc taxes can be useful in the initial adjustment stage.

The reduction of productive public investment in order to curb the deficit is an option that is exceptionally damaging for the economy. It causes large permanent fall of the GDP level and of its rate of change for a long period of time, as shown in the simulations, leading to results clearly contrary to the desired outcome.

Table 2.14

Percentage deviations of GDP levels from baseline simulation by alternative measures of equal impact (Increase of Public Saving by 1% of GDP)

	1st year	*2nd year*	**Long-run**
Public Consumption	-0.6	-0.4	0.35
Public Investment	-1.3	-1.1	-5.0
Income Taxes	-0.4	-0.4	-0.5
Consumption Taxes	-0.4	-0.3	-0.3
Transfer payments	-0.3	-0.1	0.25

Source:IOBE estimation

Table 2.15

Percentage deviations of employment levels from baseline simulation by alternative measures of equal impact (Increase of Public Saving by 1% of GDP)

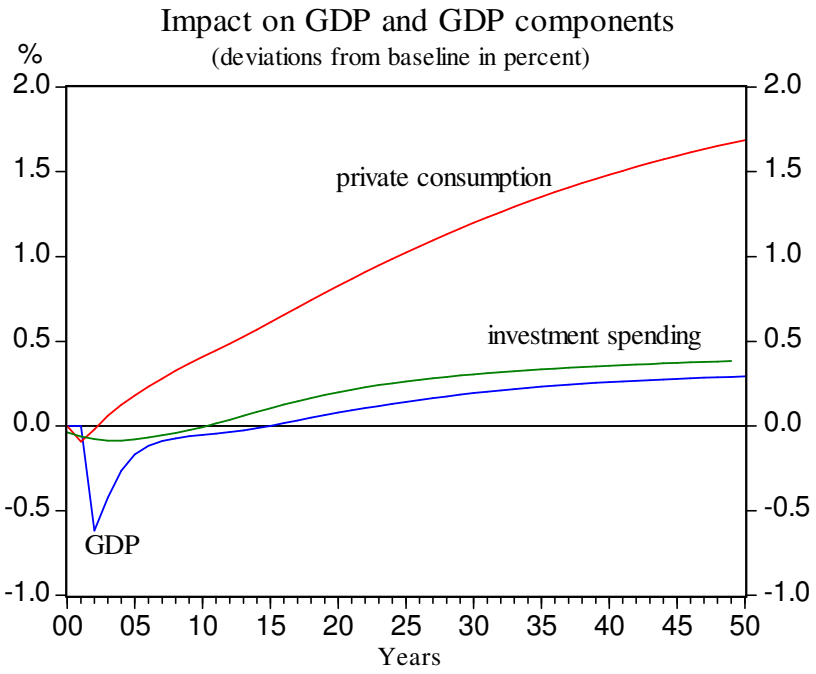
	1st year	*2nd year*	**Long-run**
Public Consumption	-0.5	-0.3	0.2
Public Investment	-1.1	-0.7	-0.3
Income Taxes	-0.6	-0.5	-0.6
Consumption Taxes	-0.5	-0.4	-0.4
Transfer payments	-0.3	-0.1	0.0

Source:IOBE estimation

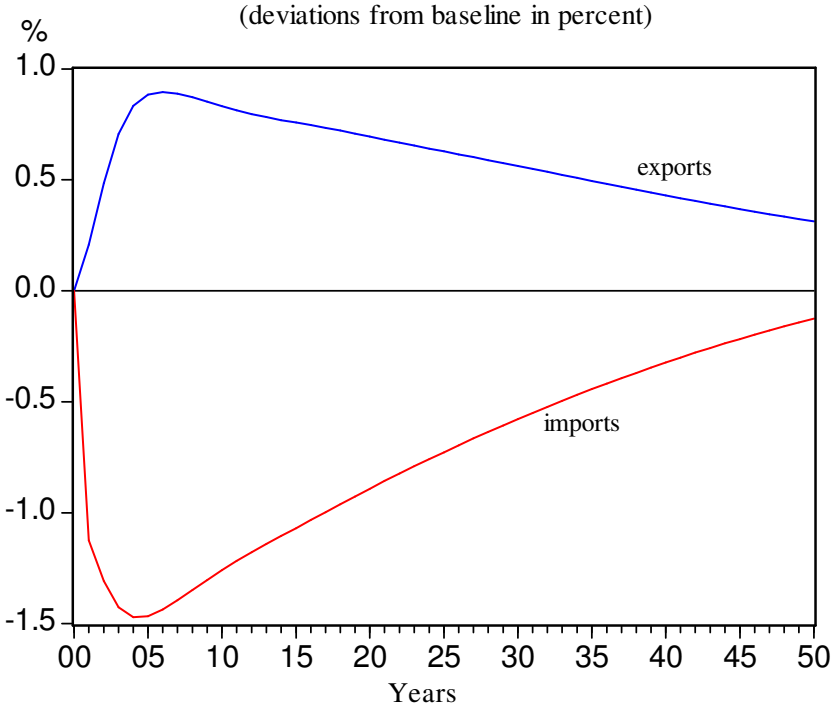
For the minimisation of the short-run adjustment cost, the policy should have permanent character, to be explained convincingly to the public and to be implemented as announced. With a credibility boost, the private sector will incorporate in its medium-term expectations the benefits of adjustment, which will have significant beneficial effects and will boost output growth. The cut in general transfer payments is beneficial for the reduction of deficit, as it has positive long-run impact, while GDP returns quicker above the baseline. Targeted reduction of transfer payments to the category of consumers with liquidity constraints and low income has clear adverse effects on growth and employment and should be avoided.

Figure 2.5

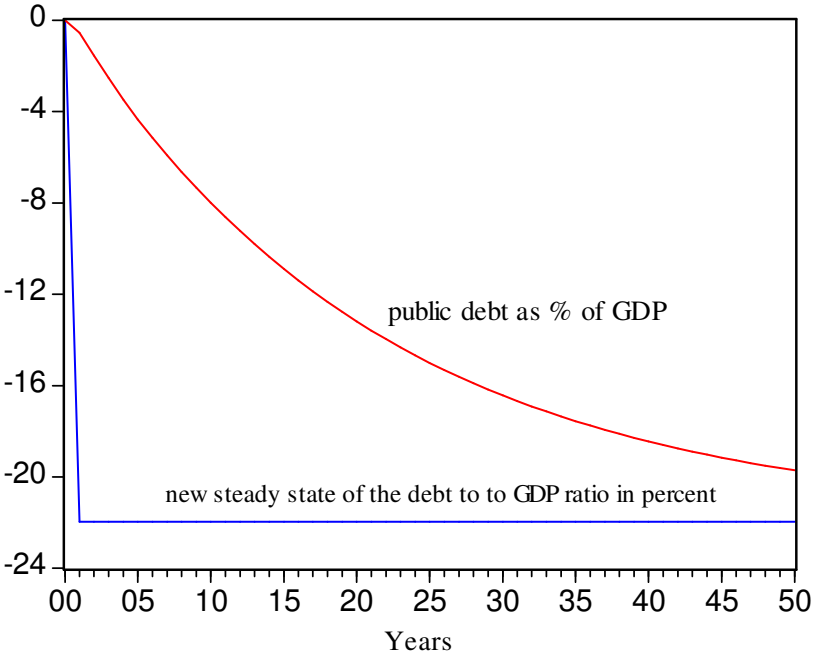
Permanent decrease of public consumption by 1% of GDP



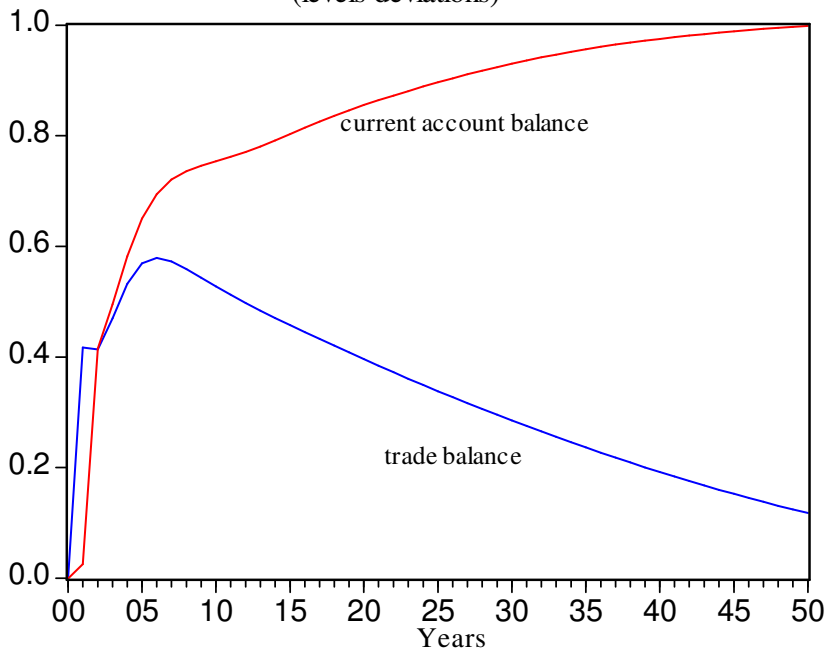
Impact on exports and imports
(deviations from baseline in percent)



The convergence of the debt to GDP ratio to the new steady state
(levels deviations)



Trade and current account balance as % of GDP
(levels deviations)



Current account and private and public savings as % of GDP
(levels deviations)

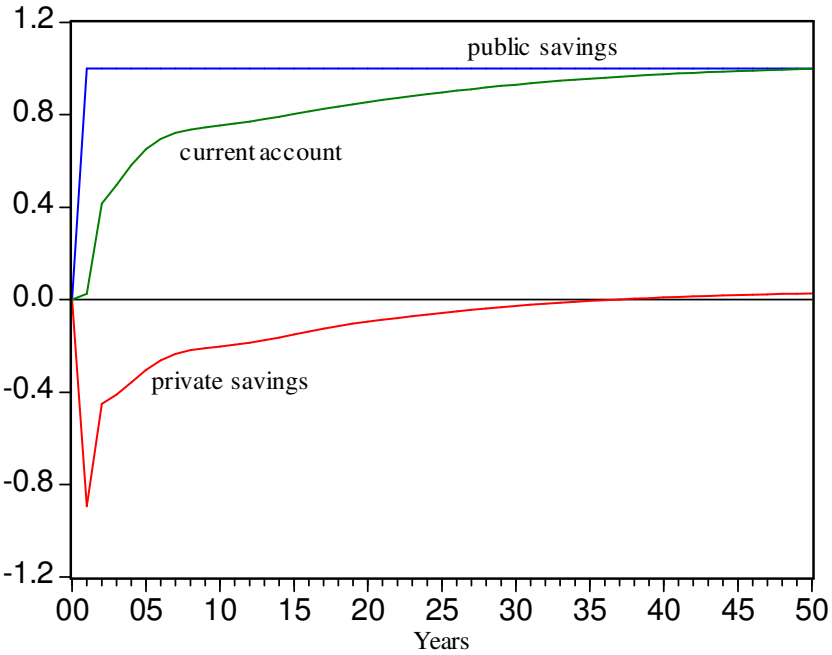
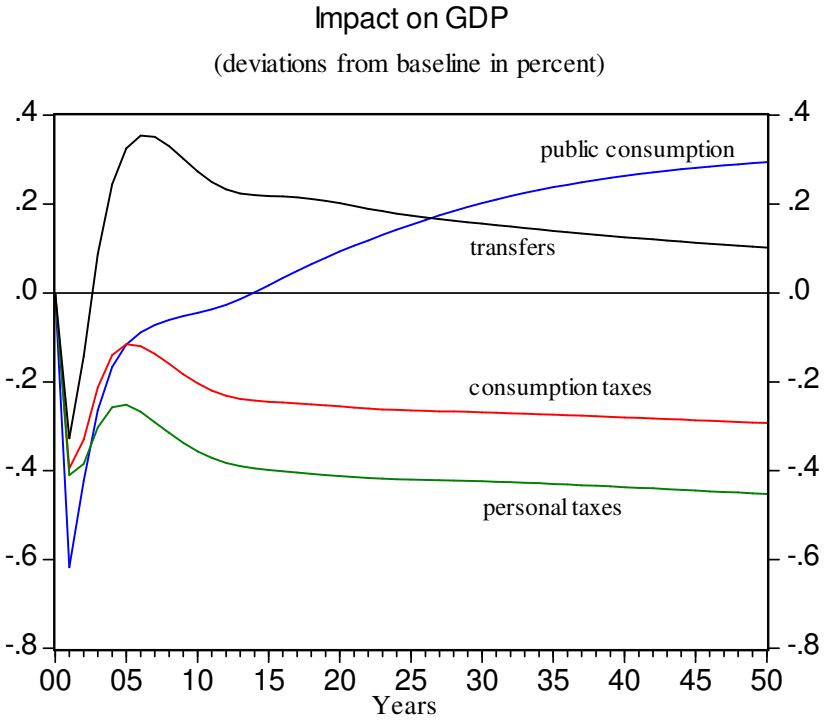
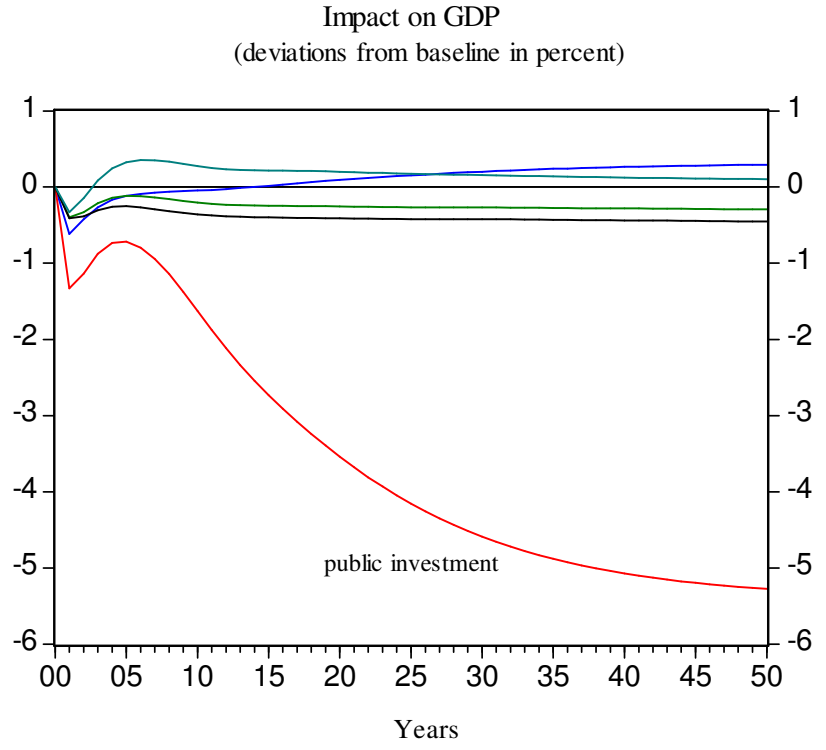


Figure 2.6 and 2.6a

Permanent increase in government savings by 1% of GDP achived through different fiscal measures





C) Economic Sentiment

The **Economic Sentiment Indicator for Greece** in the period from September to November remained unchanged, compared with the preceding three-month period (June – August), standing at 67 points on average. The indicator has firmly been below 70 since March, **reaching its lowest level in May (61.9), the month when the support agreement with IMF-EC-ECB was signed.** As a result, in the past three months the indicator has performed significantly below the long-term average for the period 2001-2009 (95.7 points) and the level recorded in the corresponding period of the previous year (78.4 points). Business expectations have remained, with small fluctuation, at very low level since the beginning of the year, while **the largest disappointment was recorded in Retail Trade and Construction.** But on the demand side too, consumer confidence has fallen to historically low levels. The contraction of consumption expenditure and the credit crunch that led to liquidity shortage have contributed to the deepening of the recession, a situation which is not expected to revert easily, unless there is a substantial intervention to resuscitate the economy.

On the demand side, consumer confidence slid further in the three-month period under investigation, recording new historic lows, as the expectations of the households became even gloomier. On the supply side, business expectations improved slightly in comparison with the summer quarter in Construction and Retail Trade, with marginal improvement recorded in Industry. In Services, the expectations remained unchanged at the level of the preceding quarter. Overall, the developments in the sectors of the economy indicate that business sentiment stabilised in the past three months, after the intense fluctuation it experienced in the previous months. Nevertheless, in a year-on-year comparison, the indicators have fallen sharply, with the most intense drop recorded in Retail Trade and Construction and marginal decline observed in Industry.

Contrary to Greece, economic sentiment improved in the EU and the Euro area, even on a year-on-year basis. More specifically, in the three-month period from September to November, the indicator in EU-27 and the Euro area averaged 104 points, 15 points higher compared to the corresponding period of the previous year and 3-4 points higher compared with the immediately preceding three-month period.

In greater detail:

The **Consumer Confidence Index** in Greece once more registered historic low in the September – November period, standing at -69 (from -65 in the preceding three-month period), having lost 35 points year-on-year. **The discontent of the Greek consumers about the state of their financial situation has ranked them as the more pessimistic Europeans throughout the year.** In particular, the average values for the index in the EU and the Euro area during the same period were significantly higher, at -11 and -10 respectively, recording an in-

crease both quarter-on-quarter and year-on-year.

Consumer confidence in Greece deteriorated significantly in May, when the fiscal measures of the EC-IMF-ECB support agreement were settled. The index remained at very low levels throughout the summer, while in October it fell below -70. In November consumer confidence slightly improved, yet Greek households have remainedmarkedlyreserved in the current economic conditions. Except the consumer expectations about the financial situation of the country in the coming 12 months, where a marginal improvement was recorded, all the remaining constituents of the index have deteriorated quarter-on-quarter.

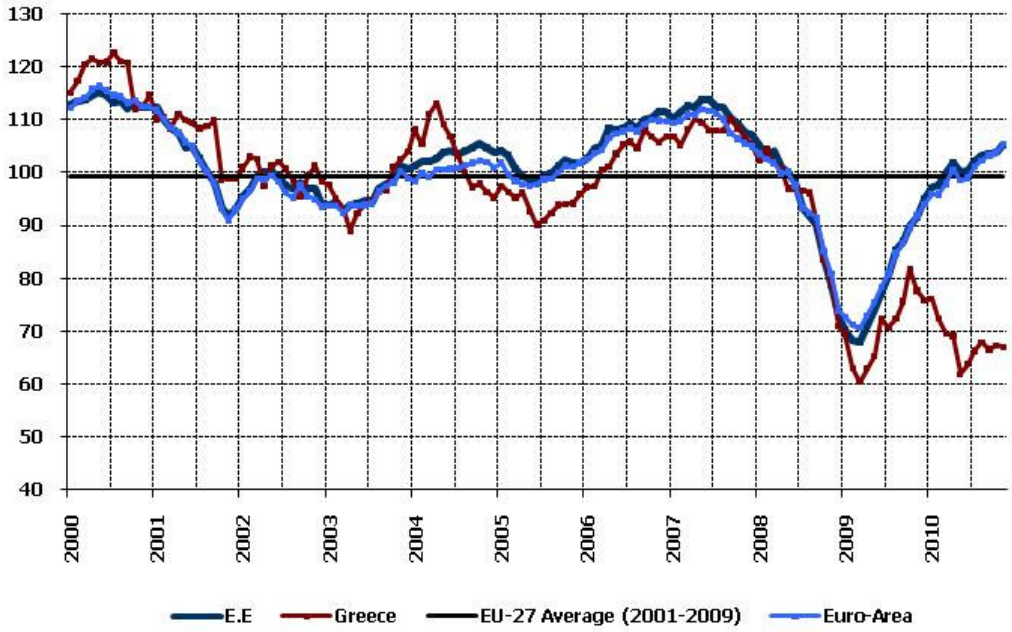
Table 2.16
Economic Sentiment Short-Term Indices

Month/Year	Economic Sentiment Indicator[1]		Business Confidence Indicators [2] (Greece)				Consumer Confidence Indicator[1] (Greece)
	EU-27	*Greece*	*Industry*	*Constructions*	*Retail Trade*	*Services*	
2001	**101,0**	**107,6**	**101,9**	**114,0**	**92,2**	**105,8**	**-26**
2002	**94,9**	**98,9**	**101,2**	**114,0**	**93,3**	**82,8**	**-28**
2003	**93,2**	**93,2**	**97,9**	**115,0**	**102,0**	**85,5**	**-39**
2004	**102,5**	**102,9**	**99,1**	**81,5**	**104,8**	**94,6**	**-26**
2005	**99,4**	**89,3**	**92,6**	**63,0**	**96,8**	**93,6**	**-34**
2006	**108,4**	**103,1**	**101,5**	**91,1**	**110,8**	**103,7**	**-33**
2007	**110,8**	**108,0**	**102,8**	**92,5**	**120,8**	**106,6**	**-29**
2008	**90,7**	**89,0**	**91,9**	**95,2**	**102,5**	**97,8**	**-46**
2009	**79,9**	**70,6**	**72,1**	**65,5**	**80,4**	**70,1**	**-46**
Jan-09	70,3	69,4	68,2	65,0	65,3	62,6	-48
Feb-09	68,2	63,1	62,8	68,3	61,9	64,5	-55
Mar-09	68,0	60,4	63,8	59,1	60,2	66,0	-56
Apr-09	71,1	63,0	68,9	63,0	64,5	66,7	-51
May-09	74,3	65,3	71,0	52,8	80,7	73,2	-50
Jun-09	77,1	72,3	76,0	69,0	90,4	75,3	-45
Jul-09	80,5	70,7	73,8	67,4	91,4	73,7	-49
Aug-09	85,4	72,3	75,5	61,4	88,5	75,8	-45
Sep-09	87,0	75,7	80,4	67,6	91,4	68,4	-39
Oct-09	90,0	81,8	79,4	71,6	99,0	72,4	-27
Nov-09	91,5	77,7	74,8	72,4	91,1	71,8	-38
Dec–09	95,0	75,9	71,0	68,1	81,0	70,6	-44
Jan–10	97,2	76,1	75,8	64,1	75,3	67,2	-47
Feb-10	97,6	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	48,0	53,2	67,0	-61
Sep-10	103,6	66,6	78,4	35,5	53,4	66,7	-67
Oct-10	103,9	67,3	78,5	59,7	58,2	67,4	-72
Nov-10	105,2	67,0	74,6	56,1	55,3	60,3	-69

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

Figure 2.7

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

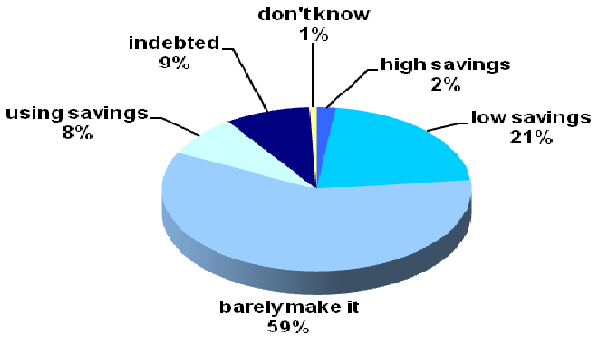


Source: European Commission, DG ECFIN

Figure 2.8

Consumer survey data on their household's financial situation

(June – August 2010 average)



Source: IOBE

Two in three households were expecting their financial situation to worsen slightly or significantly in the coming 12 months, while ¾ of the households were predicting slight or significant deterioration of the overall economic situation. **The propensity to save remained at very low levels in the last quarter, with on average 68% of the households considering it impossible. Meanwhile, overwhelming majority (94%) of the consumers expected slight or signifi-**

cant deterioration of unemployment. In addition, the proportion of consumers reporting that they were 'in debt' and were dipping into their savings has stood at 8-9% in the last six months. Meanwhile, the percentage of those that were saving small or large amounts fell to 23% from 25% in the June – August period (and 28% in the previous year). Lastly, the percentage of consumers who reported that they were "just making ends meet" increased to 59% (from 52% in the preceding three-month period).

In **Industry,** the Confidence Indicator in the period from September to November stood at 77 on average, marginally higher than the level recorded in the preceding three-month period and its average for the preceding year. **In any case, business sentiment in Industry is not significantly worse, compared with the corresponding period of the previous year**, when it stood at 75. **Industry has remained the least affected sector, exhibiting relative stability**. Still, most of the constituent indices remained at negative levels.

In particular, the expectations regarding the course of production in the upcoming 3-4 months had a negative balance (at -3, from -5 in the preceding three-month period and +3 in the corresponding period of the previous year). The estimates of order levels and demand, as well as foreign demand, also experienced slight improvement, despite the fact that more than half of the enterprises still considered them to be low for the time of the year. Finished product inventories, despite remaining bloated, preserved their level from the preceding period, standing at +14, at a lower level compared with the corresponding period of the previous year (+18).Employment expectations, on the other hand, worsened, with their negative balance extending to -23 (from -17 in the preceding period and -14 in the corresponding period of the previous year). Meanwhile, the utilisation rate of the production factors marginally fell to 68%, when in the same period of the previous year it stood at 71%. Lastly, the number of months of assured production remained unchanged at 3.8 during this period too, close to the average for the year (4 months) and slightly below their level in the corresponding period of the previous year (4.4 months).

The Confidence Indicator in **Retail Trade** in the period from September to November stood at 56 on average, slightly higher in comparison with the June – August average (52), but substantially lower compared with the corresponding period of the previous year (94). **Retail trade suffered significant damage from the economic downturn this year and, with a small time lag in comparison with the remaining sectors, was intensely affected by the fiscal crisis and its consequences in 2010.** Until July, the fall in the corresponding indicator was continuous, with all activity indicators contracting.

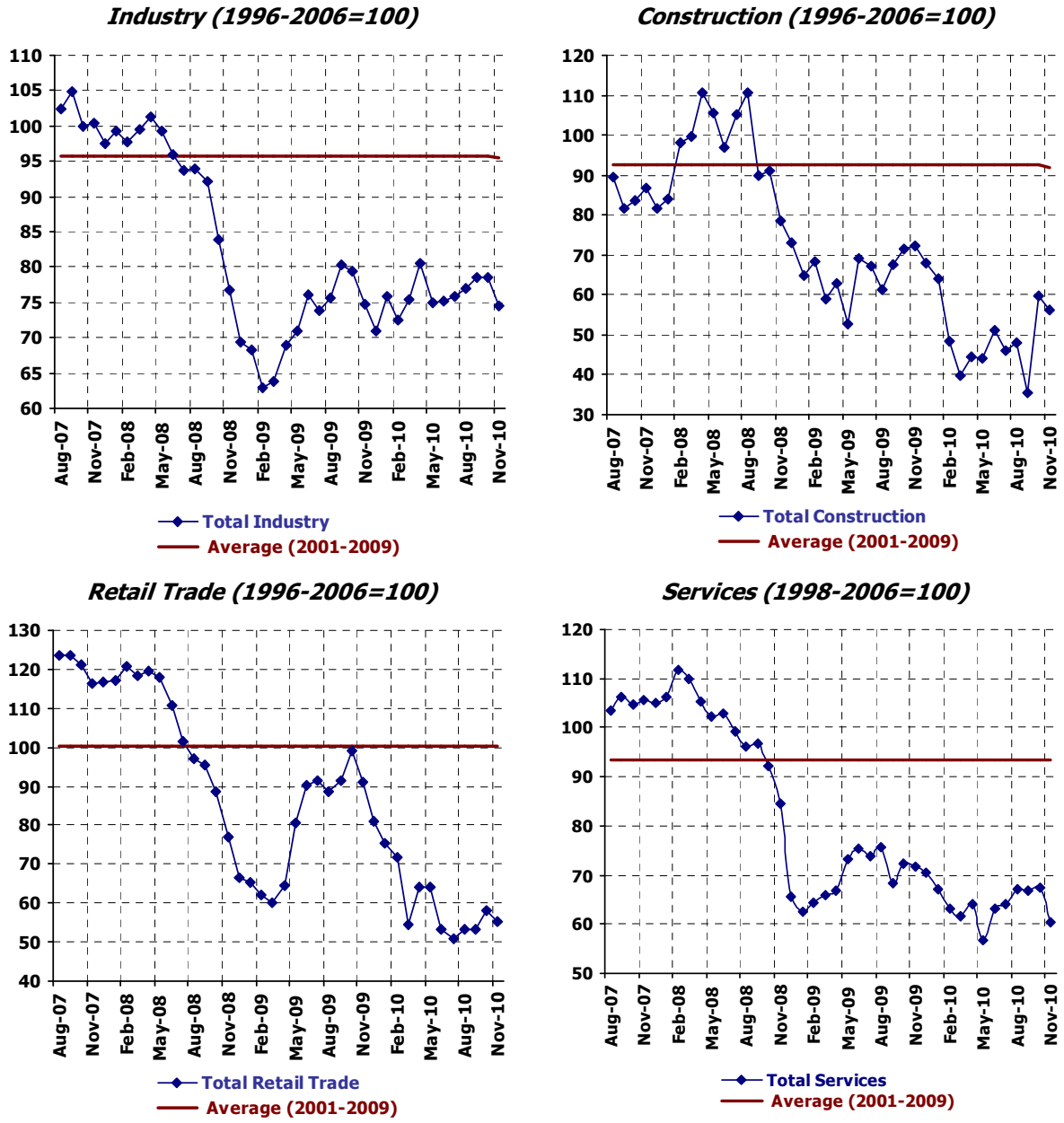
Nevertheless, in the past four months business expectations have stabilised, without showing, however, signs of recovery. The negative evaluation of the

enterprises on their sales slightly meliorated, while more substantial was the improvement in the projections of the sales over the coming three months, with the relevant balance standing at an average of -38 (from -48 in the preceding period).Similar "improvement" was also recorded in the expectations of the enterprises about the orders placed with suppliers, remaining, however, negative (at -48). Meanwhile, inventories remained bloated. The employment expectations in the sector improved in the September - November period, mainly due to their sharp increase registered in September, but the relative balance remained slightly negative. Lastly, regarding price expectations, the negative balance of the previous three-month period slightly extended to -16, reaching the same level with that recorded in the corresponding period of the previous year.

Business confidence in the **Construction** sector recorded slight quarter-on-quarter improvement in the last three-month period, mainly due to sharp increase in October and November. **The importance of the construction sector for the economy of Greece is beyond doubt, yet the structural problems that it is experiencing, its excessive growth in the previous years, the contraction of mortgage lending, the reduction in the Public Investment Programme and in general the fall in demand have led to stagnation in the sector.** In the period under investigation, the confidence indicator stood at 50 on average (from 48 in the preceding three-month period and 71 in the same period of the previous year). The very grim expectations of the enterprises about their current work schedule and employment eased by 9 points, with the corresponding balances standing at -56 on average. On the other hand, the negative employment expectations extended during this period, as more than half of the enterprises were expecting reduction of jobs in the sector. Meanwhile, the estimates of the enterprises on their current work schedule improved slightly, according to 14% of the enterprises (from 10% in the preceding three-month period). The number of months of assured activity increased to 14 from 12, while in the corresponding period of the previous year they stood at 16. Regarding the price level, the deflationary expectations dominated against the expectations for price increase. Lastly, only 6% of the enterprises (from 10% in the preceding period and 15% in the corresponding period of the previous year) reported that they were not facing any obstacles to their construction activities, with 45% assessing as the main obstacle to their operation lack of financing, 38% low demand, and the remaining 11% the overall economic situation, inadequacy of the state, large discounts, suspension of projects, ambient uncertainty, insufficient bank lending and other factors.

Figure 2.9

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

The Confidence Indicator in **Services** in the period from September to November remained at the levels recorded in the June-August period, standing at 65 on average, 6 points lower year-on-year. **The expectations in the sector had stabilised, with a tendency to improve from the summer months**

onwards, however in November the indicator fell to its lowest level in six months.

The assessment of the enterprises on their current activity and demand remained pessimistic, with the relevant balances extending slightly to -30 and -15 respectively (from -11 in both categories in the corresponding period of the previous year). In contrast, the expectations of future demand slightly recovered, with one in five enterprises expecting rise in demand. Employment expectations improved substantially, where the balance increased to -12 (from -23), reaching the level recorded in the corresponding period of the previous year. Price expectations were yet again deflationary on balance, yet the overwhelming majority of the enterprises were anticipating stability of prices. Lastly, the share of companies reporting that their business activity was being conducted without obstacles slightly increased to 29% (from 25% in the preceding three-month period), while 39% of the companies indicated as the main obstacle insufficient demand, 15% reported lack of working capital and further 15% indicated exogenous factors, such as the overall economic crisis, inadequacy of the state and red-tape, delays in payments from the Public Sector, high taxation, degradation of Athens's downtown area, bad resource management, excessive social security contributions and other factors.

3. PERFORMANCE AND PROSPECTS

3.1 Macroeconomic developments

Developments in the first nine months of 2010

The course of the Greek economy in the third quarter was largely affected by the commencement of the implementation of the fiscal and structural reforms, contained in the support agreement (social security reform, abolition of cabotage restrictions for cruisers, liberalisation of road haulage), the reactions to these reforms, the completion of the adoption of a new package of tax and incomes policies and, lastly, the review process by EC, ECB and IMF for the granting of the second tranche of the stand-by arrangement. In this economic environment, the contraction of GDP accelerated, reaching 4.6% from 4.0% in the preceding quarter, according to the latest revised national accounts data of ELSTAT (Table 3.1). According to these data, **the contraction of the Greek economy in the first nine months of 2010 reached 3.8%, from 2.0% in the corresponding period of 2009.**

The acceleration of GDP contraction in the third quarter is reflected in all key components, except exports and public consumption. For the whole duration of the first nine months of 2010, **the contraction of fixed capital formation was the key factor for the recession in the Greek economy.** Next in significance come private consumption and public consumption. The reduction of exports was gradually moderated, while the fall in imports significantly accelerated. As a result, the negative contribution of the external sector to GDP has weakened, reversing to a large extend the upward trend in the external deficit, observed in the previous years.

In greater detail, **total final consumption**, public and private, was lower by 4.1%, year-on-year, in the January-September period, while in the corresponding period of the previous year it had stabilised in relation to 2008. In absolute terms, the fall in private consumption was larger than that in public consumption, yet proportionately the former is weaker by 3.0% compared with the corresponding period of 2009, while the percentage fall in the latter reached 8.2%. It should be noted, however, that until mid 2010, the fall in public consumption was larger both in absolute terms and proportionately. Yet, public consumption was the only GDP component that increased quarter-on-quarter in the third quarter of 2010 (by 7.9%), which moderated its year-to-date fall as of the end of September. On the other hand, private consumption, which in the first quarter was increasing, has been fallings since, at a constantly accelerating rate. It is evident from the revised data that the tax incentives for the issuance of purchase receipts, which were adopted in early 2010 with positive impact on the officially recorded transactions, did not prevent the subsequent **contraction of household consumption expenditure by about 5%.**

The fall in **investment activity**, which had weakened in the second quarter, accelerated anew in the summer months, reaching 26% year-on-year, while the September year-to-date fall extended to 21.5% (-16% in September 2009 y-t-d). The large extent of the fall is due to the recent revision of the change in inventory from positive to negative, which was the key factor for the weaker fall of investment in the first half, as noted in the previous IOBE bulletin.[37] **The contraction of investment was more intense in non-residential construction (-20.4% September y-t-d), residential construction (-19.7%) and transport equipment (-17.6%)**, however only in the last category of the three the fall accelerated in the third quarter. In contrast, the fall in investment in agriculture equipment did not exceed 1.9%, while its downward trend from the first half of the year was reversed in the third quarter.

The negative impact of the **external sector** of the economy has been weakening, which has been due to development in both of its components. The year-on-year contraction of **exports** in the third quarter of 2009 was weaker, compared with the preceding quarter, due mainly to the low base in the corresponding period of the previous year. As a result, exports were 1.2% less year-on-year in the first nine months of 2010. It should be noted that **the fall in exports was due solely to decline in services (-2.6%), as the export of goods increased**, albeit at a low rate (+0.7%).

The fall of **imports** for a seventh consecutive quarter implied that they recorded their lowest quarter and September year-to-date levels since at least the beginning of 2000. **In the first nine months of the year imports were down by 13.1% on the same period of 2009.** In contrast with exports, imports fell entirely due to contraction in the import of goods (by 18.2%), while the import of services increased by 10.5%, whose trend weakened over time (only +0.7% in the third quarter). As a result of these developments in the two trade flow directions, **the deficit of the external sector remained significantly below 10% of GDP in the first nine months of 2010** and weakened in the third quarter, falling to **8.6% of GDP**, down by 2.7 percentage points on the same period of 2009. The deficit in the third quarter was at its lowest level at least since 2000.

In terms of production value, domestic gross value added fell by 5.3% year-on-year in the first nine months of the year. Reflecting the investment slump in the sector, **construction recorded the largest drop of value added among the key branches of the Greek economy (-20.5%).** The second largest fall (by 7.4%) was registered in trade-hotels-restaurants-transport. Next in this ranking were industry-energy and remaining services. Stabilising trends dominated the value added of financial activities and activities related to real estate (-0.6%), while value added in agriculture, forestry and fishing has experienced constant growth for a second year in concession (+4.3%).

[37] However, there are still significant quarter-on-quarter differences between the inventory deflators in 2010.

Table 3.1

Main Economic Volumes (constant 2000 prices)

Year/ Quarter	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*	**162.411**	**4,4%**	**143.158**	**3,8%**	**38.686**	**-2,4%**	**37.470**	**17,3%**	**56.814**	**5,7%**
a' 2005	40.964	2,3%	36.601	3,9%	8.872	-9,2%	9.332	3,8%	13.830	-0,8%
b' 2005	41.198	1,6%	36.942	3,7%	8.817	-13,7%	9.043	-1,1%	13.586	-5,9%
c' 2005	41.701	2,4%	37.324	3,6%	8.159	-11,5%	10.397	6,4%	14.197	-0,4%
d' 2005	42.251	2,8%	37.758	4,1%	9.226	-2,7%	9.636	0,8%	14.361	1,2%
2005*	**166.114**	**2,3%**	**148.625**	**3,8%**	**35.073**	**-9,3%**	**38.408**	**2,5%**	**55.974**	**-1,5%**
a' 2006	42.565	3,9%	38.317	4,7%	9.067	2,2%	9.849	5,5%	14.679	6,1%
b' 2006	43.268	5,0%	38.729	4,8%	9.811	11,3%	10.136	12,1%	15.410	13,4%
c' 2006	43.716	4,8%	39.135	4,9%	9.452	15,9%	10.586	1,8%	15.473	9,0%
d' 2006	44.019	4,2%	39.515	4,7%	10.445	13,2%	9.881	2,5%	15.816	10,1%
2006*	**173.568**	**4,5%**	**155.696**	**4,8%**	**38.775**	**10,6%**	**40.452**	**5,3%**	**61.379**	**9,7%**
a' 2007	44.835	5,3%	39.979	4,3%	11.043	21,8%	10.329	4,9%	16.494	12,4%
b' 2007	45.043	4,1%	40.395	4,3%	10.743	9,5%	10.499	3,6%	16.595	7,7%
c' 2007	45.376	3,8%	40.777	4,2%	10.717	13,4%	10.969	3,6%	17.106	10,6%
d' 2007	45.699	3,8%	41.148	4,1%	10.770	3,1%	10.982	11,1%	17.224	8,9%
2007*	**180.953**	**4,3%**	**162.299**	**4,2%**	**43.273**	**11,6%**	**42.780**	**5,8%**	**67.419**	**9,8%**
a' 2008	45.805	2,2%	41.516	3,8%	9.783	-11,4%	11.627	12,6%	17.202	4,3%
b' 2008	45.931	2,0%	41.691	3,2%	10.149	-5,5%	11.563	10,1%	17.550	5,8%
c' 2008	45.830	1,0%	41.800	2,5%	10.722	0,0%	10.662	-2,8%	17.408	1,8%
d' 2008	45.655	-0,1%	41.800	1,6%	11.091	3,0%	10.646	-3,1%	17.942	4,2%
2008*	**183.220**	**1,3%**	**166.806**	**2,8%**	**41.744**	**-3,5%**	**44.497**	**4,0%**	**70.101**	**4,0%**
a' 2009	45.149	-1,4%	41.758	0,6%	8.812	-9,9%	9.205	-20,8%	14.764	-14,2%
b' 2009	44.991	-2,0%	41.739	0,1%	8.275	-18,5%	9.303	-19,5%	14.494	-17,4%
c' 2009	44.690	-2,5%	41.670	-0,3%	8.660	-19,2%	8.494	-20,3%	14.283	-18,0%
d' 2009	44.201	-3,2%	41.604	-0,5%	7.321	-34,0%	8.565	-19,5%	13.513	-24,7%
2009*	**179.031**	**-2,3%**	**166.771**	**0,0%**	**33.068**	**-20,8%**	**35.566**	**-20,1%**	**57.054**	**18,6%**
a' 2010	43.925	-2,7%	41.335	-1,0%	6.355	-27,9%	9.316	1,2%	13.376	-9,4%
b΄2010	43.173	-4,0%	39.338	-5,8%	7.460	-9,8%	8.955	-3,7%	12.704	-12,3%
c΄2010	42.622	-4,6%	39.370	-5,5%	6.396	-26,1%	8.402	-1,1%	11.747	-17,8%

* provisional data

Source: ELSTAT, Quarterly National Accounts, December 2010

The labour market conditions deteriorated further from the negative impact on demand and production activity of the acceleration of the fiscal consolidation effort with the third and largest set of policies. The intense cautiousness regarding the developments in the Greek economy, stemming from the stand-by agreement's reforms, also contributed to this. The long-standing influence of seasonal factors did not manage to curb the rise in

unemployment, which extended quarter-on-quarter by half a percentage point to reach **12.4%**. Unemployment increased almost entirely due to sharp employment contraction (-3.0%) and to a lesser extent due to labour force expansion. Weakening demand and production did not moderate much the inflationary pressures, as despite the fact that **inflation fell to 5.1% in October and November,** from 5.5% in the third quarter, its reduction was caused mainly by higher level of the price index in the corresponding months of 2009 in comparison with last-year's summer period.

In summary, the impact of the intense fiscal consolidation effort as part of the support agreement and the heightened uncertainty about the feasibility of this effort were the key factors that determined the economic developments in the third quarter. This impact was mostly felt on the demand side from the new sharp drop in investment activity, cut in household consumption and large contraction of imports. On production side, the contraction of domestic value added caused new increase in unemployment.

Medium-term outlook

The local government elections and the monitoring of the support programme by EC-ECB-IMF had the largest impact on the formation of the socioeconomic developments in Greece in the beginning of the last quarter of 2010. The implementation of the income and tax policies, adopted with the signing of the support agreement, has depressed household consumption demand. The weak demand is reflected in the constantly falling course of the short-term economic activity indicators. Consequently, it has curbed employment and worsened the investment climate, which in turn has been negatively affected by additional factors (cuts in the Public Investment Programme, very low credit expansion by the banking sector, prolonged absence of legal framework for investment). In this fashion, the domestic economic climate remains unfavourable, which is reflected in the course of the relevant indicators. **Spectacular immediate improvement is not expected, as the implementation of the reforms is gradual and in some cases delayed, while time is needed for their maturation and the delivery of positive results.**

In more detail, on the supply side of the economy, the economic activity indicators continue to contract. The indicators, however, can be separated to those whose contraction accelerates and those, which continue to fall, but at a lower rate. This fact perhaps signifies that **the downturn gradually acquires clear sectoral characteristics and "peaks", ceasing to be comprehensive feature of the economy.**

Industrial production remained below its 2009 level in the first ten months of the year (-5.5% y-o-y). However, the fall has weakened compared with mid-summer (-6.3% in June-July), mainly due to milder fall in manufacturing production. Similar trends can be observed in retail trade turnover, where the year-on-year drop weakened in the third quarter, compared with the second. Still, the evaluation of the fluctuations of this indicator should take into account the increase in officially

recorded transactions due to more comprehensive issuance of purchase receipts. The activity indicator in **construction** continued its sharp drop for yet another quarter, due mainly to slump in the construction of buildings, which fell anew to their lowest level since 2000. Regarding the **tourist sector,** the fall in turnover also decelerated in the third quarter, however, as in the previous quarter, it hit its lowest level for the corresponding quarter since 2006, despite the fact that the global economic conditions were much more favourable than in 2009.

On the demand side, investment expenditure has fallen continuously for a third year. As a result, it hit its lowest September y-t-d level in 11 years, standing at 38% below its peak y-t-d level recorded in 2007. Employment reached its 2006 level, despite the fact that labour force has expanded since then by about 3% (150,000 people). In addition, industrial orders have continued to fall since July, following the sharp drop in domestic demand, while orders from abroad have continued to accelerate, albeit marginally.

The business surveys conducted by IOBE reveal similar trends. The economic climate indicator stabilised in the September – November period, at a small distance, however, from its all time low level. Similar picture was observed in the sector indicators for Industry and Retail Trade. The business expectations index in Services fell sharply in November, standing marginally above its all time low record, while the prolonged recession and the heightened uncertainty that have hit the construction sector resulted in new historically low level recorded in the end of the third quarter and in significant fluctuations since then. In confirmation of the harsh conditions that the households face, the consumer confidence index in October again recorded its lowest level in history.

Regarding the outlook for the upcoming months, the factors that will shape the economic developments are: a) the final attempt to achieve the 2010 fiscal targets, which were adjusted after the latest revision of the public finance figures by Eurostat, b) finalisation of the 2011 budget and c) acceleration of the fiscal and structural reforms, based on the schedule that was set in the Memorandum of Economic and Financial Policies. The importance of the achievement of the above targets is very high in light of the next evaluation of the programme's implementation by EC, ECB and IMF at the end of February. **According to the Explanatory Report of the 2011 State Budget, the highest monthly requirements (interest and capital) for the servicing of public debt will occur in March, when they will reach €12.9 billion.**

Against this background, the effort to contain public expenditure is expected to continue and to escalate, but even more emphasis will be put on the effort to increase the Regular Budget revenue, given the large shortfall from the support agreement target in the first eleven months of the year. **The curb in public consumption in the last quarter of 2010 is expected to exceed the reduction recorded in the preceding quarter**, which was relatively weaker, as mentioned earlier, due to bulky state payments.

The fall in household consumption is expected to deepen. The increase in unemployment and the cut in the Christmas allowance (double in size compared with Easter and summer vacation allowances) for public sector employees and pensioners are expected to be the two key factors behind the accelerating year-on-year drop in private consumption in the last quarter of the year. Additional containment of household consumption expenditure will come from the **crunch in consumer lending, which started in July** and consolidated in the following months to reach 2.3% contraction in October. The insecurity from the reforms in the labour market and in state-owned enterprises, adopted in mid December, might further curb consumption.

Very low and falling rate of corporate credit expansion (2.2% in October) and in general low availability of capital will continue to reduce or hamper investment in the last quarter of the year. Further key causes of the fall in investment expenditure are low domestic demand and the adopted economic and investment policies (prolonged lack of updated investment regulatory framework, successive cuts in the Public Investment Programme, profit taxation). The declining trend in demand is reflected in reversion of the trend in industrial orders from growing to falling since mid 2010 and in stabilisation of the utilisation of production capacity below 70% throughout 2010. The change of investment sentiment in Industry during the year is reflected in the latest **biannual Industry Investment Study of IOBE**. The spring forecast for increase of industry investment by 6.8% by the end of the year gave way to **anticipated reduction by 7.8%.** Much lower level of current and expected demand is also observed by enterprises in trade and services, two key sectors of the Greek economy, as evident in IOBE's business surveys.

Nevertheless, the very low level of investment in the last quarter of 2009 will prevent a much larger fall in investment in the last quarter of 2010. Small acceleration of the Public Investment Programme, provided that the new lower target is achieved, will have very small additional positive impact on this year's investment policy outcome. Apart from height, the timing of investment within the year also matters for this result, as the relevant multipliers need time to take effect. **The particularly unfavourable current investment climate will be subjected to stimulating intervention in the beginning of 2011 with adoption of new investment law, commencement of the implementation of the law for acceleration of strategic investment and reduction of the rate of tax on undistributed profits from 24% to 20%.** The implementation of mature investment plans has been delayed in expectation of these developments.

In the **external sector** of the economy, the beneficial for GDP results since early 2010 will continue to arrive and probably will strengthen until the end of the year. **The fall in imports was not interrupted in the third quarter**. In contrast, it accelerated, compared with the second quarter. Increasing deviation of the euro/dollar exchange rate from its level recorded in the last quarter of 2009

and higher oil price this year will inhibit the demand for imports independently of the impact of endogenous for the Greek economy factors. The level of imports at the end of 2010 will receive further pressure from continuing increase in unemployment, reduction in the relatively high Christmas allowance and the uncertainty about the short-run effects from the changes in the labour market, which will make the consumers more cautious in their spending. The only factor that will limit the fall in imports is their low level in the final quarter of 2009.

The lower y-o-y drop of **exports** in the third quarter, compared with the preceding quarter, is exclusively due to their very low level in the second half of the previous year. Quarter-on-quarter, exports in the third quarter of 2010 were lower by 6.2%, despite the (marginal from mid 2010) increase in international trade transactions. This reveals the competitiveness problems of the domestically manufactured goods (-12.2% q-o-q) and to a smaller degree of services (-1.3%). The impending continuation of the downturn in global trade will affect Greek exports too. However, the negative impact of global demand will be moderated yet again from last year's low base of comparison.

As a result of the trends in the key GDP components, the recession will deepen by the end of 2010, primarily due to the large drop in consumption expenditure, public and private, and the contraction of investment. Taking into account the developments in the key components of GDP, the implementation rate of the support agreement reforms and the reaction that they cause, as well as the time that they need in order to deliver the anticipated results, IOBE expects that **in the last quarter of 2010 GDP will contract by 5.4%, while for all of 2010 the fall in GDP will reach 4.2%.** This estimate is consistent with the latest forecasts of the European Commission, the International Monetary Fund and the Ministry of Finance in the Explanatory Report of the 2011 State Budget (Table 3.2).[38]

Unavoidably, the deepening recession will have a negative impact on the **labour market**. As anticipated in the previous quarterly bulletin of IOBE, unemployment did not fall in the third quarter from the seasonal factors present until 2008. Besides, foreign tourist receipts fell by 4.3% in the third quarter year-on-year, standing at 13.6% below the level recorded in 2008.[39] Under this influence and due to the accelerating contraction of economic activity in general, unemployment increased quarter-on-quarter in the July-September period with margin proportionately similar to that observed in the corresponding quarters of 2009. The year-on-year differences marginally expanded in the third quarter, exceeding three percentage points (12.4% against 9.3%).

In line with the preceding quarters and reflecting the impact of GDP contraction, the increase in unemployment was mainly caused by sharp drop in employment, whose contraction rate was more than

[38]European Economic Forecast - Autumn 2010, European Commission, November 2010 - Explanatory Report, 2011 State Budget, November 2010 - Greece, Second Review Under the Stand-By Arrangement, IMF, December 2010

[39] Balance of Payments, June and September 2010, Bank of Greece

double compared with the first quarter of 2010 (3.0% from 1.3%). Labour force expanded by about 14,000 people (+0.4%), at a lower rate, compared with early 2010, causing a small additional increase in unemployment. Subsequently, the expected deepening of the recession in the last quarter of the current year will impact on the labour market with further contraction of employment. Likely reduction of the labour force, as in conditions of prolonged recession those that cannot find employment over long periods of time gradually abandon the job search, would counteract the previous development. This trend is expected to become evident in 2011. Taking into account the above considerations, the unemployment rate is expected to surpass 13% in the final quarter of 2010, **placing the annual estimate of the unemployment rate in the region of 12.2%**.

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	-2,3	-4,2	-3,0
Private Consumption	2,3	-1,8	-4,1	-4,3
Public Consumption	0,6	7,6	-9,0	-8,5
Gross Fixed Capital Formation	-7,4	-11,4	-17,4	-7,5
Exports of goods and services	4,0	-20,1	0,6	5,1
Imports of goods and services	0,2	-18,6	-12,0	-6,4
Employment	0,1	-0,7	-2,8	-2,6
Compensation of employees / head	5,9	9,5	-1,8	-0,2
Real Unit Cost of Labor	3,9	3,9	-3,2	-1,4
GDP Deflator	3,5	1,2	3,0	1,5
Harmonized Index of Consumer Prices	4,2	1,3	4,6	2,2
Contribution to real GDP change				
Domestic Demand	0,9	-2,2	-8,0	-6,0
Net Exports	-0,5	2,1	3,9	2,9
House Inventories	0,8	-2,1	-0,1	0,1
GDP percentage				
Trade Balance	-16,6	-16,4	-13,1	-11,1
General Government Balance	-7,7	-15,4	-9,6	-7,4
Current Account Balance	-13,8	-14,0	-10,6	-8,0
General Government Debt	99,2	126,8	140,2	150,2
Percentage				
Unemployment (% of civilian labor force)	7,7	9,5	12,5	15,0

Source: European Economic Forecast-Autumn 2010, European Commission, November 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	-2,3	-4,2	-3,0	-2,3	-4,2	-3,0	-2,3	-3,9	-2,7	-2,6	-4,2	-3,0
Final Demand	:	:	:	-6,6	-6,1	-3,7	-2,5	-7,2	-5,7	:	:	:
Private Consumption	-1,8	-4,1	-4,3	-1,8	-4,1	-4,3	-1,8	-3,9	-4,3	-1,8	-4,1	-4,3
Harmonized Index of Consumer Prices	1,3	4,6	2,2	1,3	4,6	2,2	1,3	4,7	2,5	1,2	4,6	2,2
Gross Fixed Capital Formation	-11,4	-17,4	-7,5	-11,4	-17,4	-7,5	-13,9	-18,2	-10,6	-11,4	-18,8	-8,5
Unemployment (%)	9,1	12,1	14,6	9,5	12,5	15,0	9,5	12,2	14,5	9,4	12,2	14,3
General Government Balance (% of GDP)	-15,4	-9,4	-7,4	-15,4	-9,6	-7,4	-13,7	-8,3	-7,6	-15,4	-9,6	-7,4
Current Account Balance (% of GDP)	-13,1	-10,6	-8,0	-14,0	-10,6	-8,0	-11,4	-10,5	-7,5	-11,2	-10,4	-7,1
Gross Public Debt (% of GDP)	126,8	142,5	152,6	126,8	140,2	150,2	:	:	:	127	141	152

Sources: Budget rapporteur 2011, November 2010 -European Economic Forecast-Autumn 2010, European Commission, November 2010 - OECD Economic Outlook No. 88, November 2010 - Greece, Second Review Under the Stand-By Arrangement, IMF, December 2010

The increase in unemployment, together with the remaining reasons that will weaken consumer demand that were presented above, **is expected to accelerate the fall of inflation**, which started in October and continued in November. However, the observed easing of inflation was caused mainly by higher level of the consumer price index during the corresponding months of 2009. This year, while CPI was falling in the summer months, inflation remained at high levels or even was rising, because of its very low levels one year before. Since September the price index has risen, which reflects the resilience of long-standing distortions in many markets. However, its increase in the same period of the previous year was faster, which results in decelerating inflation in the current period. This "base effect", together with shrinking demand, will ease the inflationary pressures that will come from rate increase of the two reduced rate VAT categories in the beginning of the new year from 5.5% to 11% and 6.5% to 13% correspondingly. For 2010, inflation is expected to remain at the average for the first eleven months, when it stood at **4.7%**.

In summary, it is evident that the Greek economy is suffering the "throes" of a front-loaded fiscal adjustment programme, which, provided that the recent estimates in the 2011 State Budget's Explanatory Report are confirmed in practice, has resulted in an unprecedented reduction of fiscal deficit by six percentage points of GDP in a single year. This result was achieved mainly through tax rate increase, cuts in wages and pensions, ad-hoc corporate taxation, curb in the Public Investment Programme and comprehensive expenditure reduction. In other words, this was achieved through measures of imme-

diate impact, which naturally caused acute social reaction, without touching upon long-standing structural problems of the functioning of the state and the Greek economy in general. Economic policy's centre of attention is gradually shifting to these problems, according also to the latest update of the support agreement, with a multitude of planned reforms for 2011. This change, apart from any positive consequences it might have, is unavoidable, as the types of measures adopted so far are showing signs of exhaustion. **However, in contrast with the measures adopted so far, the benefits of the structural reforms are not going to occur immediately. In contrast, time is needed for the adjustment of processes, institutions and markets and thus for the full delivery of the positive impact from the adjustment.**

Therefore, responsibility, patience, effort and disposition to cooperate and reconcile different views and interests that have consolidated over time are essential in the period during which the Greek economy is in a process of adjustment. **We should take in view the costs and benefits that occur to the entire society, rather than to individual social and economic groups. It is also clear that choices on long-standing dilemmas should be made in various sectors, as delays or new postponement no longer offer advantages in political, social or economic level.** In contrast, they undermine the effort expended by the Greek society, weaken the momentum of the benefits that could occur and finally delay the needed for many years process of restructuring of the Greek economy, which could lead to a new cycle of sustainable development.

3.2 Developments and prospects in key sectors of the economy

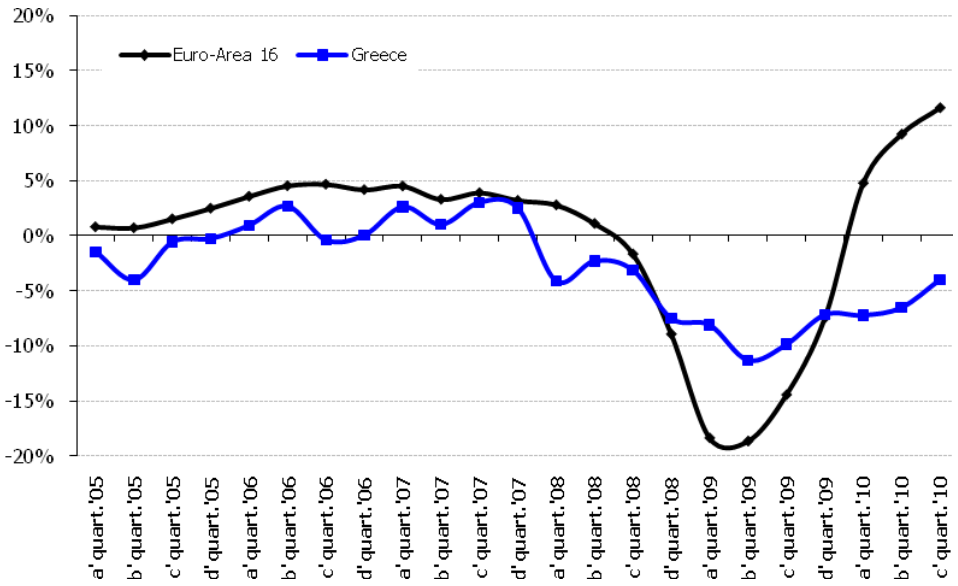
This section presents the quarterly indices of activity complied by the Hellenic Statistical Authority (ELSTAT), which track the course of production in Industry and the turnover of businesses in the sectors of Construction, Commerce and Services. In addition, it presents the corresponding branch indices compiled by IOBE on the basis of the business surveys it has been conducting in Greece since 1981.

Industry

Industrial production continued its contraction, which had started in January 2008. In particular, the indicator fell by 4.2% in October year-on-year. Despite this, **the annualised fall of industrial production in the first ten months of the year decelerated, reaching 5.5%** year-on-year, against y-o-y fall by 10.0% in 2009.

The industrial production in the majority of the Euro area countries has been expanding. As a result, the indicator for the region increased by 5.8% in the first nine months of 2010, against a substantial drop by 15.6% in 2009. Hence, industry in the Euro area has essentially recovered and unlike Greece has returned on a stable growth path.

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

At branch level, the largest reduction in production in Greece in the first ten months of the year was recorded in electricity and natural gas supply, which contracted by 8.9% in 2010 against 3.9% fall in the previous year. In Mining-Quarrying the contraction has decelerated, as the rate of decline was almost half of that recorded in 2009 (-6.7% against -12.1%). Meanwhile, the contraction in Manufacturing is easing too in comparison with 2009 (-4.6% against -12.2%). Lastly, the index in Water Supply increased marginally by 0.9% against a fall by 2.7% recorded in the previous year.

In **Mining-Quarrying**, the deceleration of production contraction came from significant boost in Extraction of Crude Petroleum & Natural Gas (58.5% against 24.3% in 2009) and production increase in Mining of Metal Ores (12.5% against -24.6% in 2009). Production in Other Mining and Quarrying marginally increased by 0.9%, compared to a large drop in the corresponding period of 2009 (-29.0%). However, production in Mining of Coal & Lignite fell at an accelerating rate (-13.5% against -1.6%), which was connected with the reduction of production of electricity from lignite (9.4% in the period under examination, according to data from the Hellenic Transmission System Operator).

In Manufacturing, the index fell in the first ten months of the year in 17 out of 24 branches, while the improvement of EU industrial production impacted positively the production in branches with export orientation. Among the branches with high share in domestic value added, the fall in production in Food manufacturing slowed down (-2.9% against -4.2% in 2009), while in contrast the contraction in Beverage manufacturing became more pronounced, compared with the previous year

(-7.1% against -6.4%). Production in Textiles continued to decline, which despite the smaller drop in comparison with 2009 (-19.6% against -29.4%) resulted in further significant contraction of the branch. On the other hand, the production of Base Metals increased significantly (11.3% against significant drop by 20.1% in the previous year), while Chemicals continued to increase marginally (+0.9% against drop by 15.7% in 2009). The production of Coke & Refinery Products continued to increase (4.7% against 1.6% in 2009), while the increase in the manufacture of Pharmaceutical Products significantly slowed down (4.1% against 18.2% in 2009).

Overall, the manufacture in branches producing Capital and Intermediate Goods fell significantly (-25.0% and -20.0% respectively), at comparable rates with 2009. The fall was stronger in Energy (-5.0% against -2.2%) and in Consumer Non-Durables (-6.2% against -5.1%). In contrast, the fall in Consumer Durables slowed down, compared with the previous year (-11.4% against -22.3%).

Construction

The substantial decline of the general index of production in Construction continued in the third quarter, reaching 63.3 (lowest level in five years). The index **fell by 37% year-on-year, against similarly significant drop by 30.8% in 2009.**

The index fell in the Euro area too, but the contraction slowed down in comparison with 2009 (see Figure 3.2). The index for EU-27 also showed signs of stabilisation (-7.6% against -9.1% in 2009). Significant contraction was observed in Romania (-14.6% against +1.9% in 2009), Slovenia (-5.2% against -6.2%) and the Netherlands (-2.7% against -0.3%).

Regarding the production indices of the branches that comprise the sector, in Building Construction production fell by 47.2%, against a drop of 31.6% in the third quarter of 2009, while similar trend was observed in the Civil Engineering production index (-31.7%). Meanwhile, total building activity declined, in terms of both number of permits and building volume, in the first nine months of the year, reaching 37,092 permits, lower year-on-year by 10.9%.

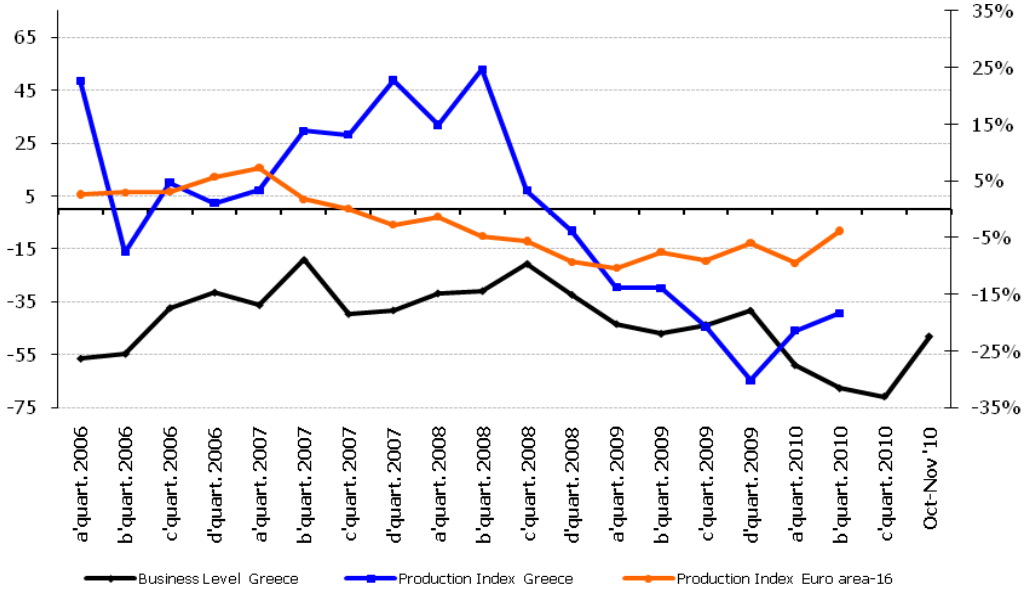
Building volume contracted by 25.7%, following the 2009 drop by 24.0%. Lastly, the surface of new buildings fell significantly by 20.7%, after its drop by 19.7% in 2009.

The acute recession in the branch has spread over all regions, as across the country the number of new permits declined. The drop is deeper in Crete (-19.5%), West Macedonia (-19.2%), North Aegean (-18.8%) and Central Greece (-13.4%).

In the third quarter of 2010, the transactions with residences with the mediation of credit institutions were lower by 3.8% year-on-year (approx. 16,000), while quarter-on-quarter the fall reached 13.7%. However, the intensity of the contraction in transactions is more evident, when compared with 2008 (-43.0%).

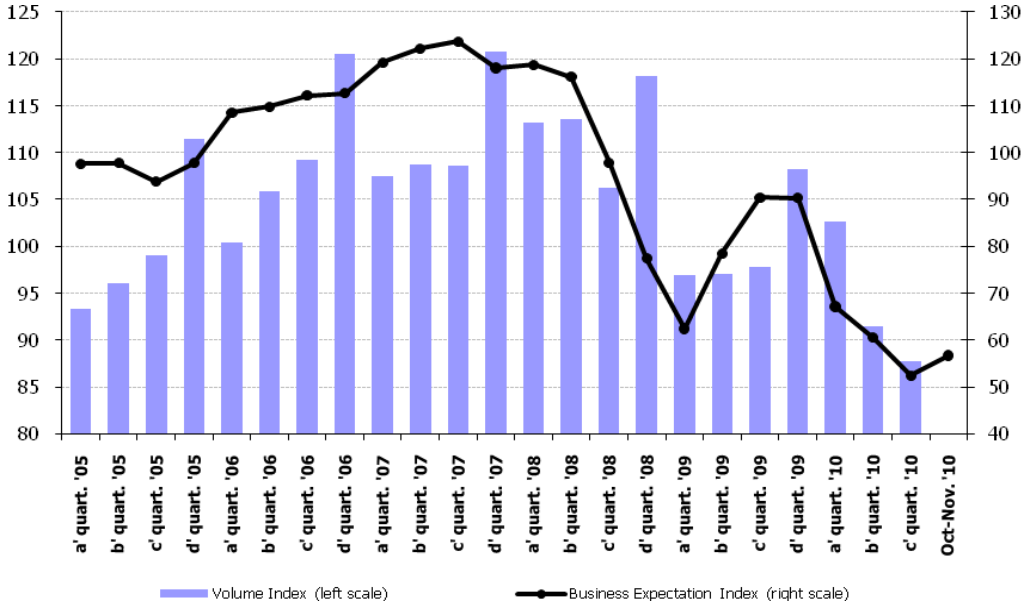
Meanwhile, transaction value continued to decline, contracting 11.2% quarter-on-quarter. Mortgage lending also continued to decline. The outstanding balance of mortgage loans fell by 1.45% in October, against 0.31% drop in August, while the average mortgage lending rate in October marginally increased reaching 3.68% against 3.62% in the preceding month.

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



Source: ELSTAT-IOBE

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



Source: ELSTAT

Retail Trade

The **Volume Index in Retail Trade** (turnover at constant prices, including automotive fuels and lubricants)[40] dropped further, standing at 87.8 (lowest level in 6 years) in the third quarter of 2010. It fell by 10.3% year-on-year and by 4.0% quarter-on-quarter. **Overall for the first nine months of 2010, the reduction of the index reached 3.4%, which is milder than the contraction experienced in the corresponding period of 2009, when it exceeded 12%.** However, almost all retail trade categories registered significant quarter-on-quarter and year-on-year decline.

The largest drop in the third quarter of 2010 was recorded in Clothing-Footwear and Furniture-Electrical Appliances-Household Goods by 17% in both categories (against an increase by 4.4% and drop by 13.5% in 2009 respectively). These were followed by Automotive Fuels & Lubricants, which fell by 11.1% (against -6.2% in 2009), Pharmaceuticals-Cosmetics (-10.7% against +3.1% in 2009) and Departmental Stores, where contraction (which started in the final quarter of 2008) accelerated, reaching 10.0%. Similar was the situation in Supermarkets, where the retail trade volume index fell by 8.5% in the third quarter (-4.8% in 2009). Lastly, Books-Stationary-Other Gift Items stabilised in relation to 2009.

These trends were captured early enough in the **Business Surveys** carried out by IOBE. The overall confidence index for Retail Trade fell year-on-year at a similar rate with the fall registered in 2009 (-26% against -24% in 2009).

In the constituent categories, similar drop with the previous year was also recorded in Fabrics-Clothing-Footwear (-23.4%), while the negative sentiment seems to have eased in Household Appliances (-17.6% against -37.2%). The business expectations were disappointing in Motor Vehicles – Spare Parts (-44.9%) and Department Stores (-16.3%), while the pessimism in Food-Beverages-Tobacco seems to be weakening (-11.7% against -24% in the corresponding period of the previous year).

For Motor Vehicles, in particular, the Confidence Indicator continued to decline in October and November, reaching almost 1/3 of the average for the period 2001-2009. Two out of three enterprises were expecting their sales to decline in the upcoming quarter (the adopted tax discounts were not widely known when the survey was conducted), while three in four enterprises were anticipating fall in orders to suppliers. Besides, from the official sales data the volume of sales in the first 11 months of 2010 was lower by 1/3 year-on-year, while it reached only half of the sales recorded in 2008. This development reduced the employment in the sector, which fell by almost 10%, reducing in the meantime the tax revenue from car sales.

[40] 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'.

Table 3.4
Annual Changes in the Index of Retail Trade Volume, January-September

Store Categories of Retail Trade	Volume Index (2005=100,0)				
	Jan-Sep 2008	**Jan-Sep 2009**	**Jan-Sep 2010**	**PC (%) '09/'08**	**PC (%) '10/'09**
Overall Index	111,0	97,3	93,9	-12,4%	-3,4%
Overall Index (excluding car fuels and lubricants)	107,4	96,1	92,5	-10,5%	-3,7%
Store Subcategories					
Large Food Stores	113,0	105,1	102,1	-6,9%	-3,0%
Multi stores	122,5	110,0	98,2	-10,2%	-11,8%
Car Fuels and Lubricants	122,8	89,0	80,8	-27,5%	-8,3%
Food-Drink-Tobacco	93,6	91,1	89,0	-2,7%	-2,1%
Medicare-Cosmetics	105,6	106,2	109,1	0,6%	2,8%
Clothing-Footwear	91,4	95,0	86,3	3,9%	-8,7%
Furniture – Electric household appli-ances - Household Goods	119,4	97,2	89,5	-18,6%	-7,7%
Books - Stationery- Other gift items	106,2	76,5	75,8	-27,9%	-0,7%

Source: ELSTAT

Table 3.5
Business Expectation Indexes in Retail Trade (1996-2006=100)

	Jan-Nov 2008	**Jan-Nov 2009**	**Jan-Nov 2010**	**PC% 09/08**	**PC% 10/09**
Food – Drinks - Tobacco	113,7	86,4	76,3	-24,0%	-11,7%
Textile-Clothing - Footwear	119,7	90,1	69,0	-24,7%	-23,4%
Household Equipment	108,3	68,0	56,0	-37,2%	-17,6%
Vehicles – Spare Parts	95,7	77,7	42,8	-18,9%	-44,9%
Multi stores	115,9	105,8	88,5	-8,7%	-16,3%
Retail Trade Total	105,8	80,4	59,4	-24,0%	-26,1%

Source:IOBE

The revenues from the tax on registration of new vehicles for all of 2010 is expected to be lower by 42% in comparison with 2009 and 67% lower than 2008, according to the State Budget.

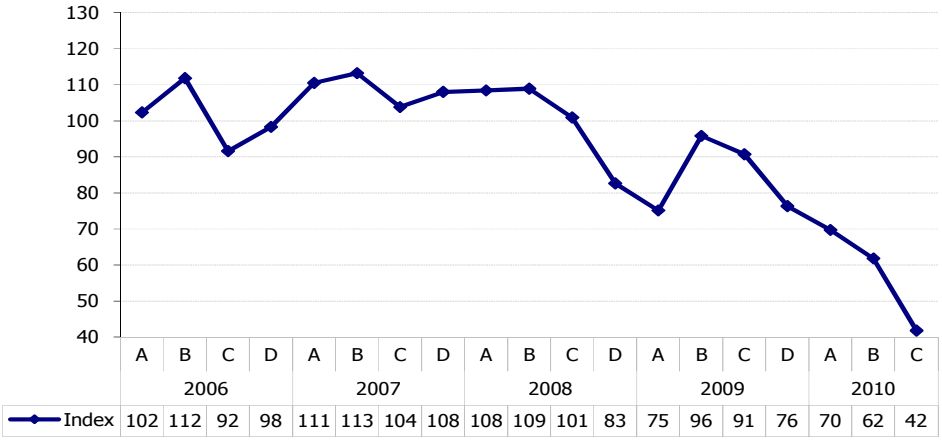
On demand side, the intention to buy a car, according to the latest available measurement (October 2010), fell to its lowest level in history, as the percentage of those declaring that it was quite possible for them to purchase a new car in the next 12 months fell significantly to 0.9% from 2.7% in the previous measurement.

Wholesale Trade

The **Turnover Index for Wholesale Trade** (branch 46 in NACE Rev.2)[41] declined by 14.3% year-on-year in the third quarter of 2010, against a corresponding decrease of 4.1% in relation to 2008. The index fell significantly in comparison with the immediately preceding quarter (-9.4%).

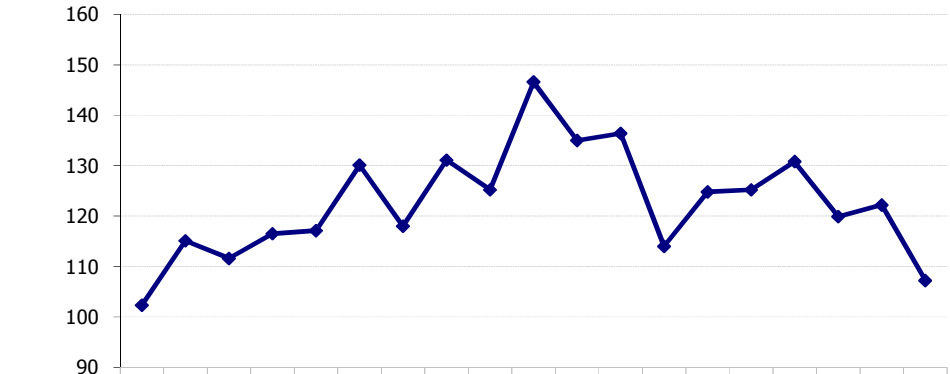
[41] The Wholesale Trade index is calculated without VAT and includes the total amounts invoiced by a company during the reference period (quarter).

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



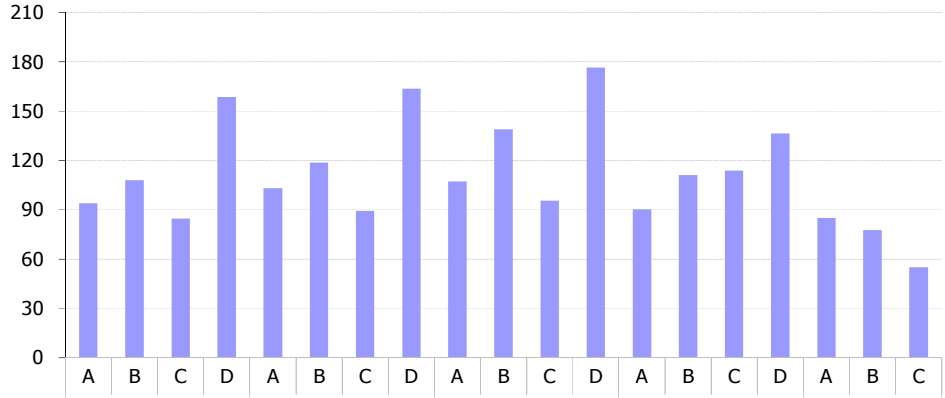
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C
	2006				2007				2008				2009				2010		
Index	102	112	92	98	111	113	104	108	108	109	101	83	75	96	91	76	70	62	42

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



	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C
	2006				2007				2008				2009				2010		
Index	102	115	112	117	117	130	118	131	125	147	135	136	114	125	125	131	120	122	107

Figure 3.6
Turnover Index in Informatics Services -Sector 62- (2005 = 100)



	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C
	2006				2007				2008				2009				2010		
Index	94	108	85	159	103	119	89	164	107	139	96	177	90	111	114	137	85	78	55

Source:ELSTAT

Services

In the Services sector,[42] the number of branches with year-on-year turnover reduction increased in the third quarter of 2010. In particular, in 12 out of the 14 branches turnover fell in the third quarter of 2010, against 9 branches in the corresponding period of the previous year. Overall for the first nine months of 2010, turnover fell in 13 branches, against 11 branches in 2009.

In greater detail:

Sharp year-on-year drop was recorded in the third quarter in **Office administrative, office support and other business support activities** (branch 82), where the index fell by 60.4% (against increase by 28.1% in the previous year), approaching its lowest level in history. The turnover index in **Other professional, scientific and technical activities** (branch 74) dropped by 57.5%, reaching its lowest level in three years.

Sharp fall was also recorded in **Computer Programming, Consultancy and Related Activities** (branch 62), where the index fell by 52.2% (against increase by 19.2% in the corresponding quarter of the previous year), reaching its lowest third quarter result for the period 2007-2010. **Telecommunications** (branch 61) were also affected by the adverse economic conditions, where turnover contracted year-on-year by more than 7.7% in the third quarter, against a year-on-year contraction by 11.7% in the corresponding period of the previous year.

[42] The indices that IOBE has selected to present are mainly those for which additional data are available from its Business Surveys.

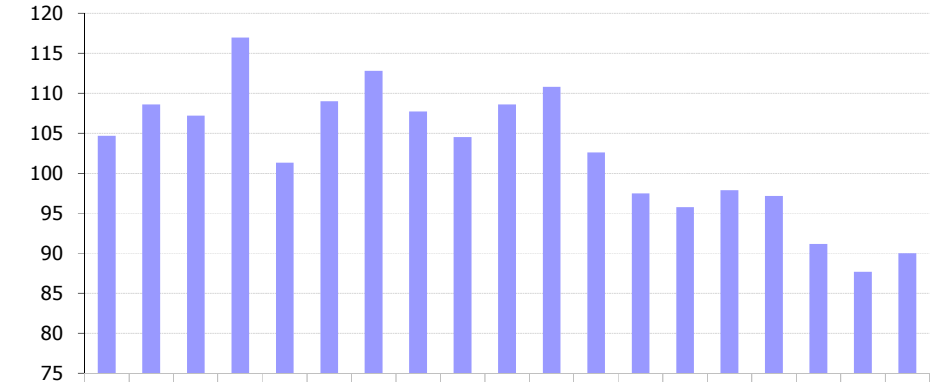
The index in the tourism sector, which includes **Accommodation** (branch 55) and **Food and Beverage Service Activities** (branch56), increased sharply quarter-on-quarter by 61.3%, but this reflected the seasonal pattern of tourist traffic, as the third quarter includes the two peak summer months. Year-on-year, the turnover index fell by 7.5%, stabilising at the levels recorded in the third quarter of 2006.

In contrast, large increase by 7.6% in the first nine months of 2010 (against -11.6% in 2009), was recorded in **Legal and accounting activities** (branch 69). In the third quarter, the index decreased by only 1%, against 20.7% drop in the corresponding quarter of the previous year. Increasing was also the turnover in **Security and investigation activities** (branch 80), but at a weaker rate compared with the previous year (0.4% against 10.0% in the third quarter of 2009).

Using data from IOBE's business surveys, the confidence indicator for Services fell by 8.9% year-on-year in the first ten months of the year. Meanwhile, in most individual branches of this sector pessimism has been pervasive, yet stabilisation trends have started to appear. For example, the confidence indicator in Travel agency, tour operator and related activities fell by 7% year-on-year, while in Hotels-Restaurants the indicator decreased by 5.0%.

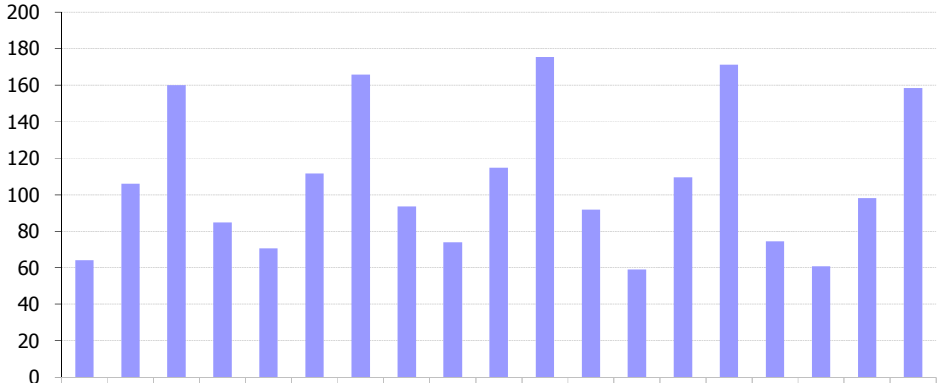
In contrast, business expectations were most optimistic in Financial Institutions, where the indicator gained 3.7% (against -17.9% in the previous year), but also in various business services.

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



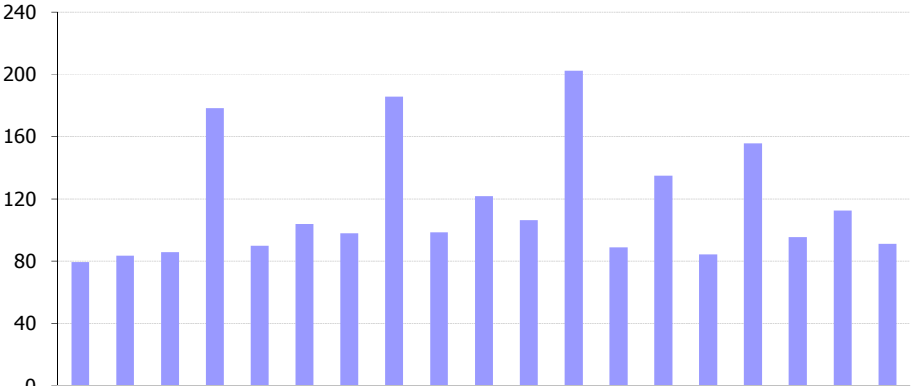
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C
	2006				2007				2008				2009				2010		
Index	105	109	107	117	101	109	113	108	105	109	111	103	98	96	98	97	91	88	90

Figure 3.8
Turnover Index in Accommodation, Food and Beverage Service Activities -Sectors 55 & 56-(2005 = 100)



	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C
	2006				2007				2008				2009				2010		
Index	64	106	160	85	71	112	166	94	74	115	175	92	59	109	171	75	61	98	158

Figure 3. 9
Turnover Index in Legal, Accounting and Consulting Services -Sectors 69 & 70.2- (2005 = 100)



	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C
	2006				2007				2008				2009				2010		
Index	80	84	86	178	90	104	98	186	99	122	106	202	89	135	84	156	95	112	91

Source: ELSTAT

Table 3.6

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

	Jan-Nov 2008	Jan-Nov 2009	Jan-Nov 2010	PC% '09/'08	PC% '10/'09
Hotels - Restaurants	101,56	79,5	75,5	-21,7%	-5,0%
Activities of travel agencies and tour operator, tourist assistance activities	87,83	70,8	61,9	-19,4%	-12,5%
Other Services to Businesses	90,87	59,7	61,8	-34,3%	3,4%
Intermediate Financial Organizations	87,60	71,9	74,5	-17,9%	3,7%
Informatics	94,75	65,5	47,4	-30,9%	-27,5%
Total Services	100,70	70,0	63,8	-30,5%	-8,9%

Source: IOBE

In summary, in the first ten months of 2010 **industrial production continued,** albeit at a decelerating rate, **its contraction** that had commenced in January 2008. Meanwhile, industrial production in the Euro area seems to have essentially recovered from the downturn, growing steadily. **Only the branches with export orientation showed resilience to the crisis**, maintaining or expanding their production level, while in contrast branches serving mostly domestic demand continued to contract. Construction also experienced significant contraction, as total building activity fell at a higher rate, compared with 2009.

The turnover index in Retail Trade fell, but at lower rate compared with the corresponding period of the previous year, in almost all of its branches. Strong contraction was experienced in Motor Vehicles, while significantly lower turnover was recorded in the majority of branches in the Services sector.

3.3 Export Performance of the Greek Economy

In the January – September period of 2010, **Greek exports stood at €11.2 billion, higher by 1.8% compared with the corresponding period of the previous year, when they fell by 16%.** In contrast, imports continued to contract, falling at a similar rate with the same period of 2009 (-22.5% against -21%). The value of imports in the period under investigation reached almost €30 billion, while **trade deficit declined by 32.5%.** As a result, in combination with the sizeable drop recorded in 2009 (-22.9%), **trade deficit fell to its lowest level in five years at least**, reaching €17.8 billion. Accordingly, the imports-exports coverage ratio reached 38.5% in the first nine months of 2010, from 29.4% in the corresponding period of the previous year.[43]

The export of industrial products, which represented the largest share in Greek exports (58.2%), increased by 1.7% (or

[43] 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.

€105.9 million) in the January-September period, against significant fall in the previous year (-19.9%). The increase came mostly from exports of 'chemical and related products' (+9.9%) and 'industrial goods classified by raw material' (+9.3%). Their increase overcompensated the decline by €228.5 million in the exports of 'vehicles and transport equipment' (-13.9%) and 'various industrial goods' (-1.6%), maintaining their share in exports stable at 10.5% in the last two years.

The share of agricultural products in total exports remained unchanged year-on-year, representing one fourth of the total value of exports, while their value slightly declined. The total export value of 'Food and live animals' increased by 3.2% (or €76.1 million) year-to-date in September 2010, continuing their last year recovery (4.3%). This increase, however, was not sufficient to compensate for the reduction of exports in the remaining categories of agricultural products. In particular, the exports of 'beverages and tobacco' dropped by 14% (or €65 million) in comparison with the corresponding period of 2009, when the exports in this category had registered the highest increase among the one-digit categories (16%). The exports in 'animal and vegetable oils and fats' also contracted with their value declining by €27.5 million (-12.4%).

In the remaining categories, increase by 8.1% (€40.1 million) was experienced in raw materials (against 16.2% drop in the previous year) and by 42.9% (€90.9 million) in 'products and transactions not classified elsewhere', whose value, however stood at relatively low levels. Lastly, fuel exports declined by 2%, (against a drop of 27% in the corresponding period of 2009).

Regarding destination, **the exports of Greek products to 18 of the 27 EU member-countries increased in the first nine months of 2010** and as a result total exports to this region increased by €366.3 million (+5.3%) year-on-year. This increase was also boosted by large increase in exports (+16.5%) to EU countries outside the Euro area, which absorbed 21.4% of total exports in the period under investigation. In particular, exports to the United Kingdom increased by 37.4% (€176.1 million), which made the UK the fifth largest destination for Greek exports during that period. Increase was also registered in the exports to all remaining EU countries outside the Euro area, with most significant expansion recorded in Poland (33.2%), the Czech Republic (32.3%), Hungary (31%) and Denmark (25%). In contrast, smaller increase was registered in the exports to the 16 Euro-area member-countries (+0.6%), whose share marginally fell year-on-year to reach 43.9%.

As for Greece's main partners, the exports to Germany increased by 3.9%, standing at €1.3billion. This destination remained the largest market for Greek products, absorbing 11.7% of Greek exports. Italy followed, where exports decreased by €1.2 billion, which represented 6.9% year-on-year drop. Meanwhile, in Cyprus, which is the third largest trading partner of Greece, the exports stood at €785.2 million, marginally higher compared with the corre-

sponding period of 2009. In the remaining markets that absorb large shares of the Greek exports, increase was experienced in Turkey (21.8%), France (9.6%) and Romania (6.9%), while in Bulgaria, which is Greece's main trading partner in the Balkans, exports increased by 3.2%.

Exports to OECD countries, which accounted for 57.9% of Greece's total exports, increased by 2.2% in the period under investigation. In the Balkan region, which absorbed 17.8% of the exports, the value increased marginally by 0.1%. Apart from Bulgaria and Romania, the value of exports increased in Croatia (43.9%), Bosnia-Herzegovina (6.4%) and Albania (0.5%) and decreased in Serbia-Montenegro-Kosovo (-4%) and FYROM (-21%).

Exports to North America fell significantly (-24.6%), reaching their lowest level in four years. This was mostly caused by reduction of exports to the US market, the 9th largest trading partner of Greece in the period under examination, by €185.8 million (-32.3%). In contrast, exports increased in Mexico and Canada, by 38.8% and 29.9% respectively, which however was not sufficient to compensate for the drop in the exports to the US economy due to their small share.

Table 3.7

Exports per 1-digit product classification (in million €), January – September 2010

	Value (mil. €)		P.C. (%)		Structure (%)		
	2010*	**2009***	**'10/'09***	**'09/'08***	**2010***	**2009***	**2008**
Agricultural Products	**2.815,1**	**2.838,2**	**-0,8%**	**4,5%**	**25,2%**	**25,9%**	**20,8%**
Food and live animals	2.221,3	2.151,8	3,2%	4,3%	19,9%	19,6%	15,8%
Beverages & Tobacco	399,8	464,7	-14,0%	16,0%	3,6%	4,2%	3,1%
Animal, Vegetable oils and fats	194,1	221,6	-12,4%	-11,6%	1,7%	2,0%	1,9%
Raw Materials	**538,7**	**498,6**	**8,1%**	**-16,2%**	**4,8%**	**4,5%**	**4,6%**
Crude materials inedible, except fuels	538,7	498,6	8,1%	-16,2%	4,8%	4,5%	4,6%
Fuels	**1.013,0**	**1.033,6**	**-2,0%**	**-27,0%**	**9,1%**	**9,4%**	**10,8%**
Minerals, fuels, lubricants, etc.	1.013,0	1.033,6	-2,0%	-27,0%	9,1%	9,4%	10,8%
Industrial products	**6.495,1**	**6.389,2**	**1,7%**	**-19,9%**	**58,2%**	**58,2%**	**61,0%**
Chemicals and related products	1.706,5	1.552,9	9,9%	-13,1%	15,3%	14,2%	13,7%
Manufactured goods classified chiefly by raw material	2.361,0	2.161,0	9,3%	-28,8%	21,1%	19,7%	23,2%
Machinery and transport equipment	1.284,2	1.513,0	-15,1%	-13,7%	11,5%	13,8%	13,4%
Miscellaneous manufactured articles	1.143,5	1.162,4	-1,6%	-17,0%	10,2%	10,6%	10,7%
Other	**303,0**	**212,0**	**42,9%**	**-42,2%**	**2,7%**	**1,9%**	**2,8%**
Commodities and transactions not classified by category	303,0	212,0	42,9%	-42,2%	2,7%	1,9%	2,8%
Total Exports	**11.164,9**	**10.971,6**	**1,8%**	**-16,0%**	**100,0%**	**100,0%**	**100,0%**

*Provisional data
Source:PEA-ERC-ELSTAT

The exports to the countries of North Africa and the Middle East, which represented 6.8% of total exports, increased by 2.5% year-on-year. Regarding the countries that absorbed the largest share of exports in this region, increase was recorded in Saudi Arabia (62.3%), Morocco (47.7%), the United Arab Emirates (26.2%), Libya (19.7%), Algeria (19.3%) and Israel (2.5%), while in Egypt, which represented the largest share of exports in the region, the value of Greek exports fell by -20.7%.

The exports to the countries of the Commonwealth of Independent States increased by 14.2% in the January-September period of 2010, as a result of increase in the exports to Russia by 32.2%, with their total value standing at €220.4 million. Lastly, the exports to China increased by €35.3 million (+52%) year-on-year, while the exports to India declined by 13.5%.

Table 3.8

Exports per destination, January – September 2010

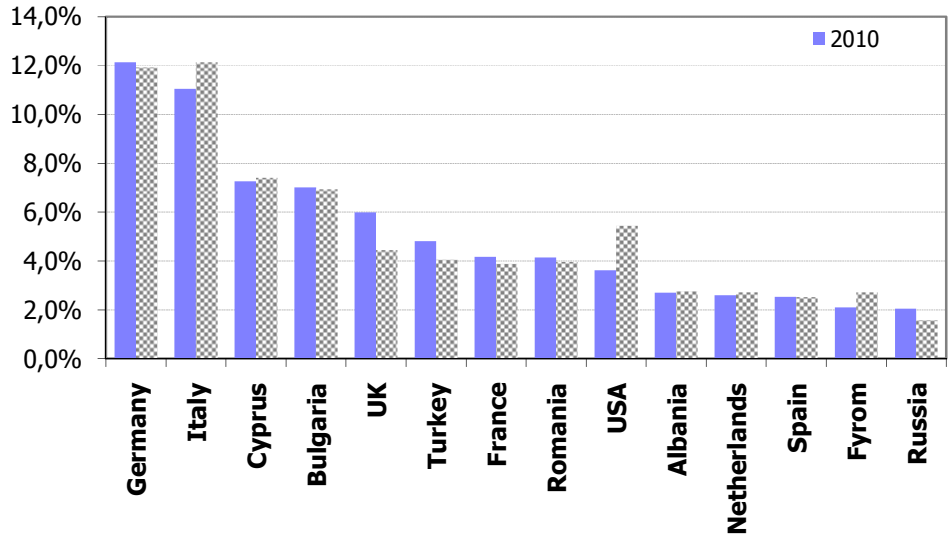
	Value (mil. €)		P.C. (%) '10/'09	Structure	
	2010*	**2009***		**2010***	**2009***
OECD (29 countries)	6.461,8	6.325,7	2,2%	57,9%	57,7%
EU (27)	7.291,9	6.925,6	5,3%	65,3%	63,1%
Euro Area -16	4.899,2	4.870,7	0,6%	43,9%	44,4%
New EU members	1.262,8	1.179,4	7,1%	11,3%	10,7%
North America	492,3	652,8	-24,6%	4,4%	5,9%
Other Developed Countries	86,6	74,8	15,9%	0,8%	0,7%
Rest OECD (excl. S. Korea)	86,6	74,8	15,9%	0,8%	0,7%
Balkans	1.988,4	1.987,4	0,1%	17,8%	18,1%
Commonwealth of Independent States (CIS)	334,5	292,9	14,2%	3,0%	2,7%
Middle East and N. Africa	753,9	735,7	2,5%	6,8%	6,7%
African Countries (excl. S. Africa)	74,7	100,4	-25,6%	0,7%	0,9%
S. E. Asia	136,5	98,1	39,1%	1,2%	0,9%
Latin America	38,4	44,6	-13,9%	0,3%	0,4%
China	39,6	45,8	-13,5%	0,4%	0,4%
S. E. Asia	103,1	67,8	52,0%	0,9%	0,6%
Rest	370,2	396,0	-6,5%	3,3%	3,6%

* Provisional Data

Source:PEA-ERC-ELSTAT

Figure 3.10

Countries with the biggest share on Greek exports
(January - September 2009 and 2010)



Source: PEA **Data processing:** IOBE

Overall, **the improvement in industrial production and consumption both in the main trading partners of Greece** and in the countries that absorb smaller share **boosted substantially the performance of the Greek exports** in the first nine months of 2010. This increase, together with the fall in imports, resulted in contraction of the trade deficit to its lowest level in several years, which partly counteracted the fall in GDP during the same period from the reduction in consumption and public investment. Meanwhile, the downward trend in domestic demand, as a result of the fiscal consolidation measures and the credit worthiness crisis, 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 all of 2010, the value of Greek exports is expected to increase by 2-2.5% year-on-year, reaching about €14.7 billion, which will represent 6% of the country's GDP.

3.4 Employment - Unemployment

The hike in unemployment is the most distressing result of the Greek economy's recession. In the third quarter the unemployment rate continued to increase, reaching its highest level in a decade (12.4%). Year-on-year it increased by 3.1 percentage points, while it also grew quarter-on-quarter by 0.6%. As a result, **the total number of unemployed reached approximately 621,900 – the largest figure in at least 12 years** – increasing by about 156,800 (or 33.7%) year-on-year and by about 27,900 (4.7%) quarter-on-quarter. Meanwhile, the unemployment rate in Greece was the fourth highest in the Euro area (9.7% on average), only behind Spain (19.8%), Slovakia (14.3%) and Ireland (14.1%). In the January-September period of 2010, the unemployment rate reached 12% (600,900

unemployed), against 9.2% in the corresponding period of the previous year (456,000 unemployed).

The number of employed fell by 3% year-on-year, which was the largest y-o-y drop in the Euro area (-0.2% on average). Meanwhile, it fell by 24,100 people (-0.5%) quarter-on-quarter. The size of the labour force stood at its highest level in 12 years (5,024,900 people), which implied that significant number of people entered the labour market without finding a job. Lastly, the employment participation rate, i.e. the labour force as a percentage of the population, did not change year-on-year (54.0%), as labour force and population grew at the same rate (+0.4%).

Regarding the characteristics of the labour force, **unemployment among women** stood at 16.1% in the third quarter of 2010, against 13.1% in the same period of the previous year. Similar growth rate was recorded in unemployment among men, which, however, continued to be significantly lower than that among women (9.7%). Regarding the age characteristics of unemployment, apart from the long-lasting high rate of unemployment among young people aged 15-29 (24.2% against 18.5% in the previous year), **output contraction has brought large increase in unemployment in all age groups.** The unemployment rate among those aged 30-44 reached its highest level in 12 years (11.5%), with the number of unemployed (approximately 250,500) increasing by 41% (or approximately 67.200) year-on-year. Similar trend was observed in those aged 45-64, where the unemployment rate reached 7.6% (against 5.7% in the previous year) and the number of unemployed totalled approximately 136,400 people (36.4% increase).

Among the **'new unemployed'**, i.e. those that entered the labour market for the first time without being able to find a job, the jobless rate (23.7%) fell by 4.4 percentage points year-on-year in the third quarter of 2010. In contrast, **long-term unemployment** increased by 4.8 percentage points year-on-year to reach (48.4%), which reveals 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 has remained at a higher level compared with the Greek nationals (14% against 12.2%) since early 2009. This result is due to larger share of economically active foreign nationals (74.5% against 54% for the Greek nationals), as well as the fact that they are participating in branches that were hit harder by the recession.

Regarding the level of education, unemployment was highest among **individuals with medium and low educational level**. The largest unemployment rate (19.3%) and, at the same time, the highest year-on-year increase in unemployment (+4.2%) was recorded among individuals who have not attended school at all. The unemployment rate increased at a similar rate for tertiary technical education graduates (15.1%), followed by intermediate school graduates (13.6%) and high school graduates (12.8%).The unemployment rate among individuals who have completed only some years of primary school increased at a similar rate with the national average. In contrast, easier access to the labour market

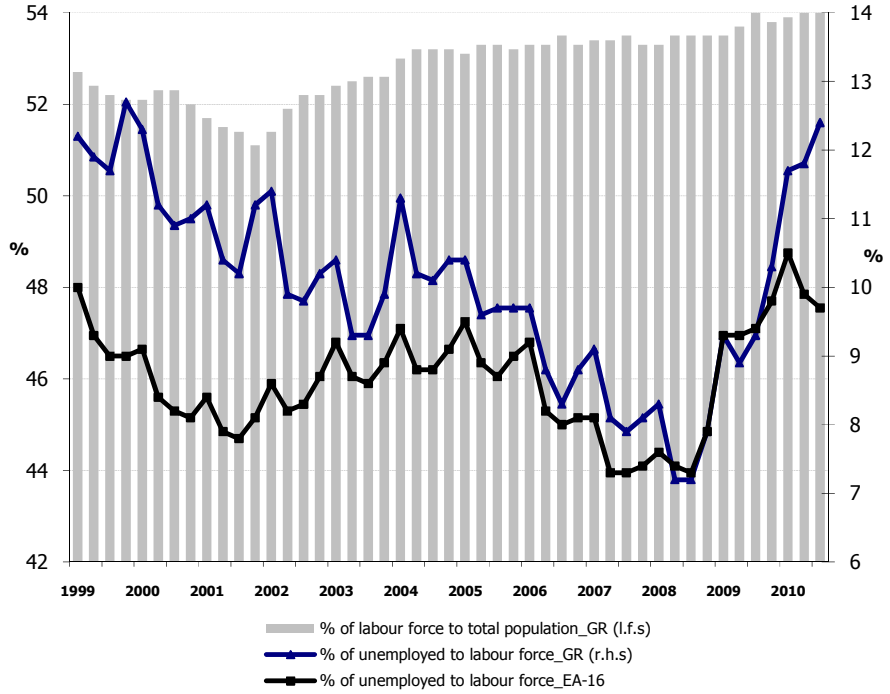
was enjoyed by the university graduates (9.4% unemployment rate), as well as by holders of doctorates or post-graduate diplomas, where unemployment decreased by 1.6% year on year (7.5%).

Regarding unemployment at regional level, the most significant problems in the labour market since the beginning of the year have been observed in Macedonia. In all three regions belonging to this area, the number of unemployed exceeded 167,000, which was directly linked to the contraction of the secondary sector and manufacturing in particular, strongly developed in these regions. In West Macedonia (14.8%) and Central Macedonia (13.5%) unemployment increased by more than 3 percentage points year-on-year, while in East Macedonia – Thrace the unemployment rate reached 13.2%. Unemployment increased significantly also in Attica (12.8%), which hosted 239,000 unemployed or 2/5 of the country's unemployment. The unemployment rate was similar to the national average in Central and Western Greece, Epirus and Thessaly. In contrast, smaller unemployment due to the peak of tourist demand in the third quarter was recorded in the island regions of the country, even though the year-on-year increase in unemployment (by more than 3%) was linked to the adverse developments in the tourist industry, due to the negative image of the country abroad and the fall in domestic demand.

As for the economic activity sectors, the number of employed in the **primary sector** (about 551,300) increased by 1.1% (or 5,900) year-on-year, with its share in total employment remaining unchanged (12.5%). In contrast, in the **secondary sector** employment decreased at almost double the rate from last year (-10.9% against -5.9%) and as a result the number of employed fell anew to its lowest level in 12 years (858,800). The share of the sector in employment stood at 19.5% (from 21.2% in the previous year). Lastly, in the **tertiary sector**, the number of employed fell by 1.2% year-on-year, registering, however, marginal quarter-on-quarter increase (0.1%). This development, together with the increase of employment in the other two sectors, resulted in the share of employment in this sector reaching its highest level since 1998 (68%).

At **branch level**, in the third quarter of 2010 employment recorded year-on-year decrease in 15 out of the 21 branches under investigation. Construction remained the branch with the largest contraction, where the number of employed fell year-on-year by 15.3% (about 57,500 people). For the first nine months of the year the decrease in this sector's employment reached 41,000 jobs. The adverse developments in the secondary sector were reflected in the drop of employment in Manufacturing by 9.5% (or 49,000) year-on-year. In contrast, in Wholesale-Retail Trade and Repair, which has been the branch with the highest share in employment, the number of employed fell only marginally year-on-year, even though for the whole of the January-September period it declined by 28,400 jobs year-on-year. Employment in Accommodation and Food Service Activities also declined (-3.6% against increase by 1.8% in the previous year), while contrary to the general trend employment increased in Health and Social Work and Financial and Insurance Activities by 6.2% and 5% respectively.

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

Regarding the employment status, the distribution between wage earners and self-employed (including maidservants) has remained unchanged in the past few years. **Nevertheless, the number of self-employed declined in parallel to the fall in the number wage earners**, which reverted a trend observed in the past, when this form of employment was compensating for the loss of jobs due to economic downturn.

In summary, the recession has hit hardest those sectors that in the past contributed substantially to the growth of GDP. On the one hand, the reduction of public investment has affected construction, while in building activity the contraction has been accelerating, affecting unfavourably large number of professions. On the other, the contraction of demand has harmed trade directly. These developments have caused job losses at times when the Greek economy has not been capable of creating new jobs. The unemployment rate is expected to stand at **12.2%** for all of 2010, while in 2011 it is expected to reach 14% with 15%.

The discontinuation of temporary labour contracts in the public sector, as a result of the fiscal consolidation effort, is expected to have further negative impact on employment. This development is expected to have direct impact on the labour market, which has been characterised by large and growing number of public servants. This trend is now being reversed by the drastic reduction in public sector recruitment (1 new employee per 5 departures from the public sector, which also includes transfers between organisations).

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

Quarter/Year	Grand Total	Labor Force					
		Total	**% of population**	**Employed**	**% labor force**	**Unemployed**	**% labor force**
1998	8.680,4	4.525,8	52,1	4.017,9	88,8	507,9	11,2
1999	8.764,5	4.586,1	52,3	4.031,4	87,9	554,7	12,1
2000	8.839,8	4.611,9	52,2	4.088,5	88,6	523,5	11,4
2001	8.906,4	4.580,3	51,4	4.086,3	89,2	493,9	10,8
2002	8.964,3	4.656,0	51,9	4.175,8	89,7	480,2	10,3
2003	9.014,9	4.734,4	52,5	4.274,5	90,3	460,0	9,7
2004	9.063,5	4.818,8	53,2	4.313,2	89,5	505,7	10,5
2005	9.108,1	4.846,5	53,2	4.369,0	90,1	477,5	9,9
2006	9.157,4	4.886,4	53,4	4.452,3	91,1	434,5	8,9
2007	9.207,4	4.916,8	53,4	4.509,9	91,7	406,9	8,3
a' quart. 2008	9.222,7	4.918,2	53,3	4.511,6	91,7	406,5	8,3
b' quart. 2008	9.230,1	4.939,7	53,5	4.582,5	92,8	357,1	7,2
c' quart. 2008	9.237.8	4.944,9	53.5	4.589,8	92,8	355,1	7,2
d' quart. 2008	9.245,8	4.946,3	53,5	4.553,6	92,1	392,7	7,9
2008	**9.234,1**	**4.937,3**	**53,5**	**4.559,4**	**92,4**	**377,9**	**7,6**
a' quart. 2009	9.252,7	4.948,1	53,5	4.485,8	90,7	462,3	9,3
b' quart. 2009	9.262,4	4.974,5	53,7	4.531,9	91,1	442,6	8,9
c' quart. 2009	9.272,3	5.005,3	54,0	4540,1	90,7	465,1	9,3
d' quart. 2009	9.282,4	4.991,2	53,8	4.476,8	89,7	514,4	10,3
2009	**9.267,5**	**4.979,8**	**53,8**	**4.508,7**	**90,6**	**471,1**	**9,5**
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
c' quart. 2010	9.311,5	5.024,9	54,0	4.402,9	87,6	621,9	12,4

Source: ELSTAT, Labor Force Survey

Lastly, the labour market is characterised by significant distortions, which are revealed by the large number of young unemployed and women out of job. For this reason, the support of employment through active policies is essential. Such policy is the programme announced by the Labour Force Employment Agency for subsidising full-time jobs by covering employer contributions in the private sector. Given the large share of long-term unemployed it makes sense to subsidise employment, rather than unemployment. Meanwhile, new legal framework is being currently adopted in the labour market, by allowing special contracts at enterprise level to take precedence over sector contracts and instituting new regulations regarding wages, layoffs and flexible labour relations.

Additional data on the short-term employment outlook are provided by the Business Surveys conducted by IOBE. In the September – November period of 2010, **employment expectations remained gloomy in all sectors**. However, the negative balance of the index has significantly weakened in comparison with the June-August period in Services and Retail Trade. In contrast, in Industry and Construction the employment expectations worsened. However, in comparison with the corresponding period of the previous year, apart from Services, where the index remained unchanged, all sectors exhibited worse employment outlook.

In greater detail:

In Industry employment expectations slightly deteriorated (q-o-q) in the September – November period, with the balance of positive – negative answers falling by 6 points to reach -23, close to its 2009 average (-20). In comparison with the corresponding period of the previous year, when the index then stood at -14, the expectations balance has deteriorated slightly. **One in four enterprises on average was expecting employment to fall**.

The strongly negative employment expectations in **Construction** in the previous quarter deteriorated further in the September – November period, signifying continuation of employment contraction in the sector. The index fell on average by 6 points, reaching -48, while in the corresponding period of the previous year it stood at significantly higher level (-25). Throughout the year, the expectations for rise in employment were sluggish. In the last quarter, more than half of the enterprises were anticipating a further decline in employment in the near term and only 4% were expecting employment to grow (from 8% in the previous quarter). The deterioration of employment expectations was more intense in Public Works, where the balance fell by 11 points to reach -51, while in Private Construction the balance, albeit remaining strongly negative (at -39), improved by 7 points.

In Services employment expectations improved by 11 points in the September – November period, yet the balance remained negative at the level recorded in the corresponding period of the previous year (-12). Twenty eight percent (from 33%) of the enterprises in the sector were anticipating further reduction in employment in the upcoming months, while only 16% were anticipating growth (from 10% in the preceding quarter).

Significant quarter-on-quarter recovery was recorded in the employment expectations in **Retail Trade** in the period from September to November, with the number of enterprises expecting increase equalling the number of those expecting decline. This performance was better compared with the 2009 average (-6), but worse than that recorded in the corresponding period of the previous year (+4). Upbeat messages came from Food-Beverages-Tobacco and Department Stores, where the index turned positive. In contrast, Vehicles – Spare Parts was the only branch with deterioration of employment expectations in this particular quarter, which highlighted the severity of the crisis in the branch in the past year.

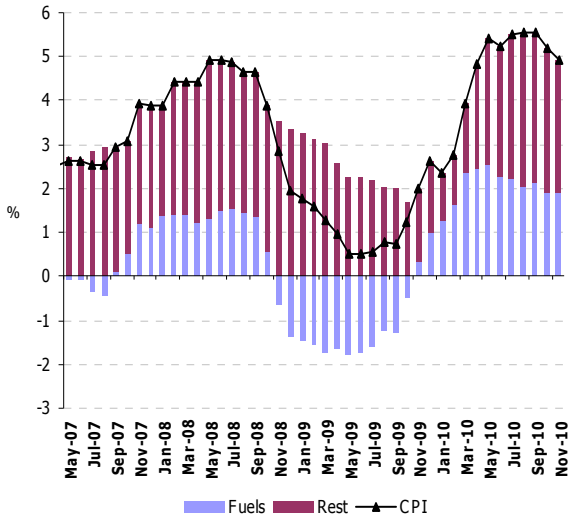
3.5. Consumer Prices

Recent Developments

The Consumer Price Index was running at 4.7% on average in the period from January to November of 2010, from 1.1% in the corresponding period of the previous year and 4.4% in 2008. In November 2010 the inflation rate declined to 4.9%, falling by 0.7 percentage points since September, when it reached its highest level in 12 years (5.6%). The course of CPI in the first eleven months of 2010 can be explained partly by the significant increase in the price of goods and services due to higher indirect taxation. Indicatively, the fuel index registered average y-o-y increase by 37.4%, against a drop of 18.3% in the previous year, while the energy index increased by 29.4% against a drop by 14% in the previous year. As a result, the index for Transport increased by

16.3% in the first eleven months, against a drop by 3.4% in the previous year, while in Alcohol – Tobacco following the excise tax hike the price index was running at almost triple the rate recorded in the first eleven months of 2009 (14.3%).

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

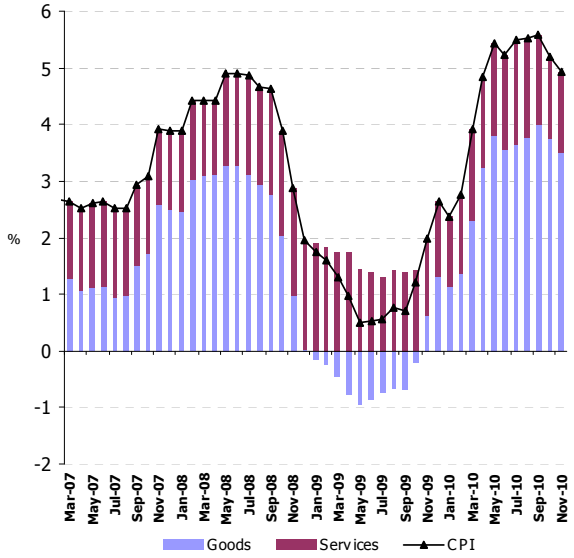


Source:ELSTAT **Data processing**: IOBE

Overall, the course of inflation in the period under investigation was affected more by increase in the prices of goods, rather than the prices of services. It is indicative that the price index for goods increased by 5.4% against a drop by 0.8% in the previous year, while in services the index was running at a similar rate with 2009 (3.6%). On the other hand, reduction was recorded in Fruits – Vegetables in the first 11 months of the year, where the index recorded negative rates of change (-4.5%) in contrast with 6.6% increase in the previous year.

The negative impact of fuel prices on inflation was evident in the course of **core inflation**, which in the first eleven months of the year increased by 0.6 percentage points year-on-year (3%). In November 2010, the rate of core inflation reached 3.3%. The largest y-o-y increase in November was registered in Electricity (7.2%), Hospital Care (4.6%), Motorcars (4.2%) and Medical – Dental – Paramedical Services (3.4%), pushing up the index by 0.5 percentage points. In contrast, large year-on-year drop of prices (-16.3%) was recorded in Pharmaceuticals, which pushed down the overall index by 0.2 percentage points.

Figure 3.13
Inflation (annual % change)

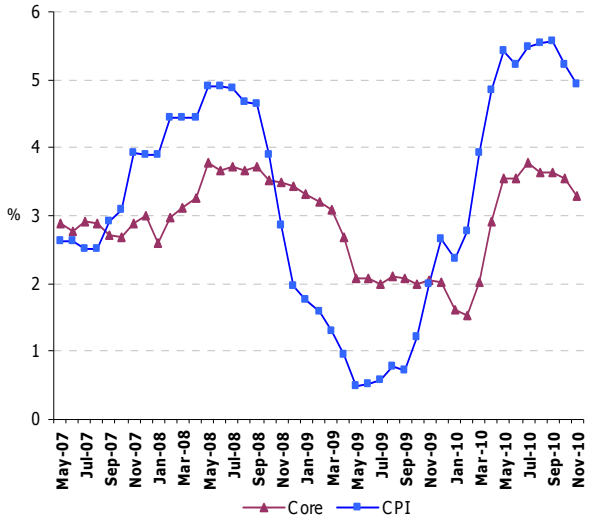


Source:ELSTAT **Data processing:**IOBE

In the remaining categories of goods and services, apart from Food and Non-alcoholic Beverages, where prices marginally dropped (-0.1%), the price index increased in the first eleven months of the year. The largest increase was recorded in Housing (6.9%), where prices were falling by 3.2% in the previous year. Similar trend reversal was observed in Telecommunications, where prices, as a result of the tax hike, increased by 3.1%, against deflation of 0.3% recorded in the previous year. Increase, albeit smaller compared with the previous year, was recorded in Education (2.2% against 4.2%) and Clothing-Footwear (1.5% against

3%), while in Hotels-Cafes-Restaurants the inflation rate stood at the 2009 level (2.9%).

Figure 3.14
Core Inflation (annual % change)

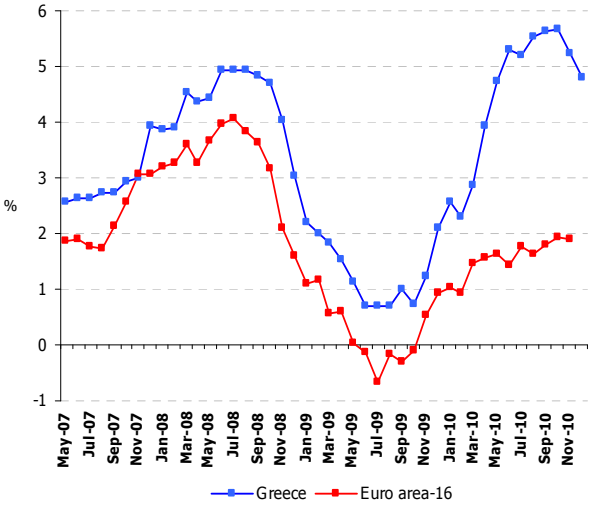


Source:ELSTAT **Data processing**: IOBE

The harmonised index (HICP) inflation rate reached 4.8% in November 2010 from 2.1% in the corresponding month of 2009. For the period from January to November the index stood at 4.7%, increasing by 3.4 percentage points year-on-year. Since the beginning of the year Greece has been ranked third among the EU-27 member countries (2% on average), behind Romania (5.9%) and Hungary (4.7%). Meanwhile, the Greek harmonised inflation rate remained highest in the Euro area, whose average stood at 1.5%, having increased 1.3 percentage points year-on-year.

The **cost of production**, which constitutes both an important factor for the formation of retail prices and a leading indicator for inflation, increased significantly in 2010. In more detail, producer prices increased in the majority of industry branches (33 from 41 in total). As a result, the producer price index in domestic industry increased by 6.1% in the first ten months of 2010, compared to a drop by 7.3% in 2009. The largest increase was recorded in Coke and Refinery Products (33.6%), Energy Goods except Electricity (29.2%), Energy Goods (15.9%) and Electrical Equipment (12.3%) In contrast, producer price deflation was observed in Tobacco Products (-8.6%), Basic Pharmaceutical Products (-8.2%) and Chemical Products (-6.7%). Lastly, the recovery observed in Industry and Services in a number of large economies pushed up the prices of imported raw material. As a result, the industry import price index increased by 7.2% in the first nine months of 2010, against a fall of 3.5% in the corresponding period of the previous year.

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



Source:ELSTAT **Data processing**: IOBE

Medium-term Outlook

The annual inflation rate for 2010 will stand in the region of 4.7% (against 1.2% in 2009 and 4.2% in 2008), slightly above the forecast that IOBE published after the signing of the support agreement (4.5%, IOBE quar-

terly bulletin 02/10). This is the highest level in a decade. It is worth noting that **there is substantial deviation from both the forecasts from early 2010 and the projection in the original text of the support agreement**, which assumed that the recession and the fall in demand would contain the inflationary pressures, while large part of the tax increase would be absorbed by the enterprises. However, as stated repeatedly in the IOBE bulletins, **the irrational functioning of the markets for certain goods and services and the distortions this has created** resulted in systemically higher CPI growth in comparison with the EU economies in recent years.

Of course, the tax increase in 2010 as part of the fiscal consolidation effort had decisive impact on inflation. Indicatively, the Greek retail market for unleaded gasoline was the most expensive in EU-27 in October (1.49 €/litre, increasing 38% since November 2009).[44] Meanwhile, in other EU countries with large deficit as percentage of GDP in 2009 (e.g. Spain, Portugal, UK) that adopted fiscal consolidation measures, such as tax hikes, cuts in the public sector wages and social transfers, etc., the price index ran at lower rate compared with Greece, where the measures were most drastic. **In contrast, in Ireland, which had the largest fiscal deficit in the EU in 2009 and recently joined the support mechanism, the price index has been falling since March 2009.** Hence, the need to undertake structural measures that will help reduce the high profit margins, observed in the trade of goods and services in Greece, contributing to disinflation, has become pressing.

In 2011 CPI is expected to slow its pace, even though price will increase due to increase of the reduced VAT rate from 11% to 13%, increases in the tariffs of loss-making state-owned enterprises (mainly in the transport sector) and equalisation of the excise tax on motor diesel and heating oil, postponed for October 2011. Nevertheless, the inflationary pressure on the prices of goods and services from the increase of taxation in 2010 has created high base level of comparison for the calculation of the 2011 inflation rate. Meanwhile, the slump in demand and consumer confidence, as a result of further cuts of the wages of public servants and private sector employees, the increase of unemployment and the overall insecurity due to the recession are expected to have significant impact on the course of CPI. **As a result, the inflation rate in 2011 is expected to stand in the region of 2.6% to 2.8%.**

In contrast with Greece, inflation in the Euro area has been relatively low and as a result the European Central Bank is expected to preserve the base interest at 1% until the end of the first quarter of 2011.

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

The expectations for price reduction weakened in Services and Industry, quarter-on-quarter in the September – November period. In contrast, the deflationary expectations in Private Construction and Retail

[44]Eurostat (Prices of premium unleaded gasoline 95 RON)

Trade intensified, signifying further price reduction in the future. In greater detail:

In **Industry**, inflationary expectations dominated in September and October, while in November the balance of the index returned to negative territory. As a result, the average of the index increased, reaching +6 from -2 in the June – August period (and -6 in the corresponding period of 2009). The inflationary expectations over the upcoming quarter have intensified, as 16% of the enterprises were expecting the prices to increase, while only one in ten enterprises held deflationary expectations.

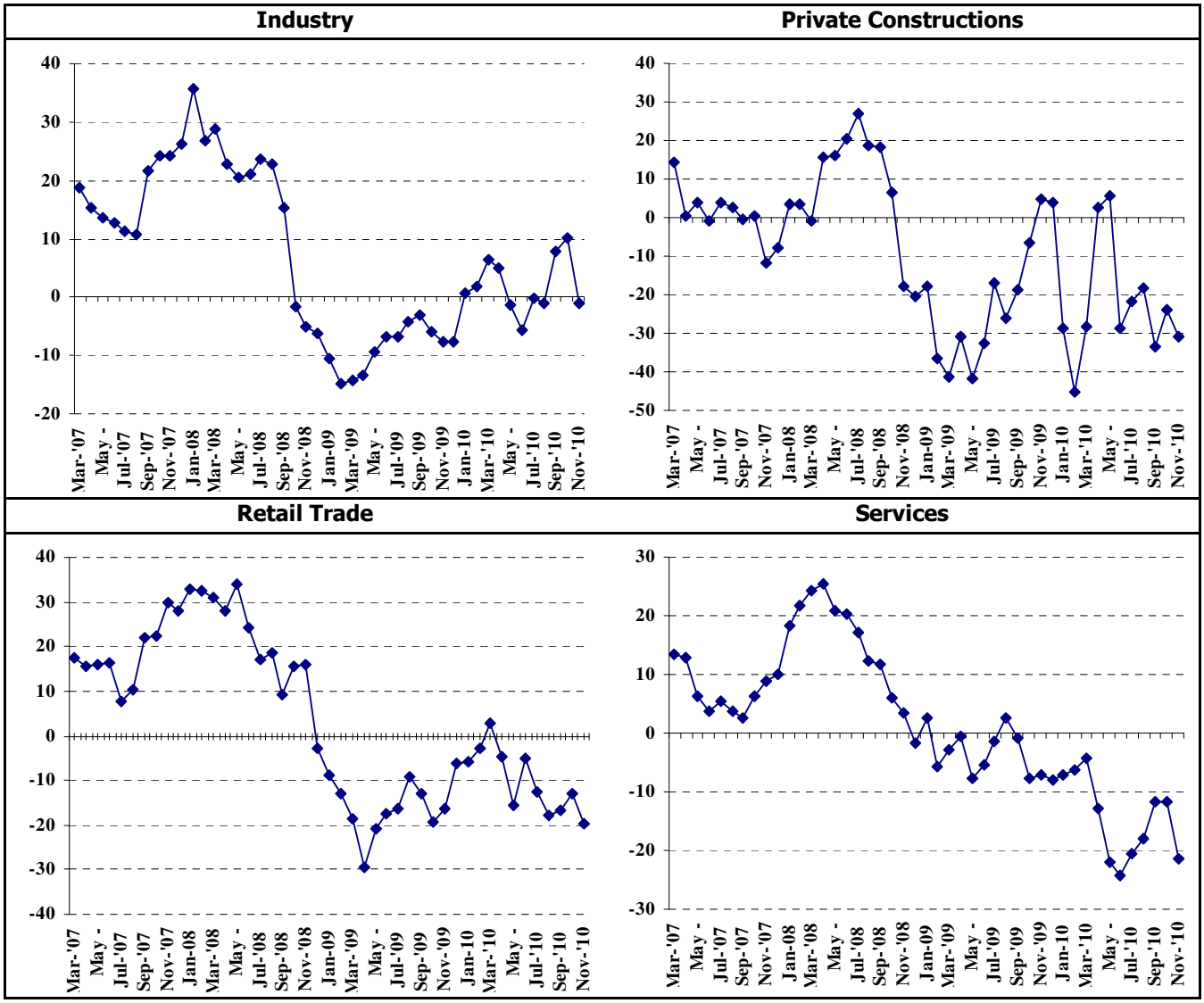
In **Retail Trade**, the deflationary expectations of the enterprises have intensified significantly since May, while in the period from September to November this trend strengthened further. The negative balance of expectations reached -16 (from -12), at a similar level compared with the corresponding quarter of 2009 and below the previous year average (-10). Only one in ten enterprises were expecting prices to increase, while 27% held deflationary expectations. The only branch in this sector that exhibited positive balance of price expectations, albeit significantly weaker compared with the preceding quarter, was Food-Drinks-Tobacco, while the strongest deflationary expectations were once more held by enterprises in Fabrics–Clothing-Footwear and Department Stores.

In **Services**, the strong deflationary expectations, held in the period from June to August, slightly eased in the subsequent quarter. The index increased to -15 from -21, reaching the previous year average, but at lower level compared with the corresponding period of the previous year (-5). Twenty two per cent of the enterprises were expecting prices to fall and seven per cent were holding inflationary expectations. In almost all branches in this sector deflationary expectations dominated.

Lastly, in **Private Construction** price expectations have been strongly negative since June, falling further (q-o-q) in the period from September to November. The index reached -30 (from -23 in the preceding quarter), below the last year average and worse compared with the corresponding period of the previous year (-25). One third of the enterprises were expecting prices to fall, while only 3-4% on average were holding inflationary expectations in the last six months. The prolonged deflationary expectations have come largely from the reduced workload in the sector from the beginning of the year, both in Residence Construction and Construction of Other Private Buildings.

Figure 3.16

Price Expectations (% difference between positive – negative answers)



Source:IOBE

3.6 Balance of Payments

Current Account

In the **period from January to September 2010**, the current account deficit contracted further by 2.9%, following its significant fall in 2009 by 28.2%. The deficit reached €17.1 billion, against €17.6 billion in the previous year and €24.5 billion in 2008 when it stood at its highest level in 14 years.

This change came from trade deficit reduction by €511 million and services surplus increase by €376 million, but also from reduction in the current transfer surplus by €752 million.

The **trade deficit** fell in this period by 4% (€ 923 million),[45] while in relation to 2008 it contracted by almost €12 billion. The trade balance of goods excluding oil and ships fell by 16.5%, as imports declined by 11.4%

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

(€2.6 billion), while exports fell slightly by 2.5% (€209 million). The value of fuel exports and imports increased by 48.8% (€1.1billion) and 30.5% (€2.4 billion) respectively, boosting the fuel trade deficit by 23.2% (€1.3 billion).

The **services surplus** increased by 3.4% (€376 million), as receipts and payments increased by 5.7% (€1.2billion) and 8% (€846 million) respectively. The improvement in receipts came mainly from increase in receipts from transport services (mainly merchant shipping) and other services by 15.6% (€1.5 billion) and 12.6% (€274 million) respectively. In contrast, the receipts from tourist services fell by 6.9% (€636 million), while payments for tourist services abroad declined by 8.3% (€152 million). Hence, as the balance incorporated almost fully the summer tourist period, the year-on-year losses in the tourist sector in the January – September period amount to approximately €562 million. If we add to this the €1.2 billion fall in 2009, tourism's performance has aggravated by €1.7 billion in the period 2008-2010.

The **income account deficit** marginally increased by 0.5% (€37 million). Receipts from abroad (remuneration, wages, interest, dividend and profits) declined by 13.7% (€458 million), while the outgoing payments fell by 4.1% (€422 million).

The surplus of **current transfers** fell by half (€752 million), following the already large decline in 2009 by 44.9%. As a result, the surplus stood at ¼ of its 2008 level. Receipts from workers' remittances fell by 22.9% (€332 million), while the receipts of General Government fell by 6.9% (€215 million), which caused total inflows[46] to decline by more than half a billion euro. Total outflows[47] increased by 6.7% (€206 million).

Capital Account

Similarly, the surplus of **capital transfers** narrowed by 49.4% (€752 million), following a drop of equal proportion in 2009, which resulted in the surplus standing at ¼ of its 2008 level. Receipts[48] fell by 12% (€546 million), while outflows declined by 9.9% (€23 million).

Lastly, the **Current and Capital Account** deficit, which to some extent reflects the economy's external borrowing requirements, stood at €16.3 billion, up by 1.5% from €16.1 billion in 2009, while in 2008 the borrowing requirements had stood at €21.5 billion.

Financial Account

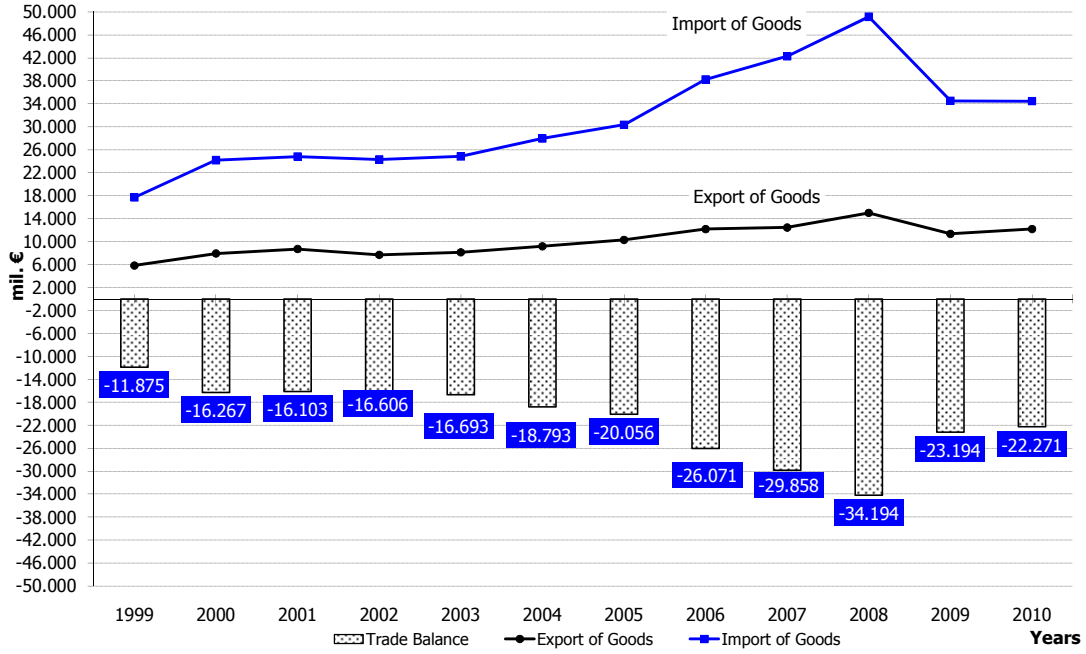
The **financial account** surplus increased slightly in the period from January to September 2010 by 1.5% (€259 million), reaching €17.1 billion from €16.8 billion in 2009 and €21.4 billion in 2008.

At the level of specific accounts, **direct investment** experienced a net inflow of €404 million, against €1.8 billion in 2009, representing a reduction by 59% (€582 million). The inflow of foreign direct investment stood at €1.1 billion in the first nine months of the year, marking a decrease by 37%. Lastly, the outflow from residents' direct investment abroad stood at €735 million, reduced by 10.5%.

[46] The inflows refer to payments from the European Agricultural Guidance and Guarantee Fund (EAGGF) and the European Social Fund (ESF).
[47] The outflows refer mainly to contributions to the Community Budget.
[48] The capital transfer receipts refer to incoming payments from structural and cohesion funds.

Figure 3.17

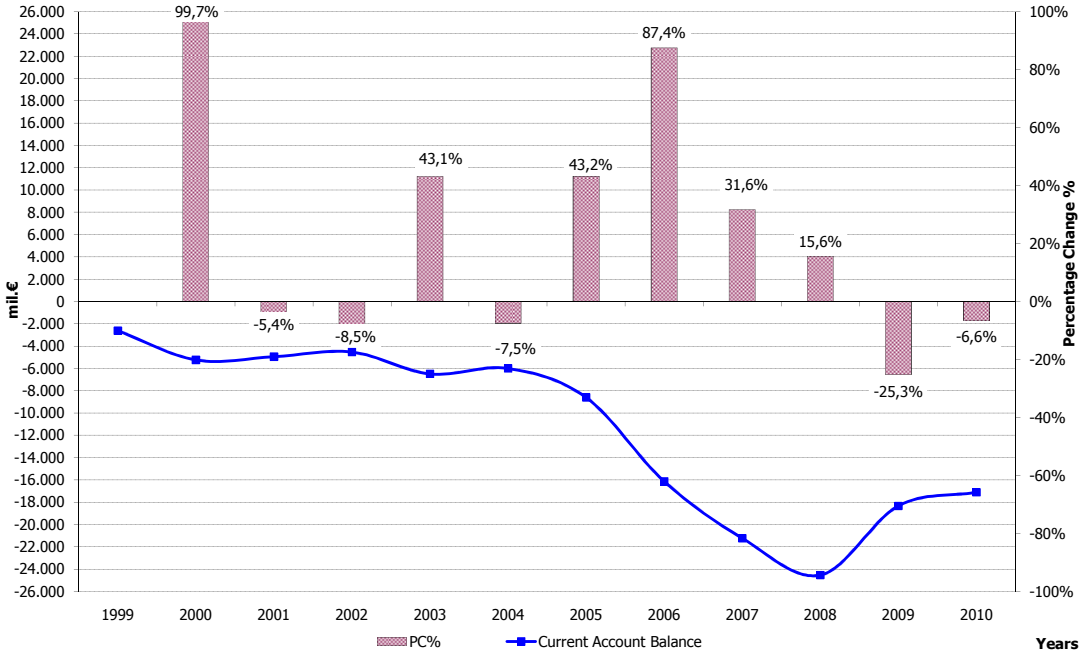
Imports-Exports 1998-2010 (January-September)



Source: Bank of Greece – **Data Processing:** IOBE

Figure 3.18

Current Account Balance 1998-2010 (January-September)



Source: Bank of Greece **Data Processing:** IOBE

Portfolio investment experienced net outflow of € 18.2 billion, marking a decline by 178% relative to the corresponding period of the previous year, when portfolio investment had net inflow of € 23.4 billion. The holding of bonds, treasury bills of the Greek state and shares of Greek companies by non-residents fell by €30.5 billion. Meanwhile, outflow of €1.2 billion resulted from increase in the holdings in foreign portfolios by residents. The inflow in the same period stood at € 12.2 billion, coming from reduction in the holding of foreign bonds, treasury bills and financial derivatives by domestic financial institutions and institutional investors.

Large fluctuations were observed in the **'other' investment** category, with the net inflow reaching €34.8 billion, against net outflow of €7.4 billion in 2009. This development reflected mainly borrowing of €27.6 billion by the general government (first two tranches of the stand-by arrangement), together with an increase in non-residents' deposit and repo holdings in Greece (€12.9 billion). These inflows were partly offset by outflow from increase in resident credit institutions' and institutional investors' deposit and repo holdings abroad (€6.6 billion). Lastly, the country's **reserve assets** at the end of September stood at € 4.4 billion.

Assessment

In the period from 1960 to 1990, the current account deficit fluctuated between 0% and 5% of GDP,[49] with short-lived surplus spells, while in the previous decade (2008) the deficit expanded to 14% of GDP. **Its reduction to below 10% in 2010 does not reflect structural change in production processes, but fall in demand and thus imports**.

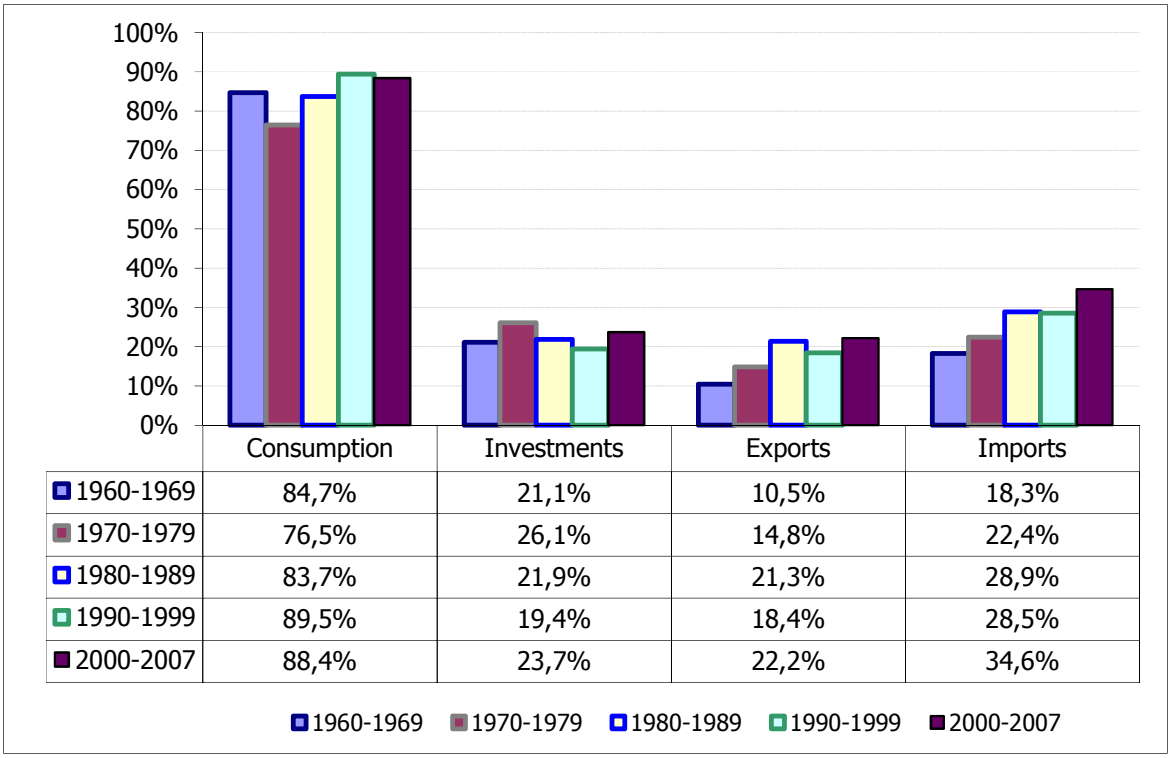
The model of development of the Greek economy in recent years strongly depended on imports. In particular, consumption corresponded to almost 90% of GDP in the period from 1990 to 2007, at a rising trend since 1960, while in contrast investment had relatively small share of GDP (23.7%). It is worth noting that despite having similar investment ratios, the remaining EU-15 countries were having smaller consumption shares (from Luxemburg's 55.4% to UK's 85.2%) due to better performance of the export sector. According to AMECO data, Greece in 1960 was ranked 12th among the EU-15 countries with respect to its degree of openness, while in 2007 it dropped to 13th. The lack of improvement in the Greek economy's export performance, together with the increase in consumption due to rising living standards, which was fuelled mostly by imports, caused large deficit in the current account.

The persistence of twin deficits (current account – fiscal) in recent years led to rapid expansion of public debt. This development could be considered reasonable for a country participating in a monetary union; however, it cannot last for large number of years. Furthermore, the funds flowing into the country should have been directed to productive activities, which could have fuelled economic development. Instead, the funds were consumed, which resulted in slump of production, while the servicing of public debt has become difficult as it requires primary surpluses and improvement of the trade balance.

[49]Current Account Balance of Greece: Causes of Imbalances and Policy Suggestions, July 2010, Bank of Greece

Meanwhile, the loss of monetary instruments has made the boost of exports through devaluation, as done in the past, practically impossible. The increase of export activity should be supported by other means, such as improved quality of the produced goods and the offered services. The Greek economy, as evident in the relevant indicators, did not manage to adjust to the new conditions of the globalised economic environment. The reordering of the world economy resulted in cheap product manufacturing in countries with low labour cost and concurrently production of specialised goods by countries that had developed new technologies, which were incorporated in the production process to create products with high value added. Greece was caught in the middle, with its manufacturing lagging behind. This position can be overcome with a well-organised plan for the restructuring of the production framework. This reconstruction should be focused on the Knowledge Triangle (Education - Research – Innovation). The strengthening of export-oriented branches, education and R&D expenditure, with the creation of innovative services, goods and techniques is expected to provide an escape route from the production and export slump that the Greek economy has been experiencing in recent years. In a difficult fiscal environment, the means to achieve these goals could come from the programs of NSRF, as already announced, but also from total overhaul of state expenditure with redirection to employment, innovation and entrepreneurship.

Figure 3.19.
Greek GDP structure 1960-2007

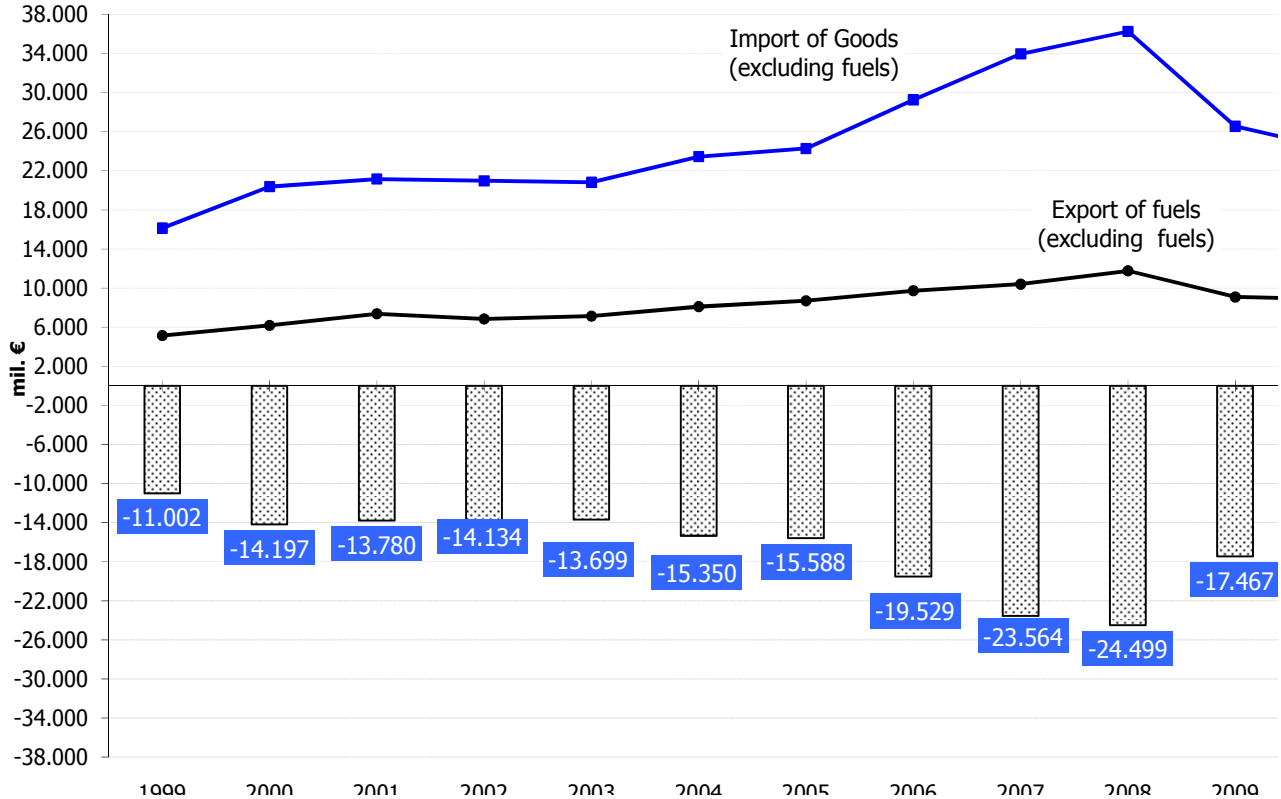


	Consumption	Investments	Exports	Imports
1960-1969	84,7%	21,1%	10,5%	18,3%
1970-1979	76,5%	26,1%	14,8%	22,4%
1980-1989	83,7%	21,9%	21,3%	28,9%
1990-1999	89,5%	19,4%	18,4%	28,5%
2000-2007	88,4%	23,7%	22,2%	34,6%

Source: Stournaras Y., Albani M., (2008). «Greek Economy after the crisis: In research for the new development model», IOBE. **Data Processing:** IOBE

Figure 3.20

Imports-Exports (**excluding fuels**) 1997-2010 (January - September)



Source: Bank of Greece **Data Processing**: IOBE

Table 3.11

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

		January - September			September		
		2008	2009	2010	2008	2009	2010
I	**Current Account (I.A +I .B+ I.Γ + I.Δ)**	**-24.542**	**-17.629**	**-17.119**	**-2.712**	**-1.480**	**-1.311**
I.A	**TRADE BALANCE(I.A.1 - I.A.2)**	**-34.194**	**-23.194**	**-22.271**	**-4.138**	**-2.598**	**-2.281**
	Oil Balance	-9.696	-5.727	-7.057	-1.388	-596	-866
	Trade Balance excluding oil	-24.499	-17.467	-15.214	-2.751	-2.002	-1.415
	Ship's Balance	-3.870	-2.550	-2.759	-508	-108	-255
	Trade Balance excluding oil and ships	-20.629	-14.917	-12.455	-2.243	-1.894	-1.160
I.A.1	**Exports**	**14.990**	**11.341**	**12.188**	**1.789**	**1.327**	**1.494**
	Oil	3.235	2.260	3.364	409	282	370
	Ships	1.354	613	566	35	56	75
	Other Goods	10.401	8.468	8.259	1.344	989	1.050
I.A.2	**Exports**	**49.184**	**34.535**	**34.460**	**5.927**	**3.925**	**3.775**
	Oil	12.930	7.987	10.421	1.797	878	1.235
	Ships	5.223	3.163	3.325	543	164	330
	Other Goods	31.030	23.385	20.714	3.588	2.883	2.210
I.B	**Services (I.B.1 - I.B.2)**	**14.818**	**10.943**	**11.319**	**2.073**	**1.777**	**1.885**
I.B.1	**Receipts**	**27.528**	**21.557**	**22.778**	**3.590**	**3.003**	**3.163**
	Travel	10.334	9.209	8.573	1.638	1.606	1.524
	Transportation	14.877	10.176	11.759	1.684	1.111	1.317
	Other Services	2.317	2.172	2.446	268	286	321
I.B.2	**Payments**	**12.710**	**10.614**	**11.459**	**1.517**	**1.227**	**1.278**
	Travel	1.969	1.827	1.675	217	181	173
	Transportation	7.147	5.218	6.180	856	624	688
	Other Services	3.593	3.569	3.605	444	422	417
I.Γ	**Income(I.Γ.1 - I.Γ.2)**	**-7.863**	**-6.863**	**-6.899**	**-759**	**-638**	**-727**
I.C.1	**Receipts**	**4.173**	**3.346**	**2.888**	**523**	**330**	**331**
	Employees' compensation	264	229	152	27	25	18
	Investment Income	3.909	3.117	2.736	496	305	314
I.C.2	**Payments**	**12.036**	**10.209**	**9.787**	**1.282**	**968**	**1.058**
	Employees' compensation	274	304	282	40	37	30
	Investment Income	11.762	9.906	9.506	1.242	932	1.028
I.D	**Current Transfers (I.Δ.1 - I.Δ.2)**	**2.696**	**1.485**	**733**	**112**	**-20**	**-188**
I.D.1	**Receipts**	**5.541**	**4.556**	**4.010**	**403**	**283**	**154**
	General Government (mainly transfers from EU)	3.867	3.108	2.893	227	146	36
	Other Sectors	1.674	1.448	1.116	176	137	118
I.D.2	**Payments**	**2.844**	**3.071**	**3.276**	**292**	**304**	**342**
	General Government (mainly transfers from EU)	1.782	1.996	2.133	161	175	228
	Other Sectors	1.062	1.075	1.143	130	129	115
II	**Capital Transfers (II.1 - II.2)**	**3.043**	**1.521**	**769**	**70**	**-13**	**-18**
II.1	**Receipts**	**3.485**	**1.754**	**979**	**115**	**15**	**8**
	General Government (mainly transfers from EU)	3.271	1.605	886	100	3	0
	Other Sectors	215	149	93	16	12	8
II.2	**Payments**	**443**	**233**	**210**	**46**	**28**	**27**
	General Government (mainly transfers from EU)	186	11	14	2	2	1
	Other Sectors	257	222	196	43	26	26
III	**Current Account and Capital transfers (I + II)**	**-21.499**	**-16.108**	**-16.350**	**-2.642**	**-1.493**	**-1.329**
IV	**Financial Account (IV.A+IV.B+IV.C+IV.D)**	**21.449**	**16.883**	**17.142**	**2.290**	**1.390**	**700**
IV.A	**Direct Investments***	**939**	**986**	**404**	**-63**	**-202**	**-85**
	Abroad	-1.801	-821	-735	-54	-169	-82
	Home	2.741	1.807	1.139	-9	-33	-3
IV.B	**Portfolio Investment***	**17.967**	**23.399**	**-18.265**	**5.374**	**2.314**	**-187**
	Assets	-2.051	-9.302	12.263	3.680	-593	2.626
	Liabilities	20.018	32.701	-30.528	1.694	2.907	-2.813
IV.C	**Other Investment***	**2.549**	**-7.466**	**34.867**	**-2.934**	**-708**	**936**
	Assets	-20.402	-19.524	-6.416	-916	-6.253	-2.163
	Liabilities	22.951	12.058	41.284	-2.018	5.545	3.099
	(General Government's Loans)	-446	-2.179	27.571	-19	-319	9.050
IV.D	**Change in Reserve Assets****	**-6**	**-37**	**136**	**-87**	**-15**	**35**
V	**Balance Item (I + II + IV + V = 0)**	**50**	**-774**	**-792**	**352**	**103**	**630**
	Reserve Assets Stock***				**2.378**	**2.498**	**4.403**

* (+) 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. INVESTMENT LAND-PLANNING IN GREECE: PROBLEMS AND SOLUTIONS[50]

The investment land-planning problem in Greece

The serious and often insurmountable land-use problems that the enterprises face during start-up constitute one of the most significant obstacles to investment in Greece.

The problem is primarily due to lack of appropriate credible spatial planning regulation that would clearly determine the permitted land uses per region, the terms and conditions for construction and the remaining rules for developing real estate. Even though since 1997 the spatial planning legislation has made land-use plans (Urban Development Master Plan and Open City Territorial and Housing Plan) obligatory for all primary local authorities, the relevant procedures have been delayed beyond measure. As a result, in many cases the plans have become obsolete, needing revision even before their adoption. In any case, the start of operation of the newly formed municipalities of the Kallikrates reform in 2011 will necessitate the redrafting of these plans or even modification of the legal basis on which their approval depends (art. 4-6 of Law No. 2508/1997). Given these developments, we could consider the past fifteen years lost from spatial planning perspective, which we could extend to 30 years if we take into account the successive initiatives for urban restructuring of the country, initiated in the early 1980s until today without success.[51]

The lack of appropriate land-use regulation is not the only aspect of this problem. Excessive spatial planning regulation also seems to create serious side effects on entrepreneurship and investment activity. This aspect manifests itself mainly in three ways:

a) There are overlapping land-use regulations at different planning levels. As a result the same issue (e.g. establishment of an Industrial Zone or Technology Park) is regulated concurrently, possibly in contradicting manner, by plans with different scale and regulative density.

b) The land-use and urban design plans include excessively detailed and inflexible provisions, which makes them difficult to adjust according to the specificities of each application (e.g. in the Regulatory Plans and the General Urban Plans there are detailed clauses on location, routing and even construction method of the projects, without being preceded by the necessary technical studies).

[50] This study, which is part of a wider survey by IOBE on the obstacles to investment and entrepreneurship, was conducted by Georgia Giannakourou, Associate Professor in the University of Athens.

[51] For a critical evaluation of the urban planning system in Greece, see Anastasopoulos, M., Vasenhoven, L., Bladou, A., Giannakourou, G., Karanikas, G., Lagoudaki, T. and Pyrgiotis, G. (2006), *Urban planning: Implementation problems and proposals for reform (in Greek)*, Report of the Scientific Committee of the Local Authorities Institute
http://www.ita.org.gr/library/Downloads/docs/Πολεοδομικός%20Σχεδιασμός%20Προβλήματα%20εφαρμογής%20και%20προτάσεις%20μεταρρύθμισης.doc

c) Lastly, having in force many special land-use procedures prolongs significantly the process of spatial planning, which augments the financial cost and discourages investment initiatives (e.g. licence for construction and use on the sea shore and on beaches, permit for intervention on monuments and their surroundings, permit for intervention on forest land, etc.). The difficulty coordinating these special procedures with general environmental licensing augments the regulatory risk of any land-use initiative. The problem grows to explosive proportions in the areas that are not included in spatial and urban plans, which attract the majority of business land-use projects. It is not rare for an investment project that has been evaluated as appropriate from spatial and environmental perspective (receiving the relevant environmental permit) to get "trapped" in the forest or archaeological legislation, resulting in long delays and even cancelation.

Additional obstacle to the spatial arrangement of businesses stems from the existence of old and outdated or obsolete spatial and urban plans, which continue to exist, without any evaluation of their effectiveness, often in complete incongruence with the economic and social conditions that they aim to regulate. The problem reveals an innate inability of the spatial and urban planning in Greece: it is incapable to follow and respond to the continuously changing needs and conditions of modern economic life. This problem is not limited to Greece and, as we shall see shortly, is attracting great attention in other European countries. There is a difference, however, in the degree of awareness about the problem in our country and elsewhere, as well as in the solutions that are proposed or scheduled to address it.

Strategies to address the problem: from the Olympic Games legislation to the strategic investment act

The problems that accompany the spatial planning of private investment began to be strongly felt in mid 1990s. The rulings of the "Hellenic Council of State" (the supreme administrative court of the country) contributed to this, revealing, on the one hand, the serious shortcomings of the legal framework on environmental permits that was in force then and, on the other, many of the deficiencies of the Greece spatial planning system.

The choice of Athens as the city to host the 2004 Olympic Games brought these issues to the surface. The spatial planning for the Olympic projects at the end of 1998 seemed hazy and very complicated: an obsolete master plan dated back to 1985, a series of disparate urban designs scattered throughout Attica, together with a multitude of regulatory requirements and formalities, were capable to delay or the whole endeavour or lead altogether to its failure.

Solution was sought to establish a special Olympic legislation that could "bypass" the established spatial planning and permit procedures, avoiding their legal, administrative and operative obstacles. The challenge was to accelerate the Olympic construction works, without breaching law and justice. The basic conception for the spatial arrangement of the Olympic

projects was as follows: a) rescaling of the Olympic projects to the level of the Athens Master Plan, by incorporating them in special urban planning guidelines for the Olympic poles system that was going to be established in Attica, b) establishment of special plans for integrated development in the areas of key Olympic installations, while allowing for derogation from general and specific urban regulations in force in each area, c) merger and integration of the content of special plans of particular environmental licences and permits, in order to reduce to time of the corresponding procedures and to achieve the necessary coordination between parallel and multiple regulatory regimes, d) approval of these plans with presidential decrees in order to secure their preliminary audit by the supreme administrative court and to shield them completely from future appeals, e) assignment of all remaining licensing to services of the central public administration so that the cases are handled in a uniform way, the problems are solved without delay and the relevant procedures are accelerated. The legal interventions were accompanied with the establishment of cohesive coordination mechanisms at central level that could swiftly make decisions and resolve any preparation problem.

The basic concept behind the legal precedent of the Olympic Games seems to be followed in the recent Law No. 3894/2010 for the acceleration of strategic investment. The initiative is undoubtedly welcome, even though some of the provisions of the new act can raise legal concerns if put to judicial review. In the current situation, as in the case of the Olympic Games, the strategy is to "bypass" the obstacles, created by established regulatory planning tools and the licensing procedures based on them. There is, however, one aspect that differentiates the two initiatives, both regarding the range of application and the applied means in each case. In the Olympic legislation, the projects and the need for the legal support were known and determined in advance. This allowed the lawmakers to introduce particular regulations and derogations from the established legislation, which gave operational character to the whole initiative, to address specific issues that were occurring during the execution of the projects and to proceed with corrective action to remedy any problems. It is doubtful that these conditions can be secured with the new act, which is directed at a much wider spectre of projects and investment plans, with unknown characteristics and covert problems for the time being.

In any case, the "fast track" system, introduced by the new act, cannot provide escape route for non-strategic investment, i.e. to the main bulk of entrepreneurial plans in the country, which today are strained under the weight of insufficient regulation and multiple administrative inflexibilities. A new procedure for quick spatial arrangement and licensing, with general scope, is required in order to address the land-use planning problems that these investment projects face. The review of the experience of other European countries, which recently addressed similar problems and proceeded to take particular measures can be especially useful for this purpose.

The experience of other countries: entrepreneurship without spatial planning obstacles

The majority of European countries have long tradition in spatial planning. Most member-countries of the European Union possess land use plans at local level and some of them (France, Denmark, Netherlands) also have regional or even national plans. The obligatory status of these plans varies. The local land-use plans have as a rule regulative content, while the remaining plan categories have guiding or sometimes indicative character, with many of the national plans providing visions, perspectives and strategy statements on particular policy areas (e.g. Nota Ruimte in the Netherlands, National planning reports in Denmark).

Irrespective of the planning specificity of each country, common objective in recent years seems to be the search for more planning flexibility and, through this, active support of development at all levels. In this regard, some countries have already undertaken a comprehensive review of their special and urban planning legislation (e.g. Netherlands), other countries proceeded to improve particular regulations (e.g. Denmark, Ireland), while elsewhere the issue has entered the agenda of upcoming reforms (e.g. UK). These initiatives aim to introduce "flexibility clauses" in the planning that will allow, in the name of competitiveness, the bypass of obsolete or redundant regulation, simplification and acceleration of planning procedures and attraction of new investment.

In this regard, particularly useful is the experience of the Netherlands and the UK, two countries that possess among the most mature and successful planning systems in Europe and internationally. The new Dutch spatial planning act,[52] adopted in July 2008, gave the central government the possibility to decide on spatial planning issues, under certain conditions and for projects of national significance, even to override local or regional plans. The same act provided the state authorities with the right to either exempt areas from local urban plans for reasons of national significance, or to adopt special plans for the regulation of issues of national scope (the so-called "integration plans"), where local urban regulation no longer apply. In addition, in the same law the local authorities are given the right to amend, with special fast procedure, the local land use plans in connection with the spatial arrangement of particular projects and activities, following a broad consultation with the national and regional authorities, the public and adjacent land owners. Lastly, the new act provides for concurrent drafting, publication and approval of all individuals licences and permits (environmental permit, building licence, etc.), required for the implementation of an investment of national significance. In these cases, the draft permits should be submitted to public consul-

[52] For the main modifications on the Dutch planning system that come with the new law, see the summary published in the website of the Dutch Ministry of Housing, Land-uses Planning and Environment (VROM) http://international.vrom.nl/pagina.html?id=37427,as well as the scientific analysis of Needham, B. (2005), «The New Dutch Spatial Planning Act: Continuity and Change in the way in which the Dutch Regulate the Practice of Spatial Planning», *Planning Practice & Research*, 20 (3), p. 327-340 and Spaans, M. (2006), «Recent changes in the Dutch planning system: towards a new governance model?», *Town Planning Review*, 77(2), σ.127-146.

tation, together with the special integration plan that regulates the spatial planning of the investment and to be approved together with it.

The United Kingdom is moving in similar direction with the Netherlands. In 2006 an independent committee of experts proposed a new system for spatial planning of nationally significant infrastructure projects, based entirely on national statements of strategic objectives, rather than on the provision of local plans.[53] Fast-track procedure for the spatial planning of nationally significant infrastructure projects was adopted in 2008, while the relevant competency was assigned to a new special independent authority (Infrastructure Planning Commission).[54] The new government that was elected in 2010 seems also to support the fast-track approach to permissions. It has announced its plans to revise legislation in order to boost the role of local institutions (Localism Bill), with, among other measures, the establishment of a decentralised, open and flexible planning system that can address the needs of the local communities.[55] In this regard, special significance is given to the introduction of spatial planning "automation", either through explicit exclusion of certain categories of land uses and installations from the requirement to possess a licence, or by providing businesses and individuals with the right to use land and buildings by presumption, provided that they do not violate national spatial, urban and environmental regulation and local plans.[56] According to the intentions that have been announced to the public, the appropriate authorities will not be allowed to reject planning application to those that conform to the above requirements and pay a tariff that compensates the community for loss of amenity and costs of additional infrastructure. The clarification of the proposed procedures in the bill, which will be published soon, is expected with particular interest.

Reviewing the Greek case: Are there solutions?

The comparative analysis that was briefly presented above shows that the attempt to overcome planning obstacles to entrepreneurship can be neither complete nor effective if it is not accompanied with significant innovation in the spatial and urban planning system and the regime for special permissions. Solutions to bypass the problem, as those adopted in the case of the Olympic projects and attempted again today for the needs of strategic investment, are not, to begin with, generalized for all investment plans. They are not sufficient primarily because they constitute exemption law and in addition because they do not address the root of the problem.

[53] HM Treasury (2006), *Barker Review of Land Use Planning. Final Report -Recommendations*, Available at: http://www.communities.gov.uk/documents/planningandbuilding/pdf/154265.pdf
[54] http://www.communities.gov.uk/documents/planningandbuilding/pdf/1521327.pdf
[55] This text is based on information available up to 10.12.2010. For more detail, see: http://www.communities.gov.uk/documents/newsroom/word/1795339.doc
[56] For more information, see op. cit. (note 55), as well as Conservative Party (2010), "OpenSourcePlanning", *PolicyGreenPaperNo 14, available at*:
http://www.conservatives.com/News/News_stories/2010/02/New_homes_and_jobs_through_Open_Source_Planning.aspx

In the recent past (2004-2009), an attempt was made to address the problem by lifting the spatial planning of key entrepreneurial activities (tourism, industry, renewables, fisheries) to the level of national spatial planning. The ultimate goal was to overcome the vagueness, inflexibility and gaps of the various urban development plans through the Special Planning Frameworks. However, the effectiveness of this option also has proven to be marginal for two main reasons. First, because the planning frameworks, particularly those at national level, cannot provide special and detailed guidelines on the spatial arrangement of projects and activities that would address the whole spectre of issues arising in administrative practice, mainly because of their large scale. Second, the approval of planning frameworks cannot automatically lead to the modification of any contradicting or differing planning provisions, present in adopted urban development plans. These plans should be amended or revised in accordance with the provisions that govern them (and within the time needed for this process), so that they are aligned with national and regional spatial planning. This practically implies that, even after the approval of the planning frameworks, the provisions of the local plans continue to be implemented, as the established legislation does not envisage their direct amendment.

In any case, the spatial planning cannot be expected to serve as the main means for healing the ills that characterise the spatial arrangement of public projects and private investment, nor could it be upgraded to the regulator for the process of development, as indirectly revealed by many decisions of the supreme administrative court.[57] Such a solution intensifies the phenomenon of spatial overregulation, without providing an escape route to the long-standing problem of the lack of clear and simple rules for land use, especially in areas that are situated outside approved development plans of cities and settlements.

The quest to escape the current dead-end should be constrained to realistic and feasible solutions. The setting of clear and sufficient rules for the spatial planning of private investment that can be implemented immediately in the whole country takes priority. This should be accompanied, where feasible, with "planning automation", which will secure fast licensing and will overcome spatial plans that have become obsolete. The Special Planning Frameworks for the Renewable Energy Sources and Tourism attempted to do just that, incorporating provisions that could had acquired from the beginning the character of general spatial planning regulations. In this regard, we can examine in more detail the following:

- Establishment of general urban development and environmental regulations for the terms and conditions of spatial planning of investment activities, valid for the whole country. These regulations, which will amend the provisions on building in areas not included in urban plans and settlements, should determine the appropriate planning requirements for each enterprise category (e.g. eligibility to build, distance from cities, settlements and

[57] See, among other decisions, HCS Plenum Dec. No. 3396-3397/2010, 2489/2006, 705/2006, 1569/2005 and HCS Dec. No. 2569/2004, 2506/2002, 2319/2002, 3364/1999, 1434/1998 and 5168/1997.

other similar or competing uses, conditions for change of use of existing facilities, conditions for establishment of activities in special category areas, such as high productivity land, etc.). These regulations, given their general character, should take precedence over every contradicting or different provision included in urban development and land use plans. Meanwhile, they will also commit the licensing authorities to the process of granting individual licences and permits.

- Merger of special land use permits, envisaged in the existing legislation (e.g. permission to modify monumental buildings and their surroundings, permission to build in forest land, land eligibility permit by the Greek Tourism Organisation, etc.) into a single environmental licence and its eventual incorporation into the overall process of environmental licensing (approval of environmental conditions). Such an intervention should be accompanied with redefinition and reduction of the submitted documentation, drafting of new standards for environmental evaluations (e.g. of the Environmental Impact Studies) and standardisation of intermediated documents and approval acts of legislation, so that both the Public Administration and the interested investors know the stages, the maximum time and the overall flow of the administrative process.

- Clear specification of the essential content of each permit and the issues of competence of the licensing authorities, in order to avoid the phenomenon of services which on the occasion of issuing a permit or an opinion adopt a stance on issues of competence of other agencies or of other stages of the process (e.g. expression of judgment or reservations over ownership issues during the stage of environmental licensing).

- Establishment of exclusive deadlines for the granting of the requested licences and approvals. After the expiry of the deadlines, the licences and approvals should be considered implicitly adopted, in case an explicit decision has not been taken. Alternatively, the application evaluation competency could be assigned to independent certified inspectors and subsequently the evaluation could be validated, under certain conditions, by the licensing authority.

The most significant and probably the most painful intervention in the existing planning system should concern the timing and other conditions under which the existing spatial and urban development plans, as well as other land use plans, can be taken into consideration and or to commit the spatial arrangement of public infrastructure projects or private investment. The legislation in force already envisages that some of these plans should be submitted to monitoring and evaluation procedures and thus modification or revision at regular intervals. This requirement is not universal, while it has languished even in the cases stipulated by the law (e.g. regional planning frameworks). As a result, there are instances when public administration rejects or the courts annul planning applications because they are not in line with the provisions of plans adopted 15, 25 or even 25 years ago, as the Athens Master Plan (Law No. 1515/1985) or the corresponding plan for Thessaloniki (Law No. 1561/1985). In cases of

plans that have become obsolete and incapable to meet contemporary social and economic needs, maybe the conditions are ripe to put into question the issue of their validity period, especially given the current critical economic conditions in Greece.

It should be noted that similar provisions have already been placed in other European countries, such as the Netherlands, where it is envisaged that all land use plans have maximum validity period of ten years. After the expiry of this period, the competent authorities ought to prepare and approve a new plan or extend the validity of the existing plan, provided that they can offer sufficient evidence of their effectiveness. The omission of these obligations prevents the legal authorities from collecting taxes and levies for the provision of services or the maintenance of infrastructure, specified in the no longer valid plan. The proposals for simplification and acceleration of the - adopted only a few years ago (2006) - planning policy that were submitted to public discussion in the UK seem to be more radical. Among the proposed solutions is the provision of approving investment projects, even when they contradict land use plans if the plans are out-of-date or indeterminate.[58]

To address the investment spatial planning issue in Greece certainly requires additional, more radical, interventions to the existing spatial planning system, which however should be prepared over longer time span and cannot have immediate effect. These include reduction of the multitude of planning levels, balanced and clear depiction of the extent to which the rulings of each planning level are binding, streamlining and simplification of the content of evaluations and procedures and mainly strengthening of the openness and the effectiveness of "business spatial planning", as well as the transparency, credibility and accountability of the authorities. These are issues that have been occasionally put to public discussion,[59] without, however, becoming the subject of systematic study and more importantly targeted action to address them. Perhaps the multiple failures that the country is experiencing today provide an opportunity to revisit with honesty problems that we used to address with perplexity and reluctance in the past. The relationship between entrepreneurship and spatial planning is certainly one of those problems.

[58]HM Treasury (2006), *Barker Review of Land Use Planning. Final Report -Recommendations*, Available at: http://www.communities.gov.uk/documents/planningandbuilding/pdf/154265.pdf

[59]See the study by LAI (2006), op. cit. (footnote 51) and the Initiative Opinion No. 190 of the Economic and Social Council of Greece on "Regional and Urban Planning and Zoning" (in Greek), adopted on 14.12.2007 and available at: http://www.oke.gr/opinion/op_190_07.pdf

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 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.

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-27.

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 Euro area (latest revision by Eurostat, August 2007) is presented in tabular form.

Abbreviations

EU27	European Union
EU25	European Union (except Bulgaria and Romania, which became EU-member in January 2007)
EA16	Euro Area of 16
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

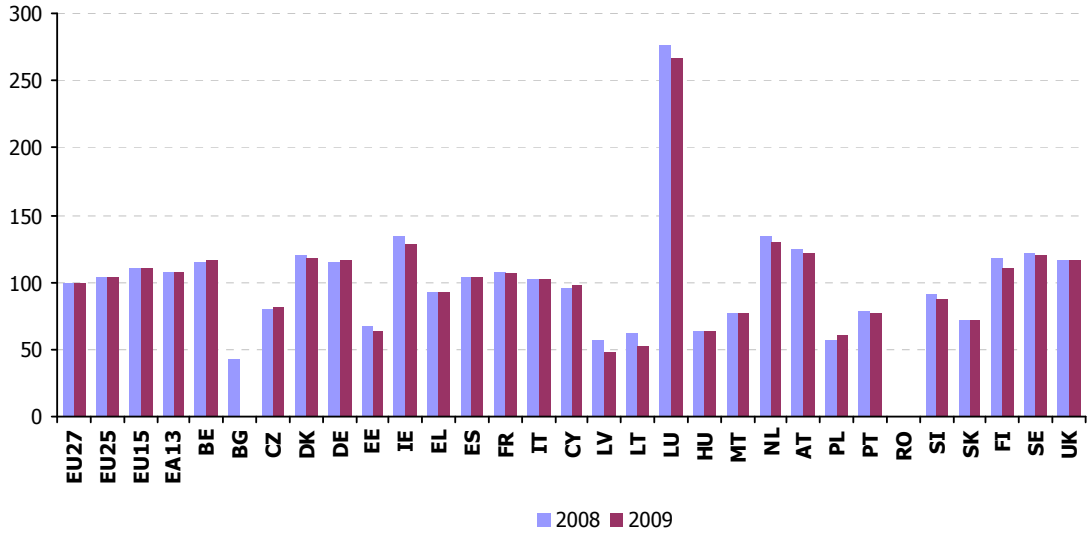
PART A
(HEADLINE INDICATORS)

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. Their use enables the comparison of the volume of GDP per capita between different countries.



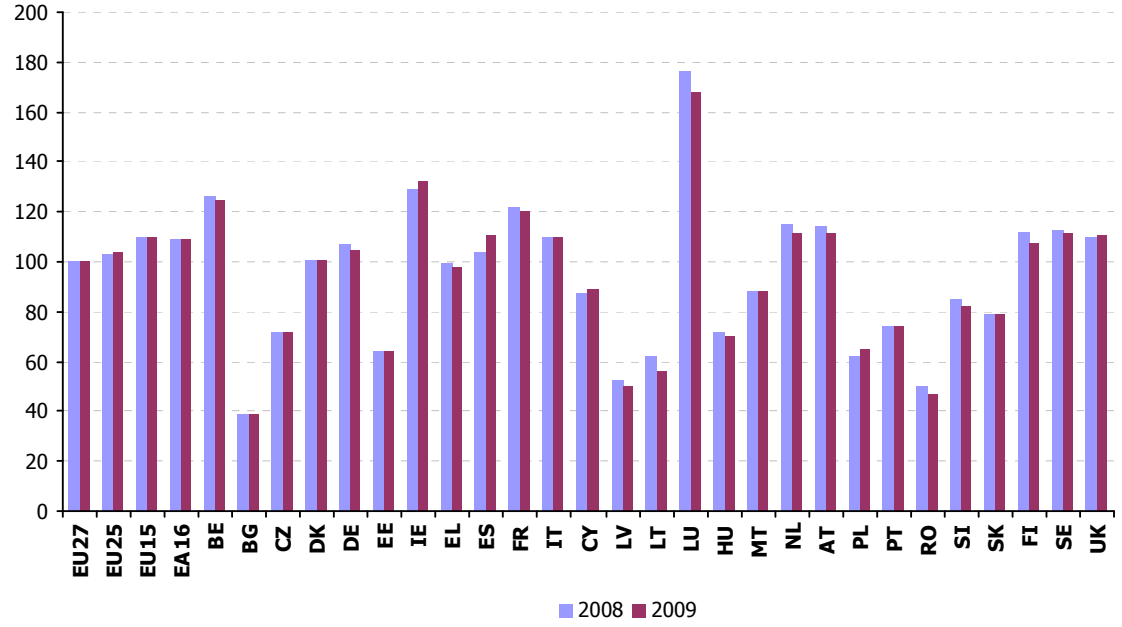
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	100	100	100	100	100	100	100	100	100
EU25	105	105	104	104	104	104	104	103	103
EU15	115	114	114	113	113	112	112	111	111
EA16	112	111	111	109	110	109	109	108	108
EL	86	90	93	94[P]	91	93	92	93	93

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.



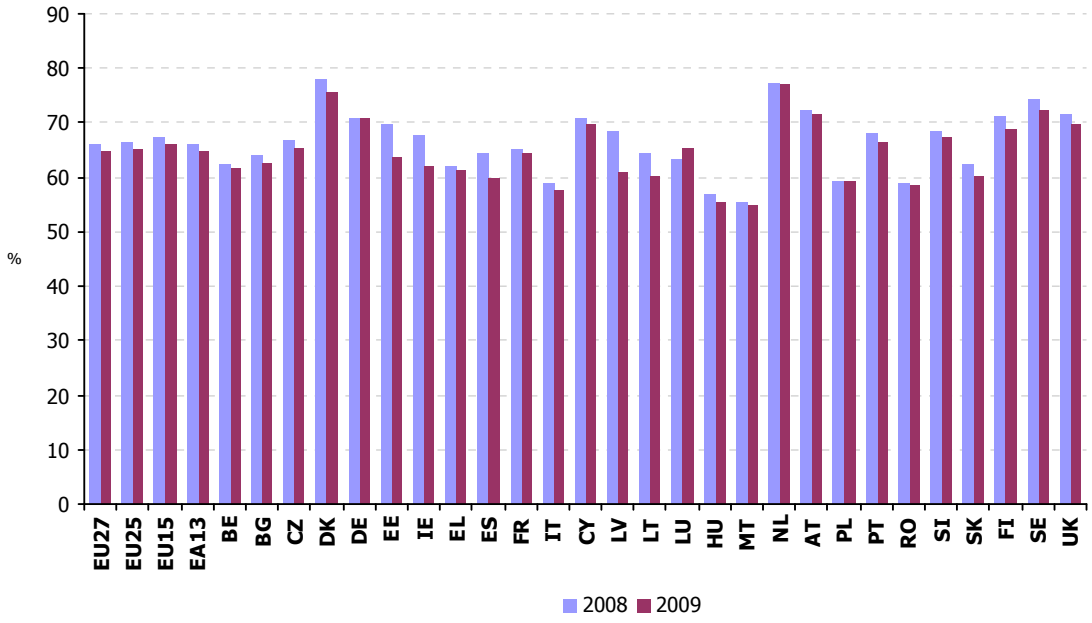
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
EU25	104.6	104.5	104.4	104.2	104	103.9	103.7	103.3	103.4
EU15	112.7	112.1	111.6	111.1	110.9	110.7	110.3	109.8	109.8
EA16	112	110.9	110.5	109.5	109.7	109.6	109.6	109.2	109.1
EL	97.2	99.5	101.2	100.6(p)	98.4(p)	98.0(p)	97.5(p)	99.1(p)	98.0(p)

(p): provisional data
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 they were temporarily absent. The survey covered 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 were no included.

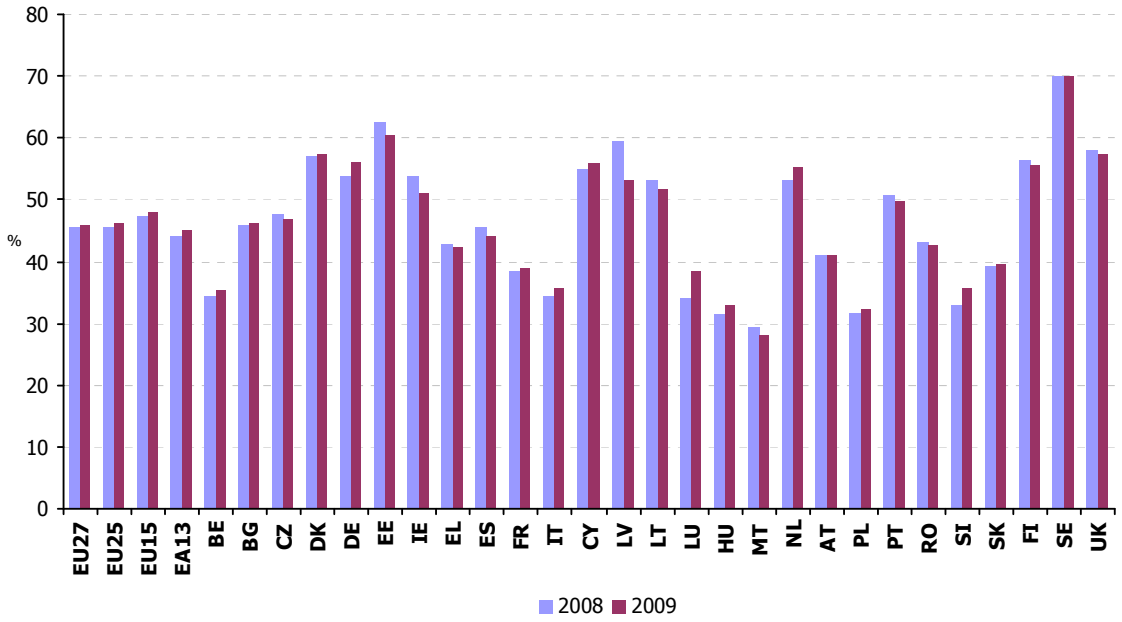


	2002	2003	2004	2005	2006	2007	2008	2009
EU27	62.4	62.7	62.8	63.5	64.5	65.4	65.9	64.6
EU25	62.8	63.0	63.1	64.0	64.8	65.8	66.3	65.0
EU15	64.2	64.4	64.6	65.4	66.2	66.9	67.3	65.9
EA16	62.3	62.6	62.8	63.7	64.6	65.6	66.0	64.7
EL	57.7	58.9	59.6	60.1	61.0	61.4	61.9	61.2
Male								
EU27	70.4	70.3	70.2	70.8	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
Female								
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)



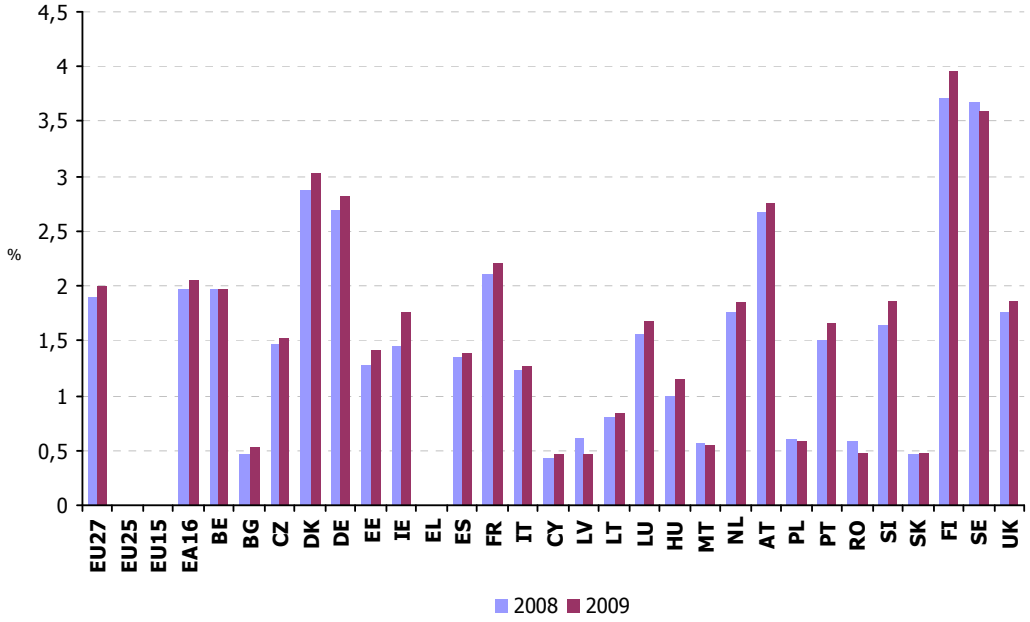
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	37.5	38.2	39.9	40.5	42.3	43.5	44.6	45.6	46.0
EU25	37.1	38.4	40.1	40.8	42.6	43.6	44.8	45.7	46.2
EU15	38.4	39.8	41.5	42.3	44.2	45.3	46.5	47.4	48.0
EA16	34.4	35.8	37.3	38.2	40.3	41.6	43.2	44.2	45.1
EL	38.2	38.9	41.0	39.4	41.6	42.3	42.4	42.8	42.2
Male									
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
Female									
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)



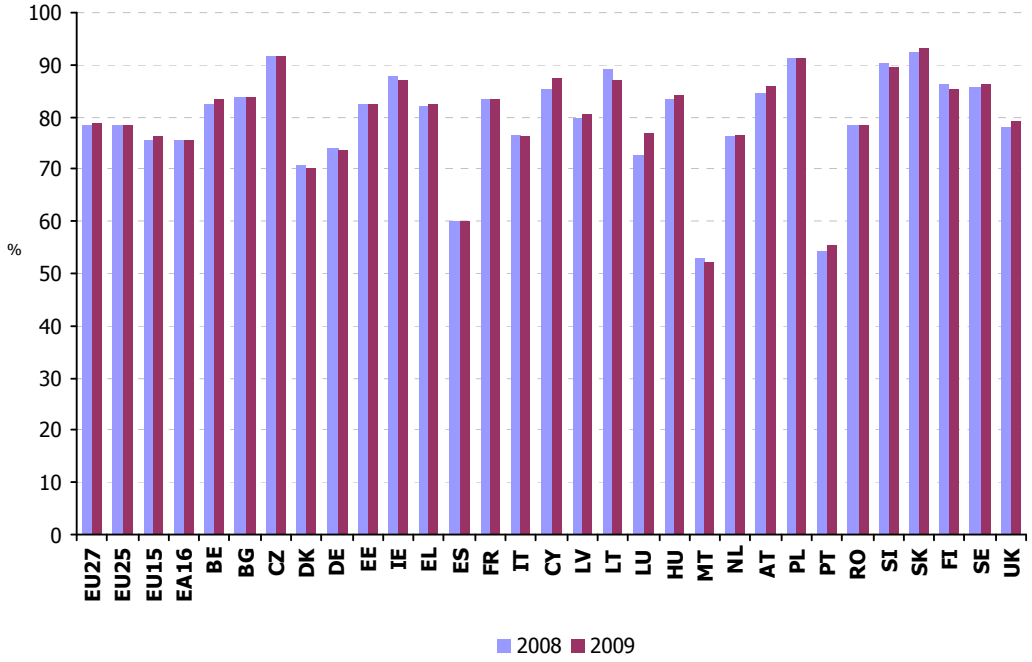
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	1.86^{s}	1.87^{s}	1.86^{s}	1.82^{s}	1.82^{s}	1.85^{s}	1.85^{s}	1.92^{s}	2.01^{s}
EU15	1.92^{s}	1.93^{s}	1.93	1.89^{s}	1.89^{s}	1.92^{s}	1.93^{s}	2.01^{s}	2.10^{s}
EA16	1.85^{s}	1.87^{s}	1.87^{s}	1.85^{s}	1.84^{s}	1.87^{s}	1.88^{s}	1.96^{s}	2.05^{s}
EL	0.58	:	0.57^{e}	0.55^{e}	0.59^{e}	0.58^{e}	0.58^{e}	:	:

(s): Eurostat estimate, (e): estimate

Source: Eurostat

III-2a. Youth education attainment level

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



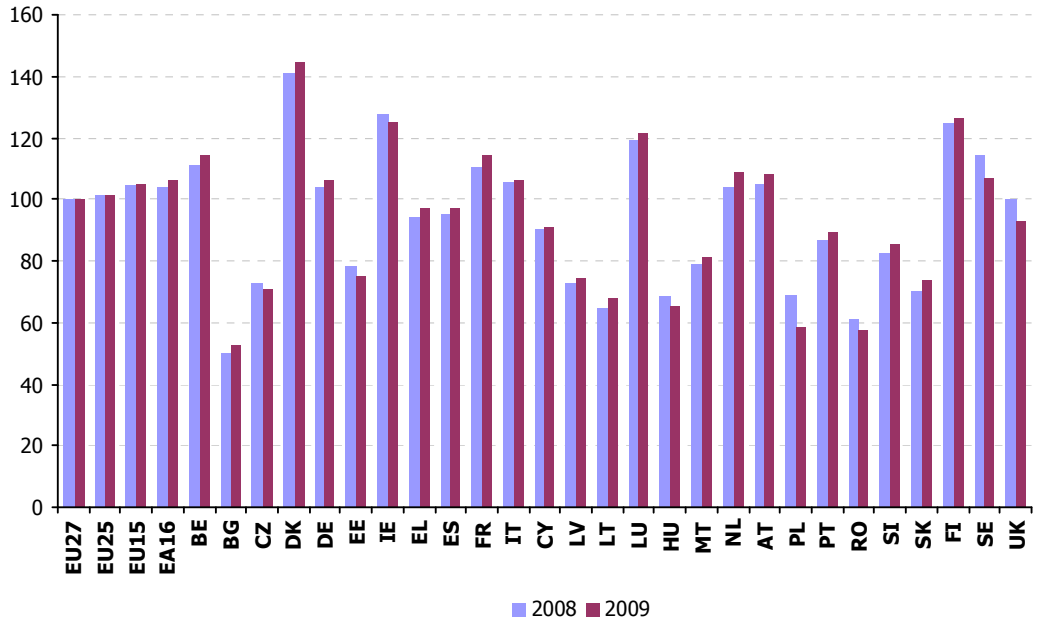
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	76.6	76.7	76.9	77.1	77.5	77.9	78.1	78.4	78.6
EU25	76.5	76.7	77	77.3	77.6	77.9	78	78.3	78.5
EU15	73.6	73.7	74.1	74.4	74.7	75	75.2	75.7	76.1
EA16	73.2	73.4	73.5	74	74.2	74.5	74.9	75.5	75.6
EL	80.2	81.1	81.7	83	84.1	81	82.1	82.1	82.2
Male									
EU27	74.0	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
Female									
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)

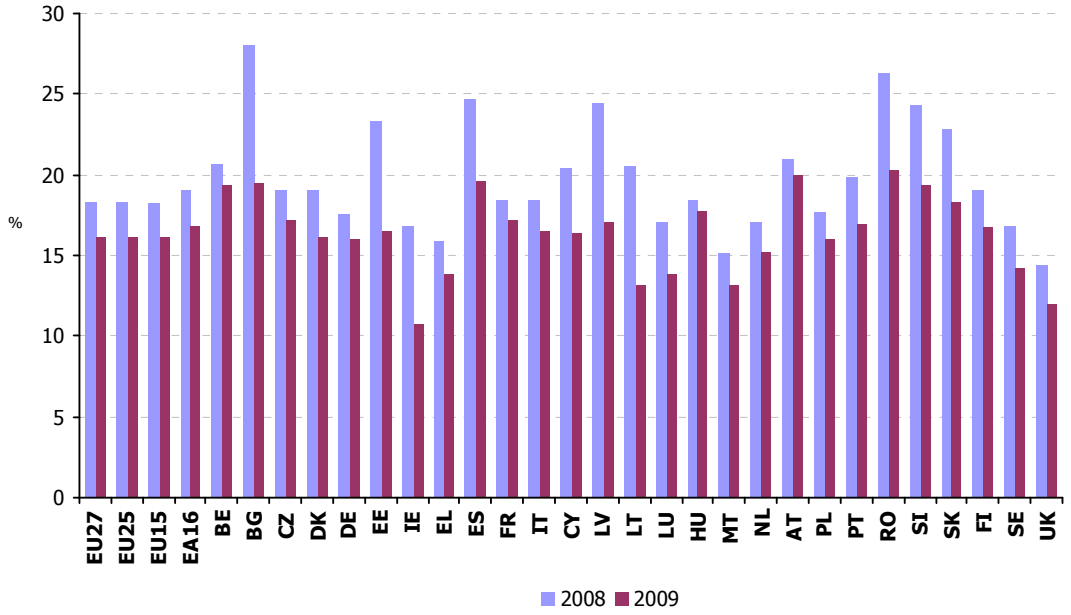


	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	100	100	100	100	100	100	100	100	100
EU25	101.1	101.1	101.1	101.2	101.1	101.1	101	101.2	101.1
EU15	104.7	104.8	105.2	105.4	104.8	104.8	104.8	104.4	104.9
EA16	100.5	100.5	103	103.1	102.1	101.9	101.6	104.0	106.5
EL	82.3	80.2	85.9	87.6	88.2	89.0	90.7	94.0	97.4

Source: Eurostat

IV-2a. Business investment

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



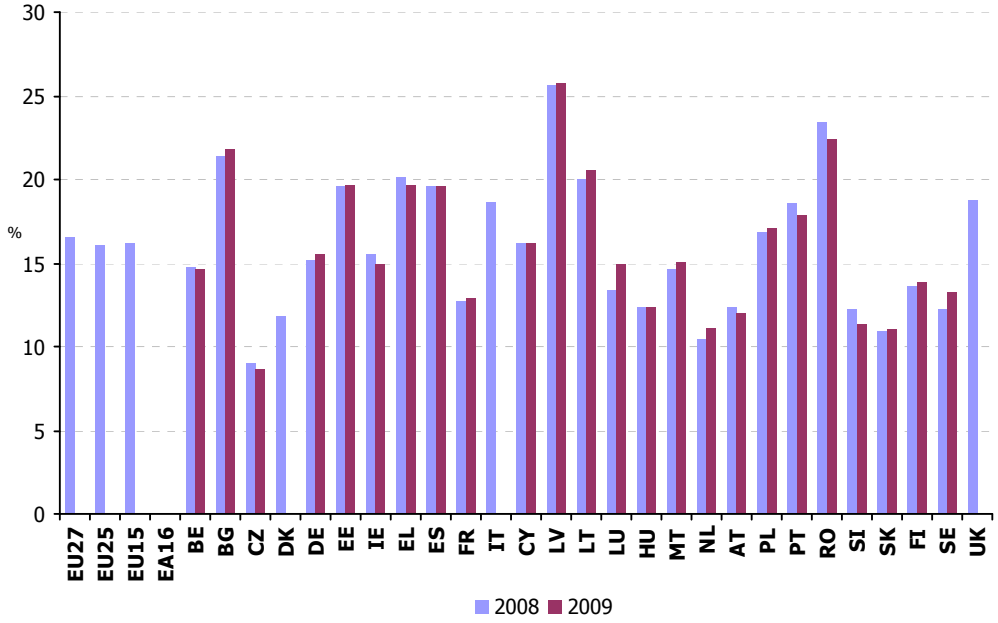
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	17.9	17.3	17.1	17.2	17.7	18.2	18.7	18.4	16.2
EU25	17.9	17.3	17.1	17.2	17.7	18.2	18.6	18.3	16.1
EU15	17.8	17.3	17	17.2	17.7	18.1	18.5	18.2	16.1
EA16	18.5	17.9	17.6	17.8	18.2	18.9	19.3	19	16.9
EL	18.1	19.1	19.8	18.5	17.1	17.7	17.6	15.9	13.8

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)



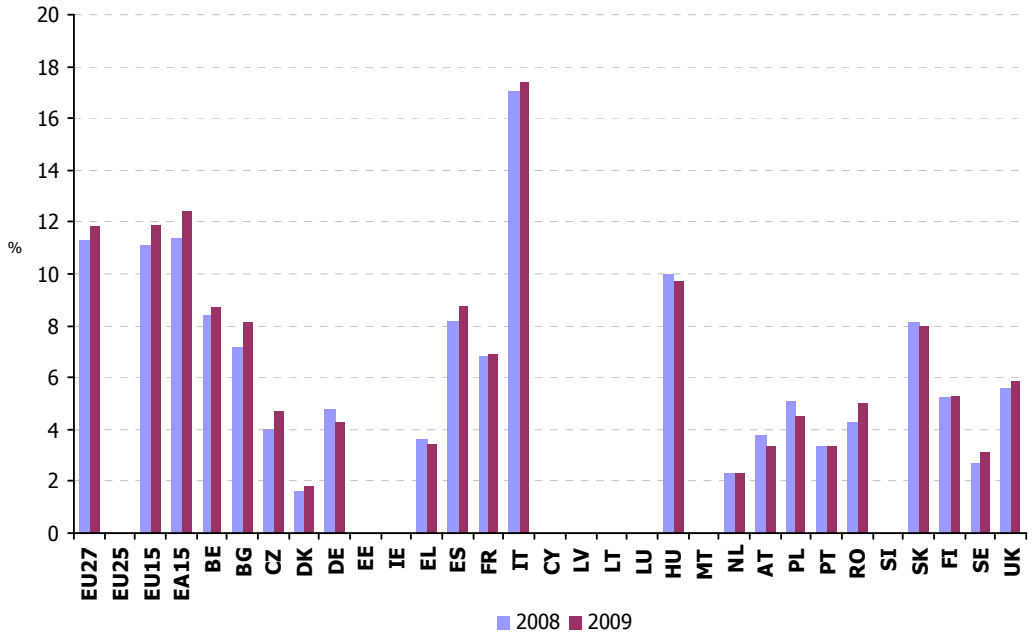
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	:	:	:	:	15.9	16.1	16.7	16.5	:
EU25	16	:	15	16	15.9	16.1	16.2	16.1	:
EU15	15	:	15	17	15.7	15.9	16.5	16.2	:
EA16	:	:	:	:	:	:	:	:	:
EL	20	:	20.7	19.9	19.6	20.5	20.3	20.1	19.7
Male									
EU27					15.2	15.3	15.9	15.5	:
EU25	15		14	15	15.2	15.3	15.4	15.1	:
EU15			14	15	14.8	15.0	15.5	15.2	:
EA16					14.2	14.5	15.1	14.8	:
EL	19.0	:	19.9	18.7	18.3	19.5	19.6	19.6	19.1
Female									
EU27	:	:	:	:	16.5(s)	16.9(s)	17.5	17.4	:
EU25	17(s)	:	16(s)	17(s)	16.6	16.8	17.1	17.0	:
EU15	:	:	17(s)	18(s)	16.5	16.9	17.4	17.3	:
EA16	:	:	:	:	16.2	16.4	17.1	16.8	:
EL	22	:	21.4	21.0	20.9	21.4	20.9	20.7	20.2

(s): Eurostat estimate

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)



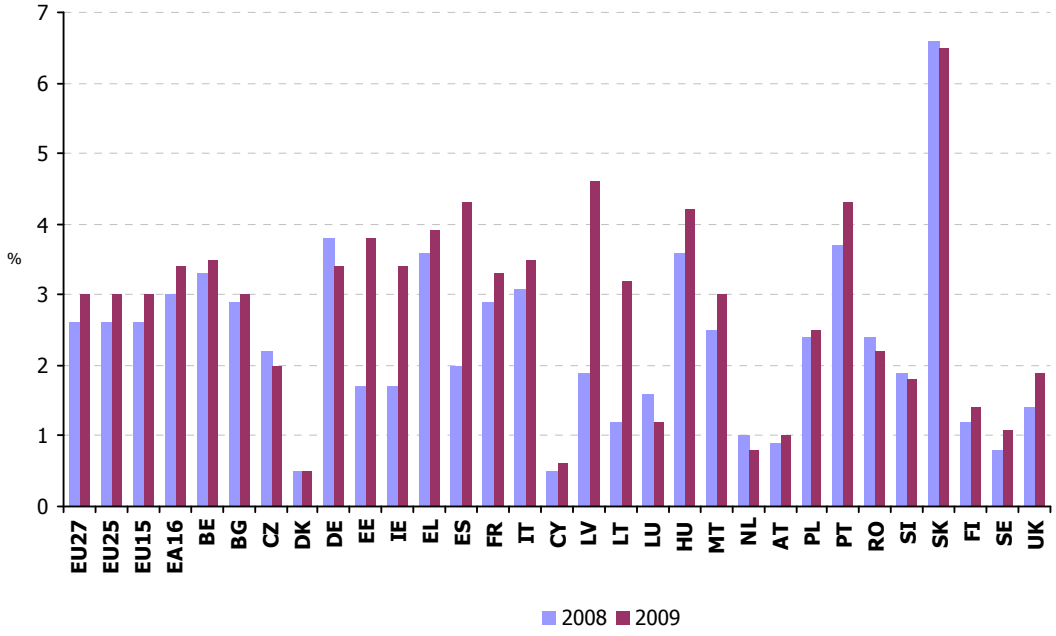
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	13.2	13.2	12.9	12.1	11.9	11.4	11.1	11.3	11.8
EU25	:	:	:	:	:	:	:	:	:
EU15	13.1	12.4	11.8	11	10.8	10.6	10.6	11.1	11.9
EA15*	12.7	12.1	11.5	10.5	10.5	10.6	10.8	11.4	12.4
EL	4.3	3.8	3.2	4.1	4.3	3.7	3.5	3.6	3.4

*There are no available data for the Euro area - 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).



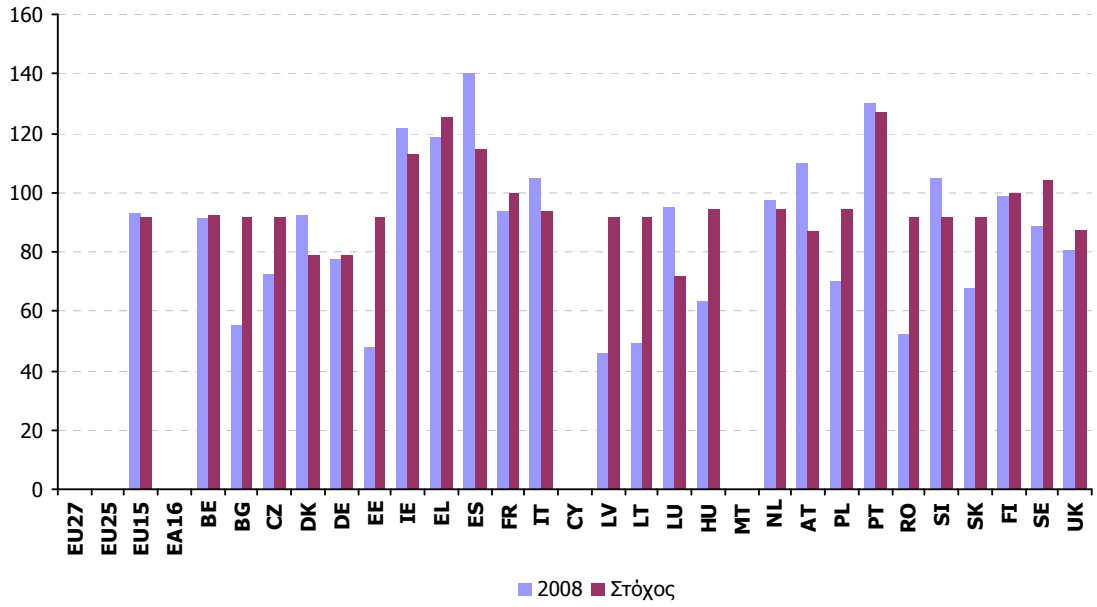
	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU27	3.9	4	4.1	4.2	:	3.7	3.1	2.6	3.0
EU25	3.8	3.9	4	4.1	:	3.7	3	2.6	3.0
EU15	3.1	3.1	3.3	3.4	:	3.2	2.8	2.6	3.0
EA16	3.7	3.7	4	4.2	4.1	3.9	3.3	3	3.4
EL	5.5	5.3	5.3	5.6	5.1	4.8	4.1	3.6	3.9
Male									
EU27	3.5	3.6	3.8	3.9	:	3.5	2.8	2.4	2.9
EU25	3.3	3.4	3.7	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
Female									
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)

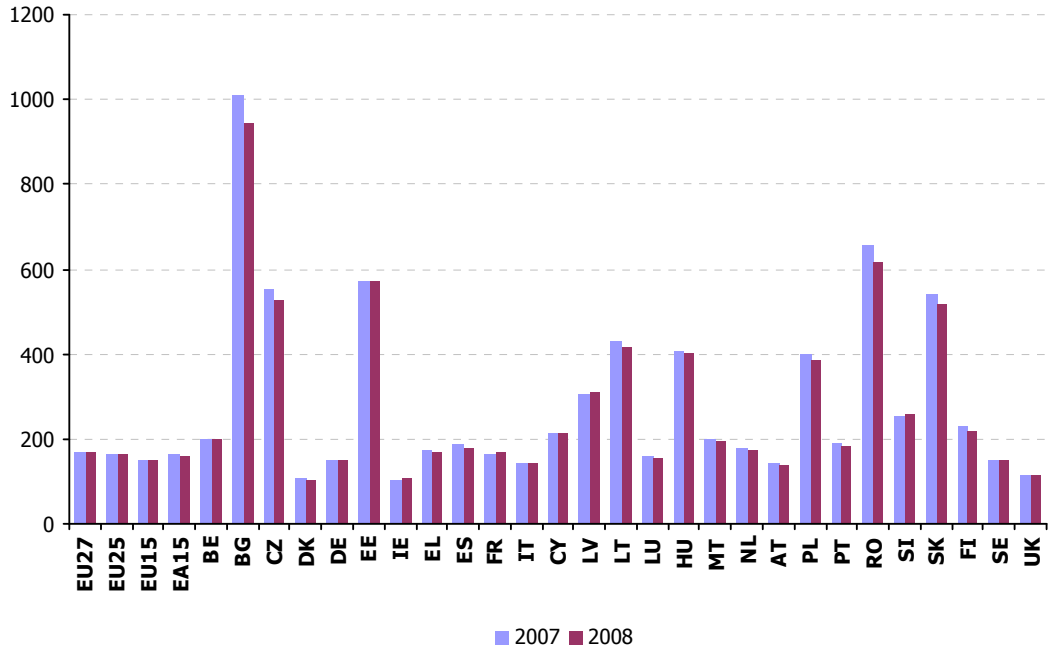


	2001	2002	2003	2004	2005	2006	2007	2008	Target
EU27	:	:	:	:	:	:	:	:	:
EU25	:	:	:	:	:	:	:	:	:
EU15	97.5	96.8	98	97.9	97.2	96.3	94.9	93.1	92
EA16	:	:	:	:	:	:	:	:	:
EL	125.2	121.8	121.4	121	123.8	122.8	121.7	121.3	125

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)

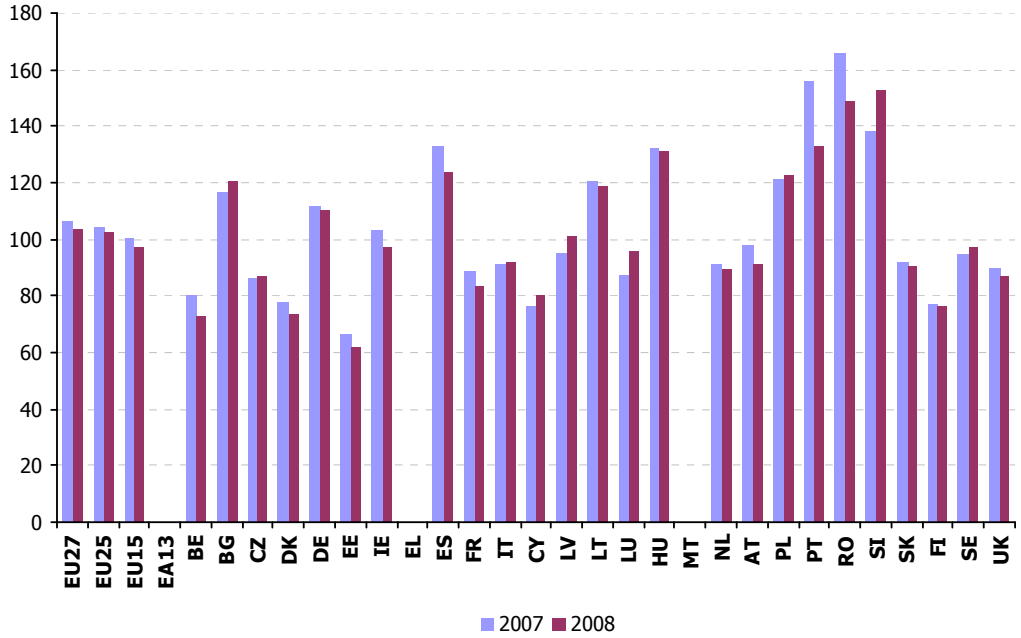


	2000	2001	2002	2003	2004	2005	2006	2007	2008
EU27	187.3	187.8	185.1	187.2	184.8	181.3	175.7	169.1	167.1
EU25	182.4	182.9	180.2	182.2	180.1	176.7	171.1	164.7	162.9
EU15	167.6	168.1	165.6	167.3	165.8	162.8	157.3	151.5	145.0
EA15	174.6	175.5	174.0	176.8	175.8	173.0	167.5	162.1	160.5
EL	204.6	202.2	200.8	192.4	186.8	186.1	179.0	171.4	170.0

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	99.0	100.2	99.3	105.4	105.4	106.0	106.5	104.0
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	:	:	:	:	:	:	:	:

Source: Eurostat