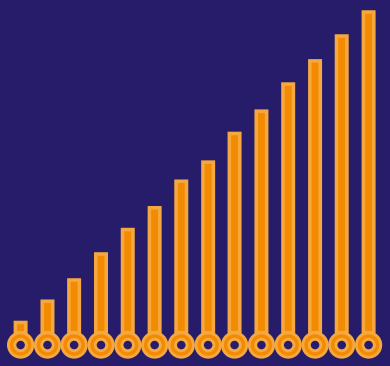
CENTRE OF PLANNING AND ECONOMIC RESEARCH

Issue 26, February 2015

GREEK ECONOMIC OUTLOOK



- Macroeconomic analysis and projections
- Public finance
- Human resources and social policies
- Development policies and sectors
- Special topics

Contents

Issue 26 - February 2015

Special topics 46

Editorial

Issue 26 of KEPE's journal *Greek Economic Outlook* finds the country in the dawn of a new era, with a new government and new macroeconomic orientations. As a scientific journal, but also as a research institution with experienced scientific staff and an institutional advisory role to the Government, we are here to provide robust economic analyses, to highlight the results of economic selections, to provide reasoned analyses of possible risks and to make development proposals in all economic sectors which we study. In all cases the aim is effective economic policies, structures, institutions and mechanisms, to promote economic development.

It is obvious that there are significant economic and social problems which await treatment. It is still early to assess the effects of the recent economic handlings at both national and international levels. The analyses and forecasts we publish, however, are, and will continue to be, useful and reliable tools in both the analysis of the economic situation, with many recipients, and in economic policy.

In the current issue, the **first part** consists of four sections. The first section of *Macroeconomic analysis and forecasts* analyzes the demand for the current account, the consumer price index, the assessment model of the recession and the presentation of KEPE's forecasts for the Greek economy. In the second section, on *Public finance,* we host two analyses, one on the presentation and analysis of the execution of the State Budget and one on the development of the Public Debt. The third section on *Human resources and social policy* looks at developments in the labor market and analyzes poverty, inequality and social exclusion. In the fourth section on *Development policies and sectors*, we present an article on the evolution of the Greek market of transport fuels, followed by an analysis of the Greek food supply chain and, finally, an approach to issues of economic programming is given.

The **second part** presents three interesting and topical articles entitled: "A critical approach to the new framework for creating tourism investment during the current period of economic crisis 2010-2014", "The determinants of Greek exports: Analysis of the effects of international demand and domestic competitiveness on the Greek sectoral exports" and finally "Greek banking support framework: A first attempt".

NICHOLAS VAGIONIS
Editor

1. Macroeconomic analysis and projections

1.1. Recent developments and prospects in the main demand components

Ersi Athanassiou, Ekaterini Tsouma

In November 2014, EL.STAT. published revised quarterly National Accounts data and also re-initiated the publication of these data on a seasonally adjusted basis.[1] Thus, in the present issue of the Greek Economic Outlook changes in the main macroeconomic aggregates between the first three quarters of 2014 and the corresponding quarters of the previous year are examined on the basis of these revised data, using the seasonally adjusted series, instead of the non-seasonally adjusted series which were, until recently, the only ones available.

According to the above data, the Greek economy has come out of the deep recession that prevailed since the middle of 2008, and appears to have entered a period of recovery. More particularly, during the nine-month period from January to September 2014, there was an increase in the GDP averaging 0.6% y-o-y, versus a decline in the GDP amounting to -4.3% during the corresponding period of the previous year. In the third quarter of 2014, the increase in the GDP reached 1.6%, while in the corresponding quarter of 2013, the decline in the GDP amounted to -2.9% (see Table 1.1.1).

With regard to the primary factor driving the recession during the previous years, i.e. the developments in domestic demand, the downward trends appear to have been reversed in the course of 2014. More particularly, private consumption moved upwards in the first three quarters of the year, recording an increase of 3.1% in the third quarter, compared to the corresponding period of the previous year. In parallel, gross fixed capital

TABLE 1.1.1 Main macroeconomic data
% rates of change compared to the corresponding period of the previous year (seasonally adjusted data at constant prices)

	2013Q1	2013Q2	2013Q3	2013Q4	2014Q1	2014Q2	2014Q3	9-month period Jan. - Sept. 2014	9-month period Jan. - Sept. 2013
Private consumption	-4.8	-2.4	-2.8	1.6	0.4	1.0	3.1	1.5	-3.3
Public consumption	-12.1	-8.8	-1.8	-3.6	0.7	2.2	-2.4	0.1	-7.7
Gross fixed capital formation	-12.5	-12.6	-2.7	-9.0	-5.8	-5.0	1.0	-3.3	-9.6
Domestic demand*	-7.0	-4.8	-2.5	-0.9	-0.2	0.5	1.9	0.1	-5.9
Exports of goods and services	0.3	4.6	3.9	-2.6	7.4	9.1	8.6	8.4	2.9
Exports of goods	5.7	9.2	3.3	-8.1	5.0	3.8	1.7	3.5	6.0
Exports of services	-5.2	-1.2	3.7	6.2	10.2	15.1	16.4	13.9	-1.0
Imports of goods and services	-3.2	-2.7	1.4	-6.7	0.3	8.2	2.9	3.8	-1.6
Imports of goods	-0.2	0.7	2.0	-5.9	-0.2	8.4	5.0	4.4	0.8
Imports of services	-14.8	-14.9	-0.4	-11.3	3.1	8.1	-6.5	1.4	-10.4
Balance of goods & services	-24.8	-49.6	-22.7	-38.9	-58.2	-3.0	-69.1	-37.0	-36.8
GDP	-5.4	-4.1	-3.5	-2.9	-0.3	0.4	1.6	0.6	-4.3

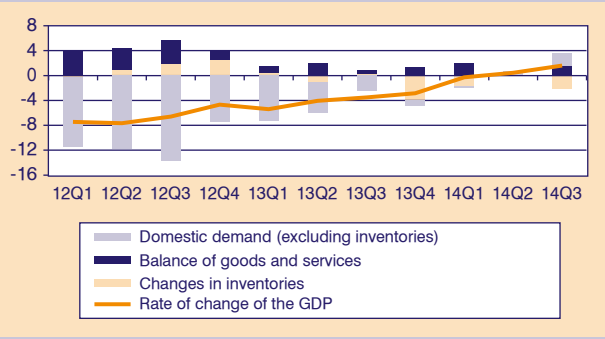
Source: National Accounts, EL.STAT. (September 2014), own calculations.

* excluding the change in inventories.

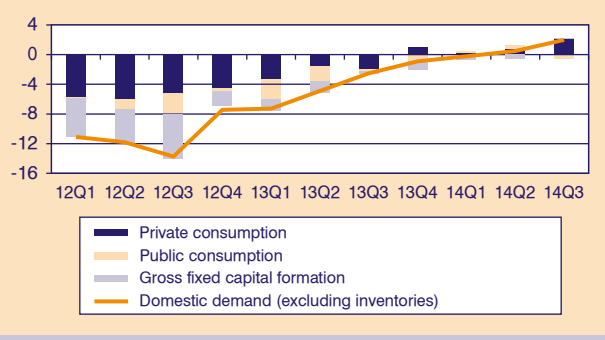
1. EL.STAT.'s Press Release of 28.11.2014 with the title "Quarterly National Accounts: 3nd Quarter 2014 (Provisional data)".

investment increased in the third quarter of 2014 for the first time since the first quarter of 2008. These developments resulted in a contribution of domestic demand to the rate of change of the GDP amounting to -0.2, 0.5 and 2.0 percentage points in the first, second and third quarter of 2014, respectively, versus -7.3, -4.9 and -2.5 percentage points, during the corresponding quarters of 2013 (Figure 1.1.1).

FIGURE 1.1.1
Contributions to the rate of change of the real GDP
Domestic and net external demand



Individual components of domestic demand



Source: National Accounts, EL.STAT., own calculations.

With respect to the external sector, its contribution to the rate of change of the GDP remained positive during the first three quarters of 2014, exhibiting nevertheless significant changes with respect to the evolution of its main components. More particularly, imports, which followed a downward course nearly throughout the recession, recorded an increase in the nine-month period from January to September 2014, as a result of the gradual recovery of domestic demand. In parallel, a major rise was also recorded during the same period in services exports, while with respect to the performance in the field of goods exports, the increase observed was weaker compared to the corresponding period of the previous year. Overall, the contribution of the external sector to the rate of change of the GDP amounted to 1.9, 0.1 and 1.6 percentage points during the first, second and third quarter of 2014, respectively, from 1.0, 2.0 and 0.6 points during the corresponding quarters of 2013.

The ending of recessionary conditions is also depicted in the econometric estimates of recession probabilities, presented in Section 1.4. Regarding the main factors shaping the aforementioned developments in the GDP, next follows a more detailed analysis of their evolution and prospects, on the basis of national accounts data and selected short-term indicators.

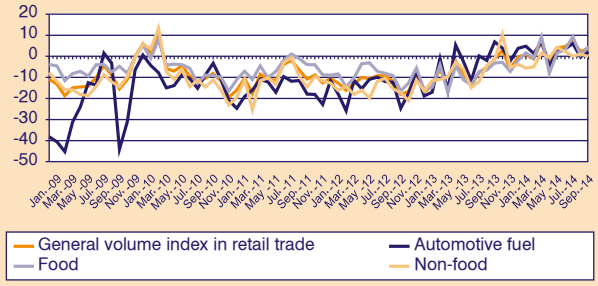
1.1.1. Private consumption

Private consumption, having entered a period of recovery already from the fourth quarter of 2013, presented a significant increase in the area of 3.1% in the third quarter of 2014, thus contributing 2.1 percentage points to the corresponding rate of change of the GDP and representing a significant factor driving the recovery of the economy. The continuation of favorable developments in private consumption expenditure is, to a significant degree, further reflected in the evolution of the monthly volume index in retail trade. In particular, during the period July-October 2014,[2] the recorded monthly percentage changes in the volume index have been exclusively positive (4.7% in July, 7.3% in August, 2.2% in September and 3.7% in October, Figure 1.1.2), while the same applied to the respective rate of change for the ten-month period from January-October 2014 (2.4%), as compared to the corresponding period in 2013. The upward trends in the general index during the referred ten-month period mirror the respective positive developments which characterized the distinct indices in two of the three retail sector main categories, namely in the *food* sector (1.8%) and the *automotive fuel* sector (2.6%). In contrast, a marginally negative percentage change was recorded, during the same time period, in the case of the *non-food* sector volume index (-0.6%). Still, in most cases (with a few exceptions) the monthly rates of change in the individual indices in the main retail sectors were positive from July to October 2014, as illustrated in Figure 1.1.2. It is worth emphasizing, that this observation also concerns the *non-food* sector, which, until the most recent reference period, had been characterized by almost exclusively negative trends (see *Greek Economic Outlook*, Issue 25).

The more detailed categorization of the volume index in retail trade in the eight specific store categories provides useful additional information. More specifically, the monthly evolution of the individual indices but primarily

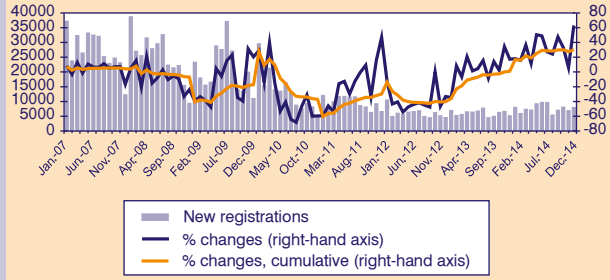
2. Note that the October statistics are provisional.

FIGURE 1.1.2
Percentage changes in the general volume index and the main sector indices in retail trade



Source: EL.STAT., own calculations.

FIGURE 1.1.3
New private passenger car registrations



Source: EL.STAT., own calculations.

the more aggregate path during the ten-month period from January-October 2014 suggest that any negative developments –as compared to 2013– mostly originated from the *department stores* (-9.6%), *food-beverages-tobacco* (-3.3%), *pharmaceuticals-cosmetics* (-1.7%) and *furniture-electrical equipment-household equipment* (-7%) categories, following the evidence from the preceding reference period. It should be stressed that the respective categories do not exclusively concern durable goods, but also relate to non-durable and necessary goods, such as food and pharmaceuticals-cosmetics. At the same time, and again in agreement with previous findings, positive developments are mainly driven by the *automotive fuel* (2.6%), *clothing-footwear* (6.7%) and *books-stationery-other books* (9.7%) categories, recently reinforced by favorable evidence from the *supermarkets* (1.5) category.

Additional information on the most recent favourable course in private consumption is provided by the particularly encouraging developments in the private passenger car market, based on new registrations. More specifically, the respective market continued to undergo a high-growth period from August to December 2014 (Figure 1.1.3), characterized by significant and, in almost all cases, two-digit positive monthly rates of change in individual indices for the number of passenger cars put into circulation for the first time (23.1% in August, 46.3% in September, 32.2% in October, 4.8% in November and 61.9% in December, as compared to the corresponding months in 2013). As a result, the percentage change for the twelve-month period January-December 2014 amounted to 30%. The ongoing favorable conditions in the car market are further confirmed by the quarterly turnover index for motor trade data for the third quarter of 2014. In particular, the quarterly index of motor vehicles recorded an increase of 19.8%, while the respective, more comprehensive, index of wholesale and retail trade, repair, and sales of parts and accessories for motor vehicles and motorcycles rose by 15.8%, as compared to the corresponding quarter in 2013.

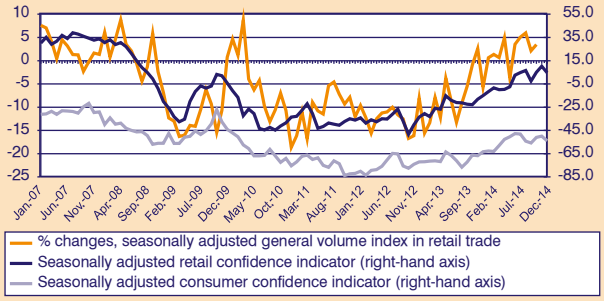
A point worth mentioning with reference to the remarkably positive conditions pertaining to the private passenger car market refers to the positive impact exerted by the tourism sector, emanating from the significant increase in tourism activity and the extension of the summer season in the country. In other words, it is true that a large number of private passenger cars are absorbed in the car rental branch in all tourist destinations, while the turnover in sectors trading with associated goods and services is therefore considered to be positively affected.

The overall assessment that Greek private consumption is moving along a gradually strengthening recovery path seems to emerge as a natural conclusion from the above analysis of the relevant evidence based on available statistical information. As to the factors potentially driving and, hence, explaining the favorable conditions recently characterizing this significant demand component, they are not seen to be related to improvements in household incomes or even the basic constituents of household wealth. Instead, they seem to be associated with increased consumption expenditure by use of available resources on the part of specific categories of households, caused by the weakening of both reluctance tendencies and the need to hold back consumption expenditures, which had prevailed until the end of 2013. This shift in the consumption behavior of particular groups of households during the reference period is, to a considerable degree, linked to the containment in uncertainty and the reinforced indications of stabilizing conditions with regard to the overall course in Greek economic activity.

It, hence, follows that the continuation and/or enhancement of the prevailing favorable conditions in private consumption expenditure during the upcoming quarters will

depend (a) on potential improvements of the situation in the labour market and/or reductions in the financial burdens that Greek households face, negatively impacting their income and wealth, and (b) on the establishment of a stable and secure domestic economic environment.

FIGURE 1.1.4
General volume index in retail trade and confidence indicators



Source: EUROSTAT, own calculations.

In any case, it appears that consumers and retailers in particular, anticipate the continuation of the upward course in private consumption expenditure in the near term, as mirrored by their expectations. These are incorporated in the most recent observations for the consumer and retail confidence indicators (Figure 1.1.4). More specifically, the improving trends already recorded during the preceding periods of reference characterized the two indices during the four-month period from September-December 2014, with the consumer confidence indicator closing at -53.9 and the retail confidence indicator settling at 4.7 in December 2014.

1.1.2. Investment

The decline in gross fixed capital investment decelerated significantly in the course of the first two quarters 2014, while in the third quarter of the year there was an increase in investment for the first time since the first quarter of 2008. More particularly, as shown in Table 1.1.2, the rate of change of investment reached 1.0% in the third quarter of 2014, versus -2.7% in the third quarter of 2013 and therefore the contribution of investment to the rate of change of the GDP reached 0.1 percentage points, from -0.3 percentage points in 2013.

More specifically, with regard to investment other than construction, developments in the course of the third quarter of 2014 were mostly positive, with expenditure in all but one category recording an increase. More particularly, transport equipment expenditure continued to increase rapidly (22.7%), while in parallel, an accelerated increase was also recorded in machinery investment (12.7%), which had been declining until the first quarter of 2014. Concerning investment in other products, a decrease was observed in the third quarter of 2014 (-3.7%), following an increase in the first two quarters of the year.

With respect to investment in construction, in the third quarter of 2014 there was a significant increase in expenditure in other building and structures (11.5%), but also a further sharp decline of investment in dwellings (-44.4%). It must be noted that the fall in dwellings investment actually prevented a more dynamic recovery in

TABLE 1.1.2 Main investment data
% rates of change compared to the corresponding period of the previous year (seasonally adjusted data at constant prices)

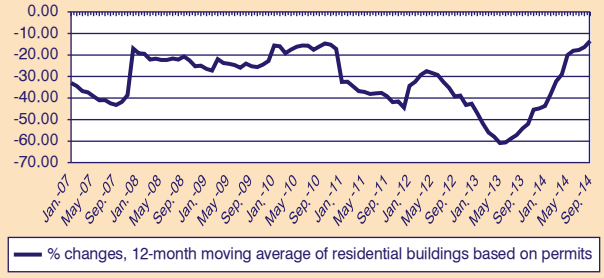
	Quarters						9 month period Jan. - Sept.	
	2013Q2	2013Q3	2013Q4	2014Q1	2014Q2	2014Q3	2014	2013
Cultivated biological resources	57.8	134.9	39.8	10.9	-0.5	5.1	4.3	45.7
Other machinery and weapon systems	-10.8	-11.9	-25.7	-13.4	3.7	12.7	0.3	-6.9
Transport equipment and weapon systems	27.1	32.8	19.8	27.7	23.1	22.7	24.4	14.9
Dwellings	-30.4	-28.5	-24.5	-49.9	-57.4	-44.4	-51.0	-28.5
Other buildings and structures	-7.7	8.7	0.2	18.3	12.7	11.5	14.1	-4.4
Other products	-0.9	8.3	7.0	3.6	0.8	-3.7	0.2	-1.1
Gross fixed capital formation	-12.6	-2.7	-9.0	-5.8	-5.0	1.0	-3.3	-9.6

Source: National Accounts, EL.STAT. (November 2014), own calculations.

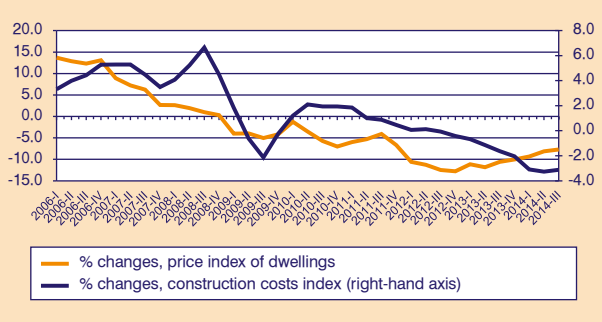
investment as a whole and therefore in the GDP during the third quarter of 2014, since its negative contribution to the rate of change of the GDP amounted to -1.0 percentage points.

The above developments confirm the previous assessments of KEPE for a positive turn of the investment climate in the country. As it seems, the gradual recovery of domestic consumption, the improvement in the economy's competitiveness and the restart of big infrastructure projects have already contributed to the strengthening of investment in categories other than dwellings. Nevertheless, crucial factors, such as uncertainty and the continuing financing and liquidity constraints in the market continue to hinder a more dynamic recovery in investment expenditure. In parallel, the intensity of the taxation of real estate property appears to be acting against the stabilisation of conditions in the housing market, thus prolonging the rapid decline of investment expenditure in this sector, despite the historically low levels to which this expenditure has already subsided.

FIGURE 1.1.5
Estimated residential building activity based on permits



Price index of dwellings and construction costs index



Source: EL.STAT., EUROSTAT, Bank of Greece, own calculations.

The conditions pertaining to residential investment are also reflected in the path of the residential buildings indicator with respect to square meters of useful floor area, based on building permits. Recent developments in both the individual monthly observations of the residential buildings indicator (rate of change of -22.6% in June, -21.9% in July, -14.7% in August and 1.93% in September 2104, as compared to 2013) and the estimated private building activity[3] demonstrate the continuation of the trends restraining the particularly negative conditions which characterized the respective sector until the end of 2013. In other words, and while the mean monthly rate of change in the estimated private building activity remained significantly negative (-18.1% in June, -17.6% in July, -16.4% in August and -13.5% in September 2014), it becomes clear that it is moving away from the considerably adverse levels recorded in 2013 and now slowly approaches the less unfavorable levels registered back in 2010 (Figure 1.1.5).

The above outlined developments in the residential investment sector are compatible with the course of both the construction cost for new dwellings and housing and apartment prices, as indicated by the most recent corresponding statistical data. In other words, the recorded ongoing contraction –even on a smaller scale– in residential building activity seems to be accompanied by further cuts in construction costs for new dwellings and in housing and apartment prices.

In more detail, the index of construction costs for new dwellings fell by -3.1% in the third quarter of 2014, as compared to the corresponding quarter in 2013. With reference to housing prices, the price index of dwellings in all urban areas recorded a further decrease in the third quarter of 2014, as compared to 2013. Still, this was once again a one-digit and decelerating negative rate of change (-7.7%) (Figure 1.1.5). In accordance with these developments, remarkable downward trends characterized apartment prices with respect to both geographical area and age. However, and as already pointed out during the preceding period of reference (see *Greek Economic Outlook*, Issue 25), negative percentage changes continued to weaken. In differentiating apartment prices with respect to geographical area, the respective negative rates of change in the third quarter of 2014 amounted to -9% for the area of Athens, -6.5% for the area of Thessaloniki, -5.5% for the category of other large cities and -4.6% for the category of the other urban areas. It follows that weakening negative dynamics are less intense in the area of Athens, indicating that the observed unwinding in falling apartment prices evolves at a slower pace in

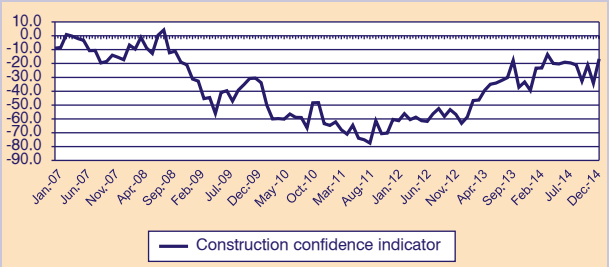
3. A twelve-month moving average and the related percentage point changes are calculated.

the case of the capital city. In separating apartments with respect to age, negative but decelerating percentage changes were again recorded in the third quarter of 2014, both in the case of old (older than 5 years) and new (up to 5 years) apartments, amounting to -6.1% and -7.5%, respectively, as compared to the corresponding quarter of 2013. It is interesting to observe that the unwinding trends in negative rates are weaker and slower in the case of old apartments, something that could be partly explained by the fact that older apartments tend to be less advantageous as compared to new ones.

With reference, more generally, to the construction sector, and following the findings of the preceding period of reference, the increased construction activity recorded in the third quarter of 2014, as reflected in the general production index in construction[4] (61.3%, as compared to the corresponding quarter in 2013), seems to result mainly from public works activity. The recorded increase is, namely, due to the respective rise in the sub-index of production of civil engineering (concerning, among other things, highways, bridges, tunnels, pipelines, networks and port development) by 137%, basically relating to infrastructure works. This fact acquires particular importance, since the continuation of the promotion of large infrastructure projects is of course associated with significant direct (e.g. job creation) and potential multiplier effects on an aggregate but also on a sectoral level. It should be further noted that the second sub-index of the production of building construction (concerning, among other things, dwellings, industrial and commercial buildings and other buildings) fell by -12.1% in the third quarter of 2014.

As to the expectations of the involved parties with reference to the short-term prospects for the construction sector, there seems to prevail a certain degree of anticipated variability in construction activity, as mirrored in the business expectations in the construction index and the construction confidence indicator. More specifically, and while the average course of the construction confidence indicator improved during the four-month period September-December 2014 (-26.2), as compared to 2013 (-31.9), there was an alternation between less and more pronouced negative observations (from -32.7 in September, to -21.2 in October, -34.2 in November and -16.6 in December, Figure 1.1.6). A similar variation trend also characterized the path of the business expectations in construction index, which had increased in October and appeared to gain ground in December, while it fell in September and November as well. It is important to note that both the observed strengthening and weakening trends in the respective indicator are mainly due to the corresponding changes in expectations with reference to public construction works and not to private construction projects.

FIGURE 1.1.6
Construction confidence indicator



Source: EUROSTAT.

With respect to the short-term prospects for investment, developments over the prospective quarters will depend on the degree to which the country will achieve the safeguarding of its stability and credibility and the fast resolution of the serious financing problems still faced by the economy's private sector. Both the recently intensifying uncertainty and the continuing negative y-o-y rate of credit expansion to businesses create conditions that contravene the otherwise favourable prospects stemming from the gradual recovery of the economy and the progress in the fields of economic adjustment and competitiveness.

1.1.3. External balance of goods and services

With regard to exports, developments in the third quarter of 2014 were, on the whole, favourable, as there was a further major increase in services exports (16.4%), and also a rise in goods exports, albeit at a weakening rate (1.7%). As a result, the contribution of exports to the rate of change of the GDP during the third quarter of 2014 reached 2.5 percentage points, representing one of the main factors contributing to the recovery of the economy. The increase in services exports was a result of the continuing large increase of receipts in tourism (by 11.8% in the third quarter of 2014 and by 11.1% as a whole in the nine-month period from January to September 2014, according to Bank of Greece data), transportation (by 9.4% and 8.3%, respectively) and other services (by 17.3% and 24.5%, respectively). Positive developments in the tourism sector were particularly important both at the external sector level and at the whole economy level, and represented a strong indication of the importance of

4. Note that the reference concerns the indicator adjusted for the number of working days while data for the third quarter are provisional.

the ongoing progress with respect to the improvement of competitiveness and the stabilization of the economy.

With respect to imports, the third quarter of 2014 was characterised by a significant increase in the case of goods (5.0%) and a notable decrease in the case of services (-6.5%), the result being a negative contribution of -0.8 percentage points to the rate of change of the GDP (see Figure 1.1.7). The increase in goods imports is consistent with the observed recovery of the economy and is related to the rise in consumption and the strengthening of expenditure in most investment sub-categories.

Overall, the particularly favourable course of services exports in the third quarter of 2014 resulted in an increase of the services surplus to the historically high levels of € 4.7 billion, and, in parallel, the narrowing of the balance of the goods and services deficit to just € 327 million. It is clear that the combination of high performance in the field of services exports and moderate levels of goods and services imports, have led to a balancing of external sector transactions. This result assumes particular importance, as it represents an indication that, under conditions of stability and fiscal discipline, the country can follow a growth track while limiting the need for additional external borrowing.

Concerning the future prospects of the external sector, its contribution to the rate of change of the GDP is expected to remain positive in the short term. Nevertheless, given that, as the economy recovers further, imports will continue to increase, the size of this positive contribution will depend upon the preservation, and to the degree possible, the boosting of services exports, the decisive strengthening of goods exports, and also the degree to which the increase in internal demand will be covered more by domestically produced goods and less by imports. It is clear that at the current critical conjuncture, a decisive role in the country's performance in the above fields will be played by the implementation of the new investment necessary for the strengthening of the country's productive capacity, which was seriously damaged by the crisis and the long lack of investment. In this framework, it is again necessary to stress the importance of the major priorities with respect to the further stabilization of the economy and the fast and decisive resolution of the continuing financing and liquidity obstacles faced by exporting businesses. In parallel, on a more general level, emphasis should be placed on the process of adjustment to the changing external demand conditions, particularly with respect to the adverse developments in the Russian economy.

FIGURE 1.1.7
Contributions to the rate of change of the GDP
Individual components of external demand

Source: National Accounts, EL.STAT., own calculations.

1.1.4. Conclusions and prospects

The above analysis of the most recent developments with respect to the main demand components and a number of relevant individual indicators demonstrates that there has been a shift in the Greek economy towards more favorable trends. Taking also into account the estimated recession probabilities for the current phase of the business cycle (Section 1.4), it follows that the overall evidence favors the exit of the Greek economy from the recession within 2014. The encouraging prospects arising on the basis of the analyzed quarterly data, as well as selected monthly indicators, are also confirmed by a number of indices incorporating expectations, but also by the forecasts provided by the recession probability model (see Section 1.4) and the KEPE dynamic factor model (see Section 1.5).

With reference to the short-term prospects for private consumption, the continuation and potential enhancement of the recorded recovery course will crucially depend upon the prevalence of a secure and safe domestic economic environment, but also upon any possible measures inducing the alleviation of the overall financial burdens facing households relating to either their income or their wealth. With respect to the course of investment and exports in the short term, developments in these two fields are expected to be to a great extent intertwined. The dynamic recovery of investment is a condition for the further substantial improvement of exports, with the combination of economic stability and restoration of financing to the private sector of the economy representing the crucial catalysts for future developments.

1.2. Recent Current Account developments (January-September 2014)

Ioanna Konstantakopoulou

In the January-September 2014 period, the current account showed a surplus. Specifically, the surplus of the current account (see Table 1.2.1) stood at 2.77% of GDP, compared with 1.74% in the corresponding period of 2013, an increase of 59.2%. In absolute terms, the increase in the surplus (see Table 1.2.2) reached 55% compared to the same period of 2013.

This positive development is mainly due to the increase in the surplus of the services balance due to an increase in travel receipts, and the reduction of the deficit of the income balance due to a decrease in interest payments.

The trade balance deficit (EI) as a percentage of GDP was 10.12% throughout the examined period, compared with 9.36% in the corresponding period of 2013. In absolute

TABLE 1.2.1 Current Account *(as percent of GDP)*

	CA	Goods	Exports	Imports	Services	Income	Current Transfers
2010	-10.13	-12.73	7.69	20.42	5.96	-3.45	0.09
2011	-9.89	-13.06	9.70	22.76	7.02	-4.12	0.27
2012	-2.39	-10.15	11.39	21.54	7.83	-0.81	0.74
2013	0.77	-9.46	12.38	21.84	9.33	-1.55	2.45
2013, a΄ quarter	-4.96	-9.68	11.66	21.33	3.16	-2.06	3.62
2013, b΄ quarter	-0.57	-8.14	12.22	20.35	8.97	-2.06	0.66
2013, c΄ quarter	11.05	-10.27	12.82	23.10	19.34	-1.68	3.67
2013, d΄ quarter	-2.95	-9.76	12.81	22.56	5.99	-1.04	1.85
2013, a΄-c΄ quarter	1.74	-9.36	12.22	21.58	10.39	-1.93	2.65
2014, a΄ quarter	-2.55	-10.08	12.05	22.14	4.26	-1.59	4.86
2014, b΄ quarter	-0.45	-9.59	12.88	22.47	10.35	-1.71	0.52
2014, c΄ quarter	11.33	-10.17	13.60	23.76	22.38	-1.61	0.73
2014, a΄-c΄ quarter	2.77	-10.12	13.07	23.19	12.49	-1.66	2.06

Sources: Bank of Greece and EL.STAT.

TABLE 1.2.2 Current Account *(in EUR billions)*

	CA	Goods	Exports	Imports	Services	Income	Current Transfers
2010	-22.51	-28.28	17.08	45.36	13.25	-7.67	0.20
2011	-20.63	-27.23	20.23	47.46	14.63	-8.59	0.56
2012	-4.62	-19.62	22.02	41.64	15.14	-1.57	1.43
2013	1.09	-17.23	22.54	39.76	16.98	-3.13	4.47
2013, a΄ quarter	-2.32	-4.52	5.45	9.97	1.48	-0.96	1.69
2013, b΄ quarter	-0.26	-3.74	5.62	9.36	4.13	-0.95	0.30
2013, c΄ quarter	4.98	-4.63	5.78	10.40	8.71	-0.76	1.65
2013, d΄ quarter	-1.31	-4.34	5.69	10.03	2.66	-0.46	0.82
2013, a΄-c΄ quarter	**2.40**	**-12.89**	**16.84**	**29.74**	**14.32**	**-2.67**	**3.65**
2014, a΄ quarter	-1.15	-4.56	5.45	10.01	1.92	-0.72	2.20
2014, b΄ quarter	-0.20	-4.48	6.02	10.50	4.84	-0.80	0.24
2014, c΄ quarter	5.07	-4.55	6.09	10.64	10.02	-0.72	0.33
2014, a΄-c΄ quarter	**3.72**	**-13.59**	**17.55**	**31.15**	**16.78**	**-2.24**	**2.77**

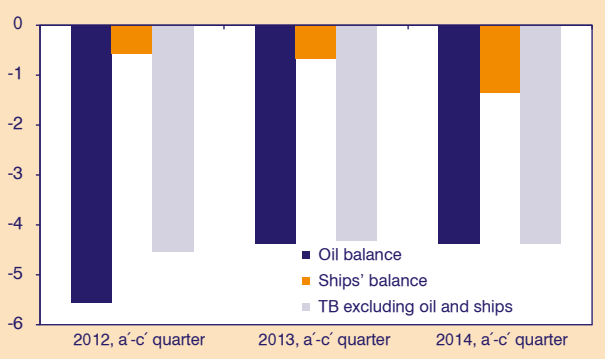
Source: Bank of Greece.

terms, the level of the trade deficit stood at €13.59 billion, compared with €12.89 billion in the same period of 2013.

This increase in the deficit of the trade balance primarily reflects the increase in the ship trade deficit. In absolute terms, the ship balance deficit stood at €1.82 billion, against €0.93 billion in the corresponding period of 2013.

Regarding the other balances, a marginal improvement in the figure of the oil balance was observed, mainly due to lower oil imports which was aided by the reduction in international oil prices; also the balance excluding oil and ships stabilized.

FIGURE 1.2.1
The components of the trade balance
(as percent of GDP)



Sources: Bank of Greece and EL.STAT.

As regards the development of the level of exports of goods, an increase of 4.43% was recorded compared to the same period of 2013, while the corresponding imports increased by 2.43%.

The surplus of the service balance, as a percent of GDP, was 12.5% against 10.39% in the corresponding period of 2013. In absolute terms, the surplus was €16.78 billion, from €14.32 billion in the examined period of 2013, a change of about 17.2%. This positive development is attributable to increased tourism. More specifically, the travel receipts increased by €1.18 billion, or a change of about 10.9% against the same period of 2013. In addition, the net transport receipts increased by €0.447 billion compared to the same period 2013.

The income deficit as a percent of GDP was 1.66% in the examined period of 2014, against 1.93% in the corresponding period of 2013. In absolute terms, the deficit was €2.24 billion throughout the examined period compared to €2.67 billion in the corresponding period of 2013. This change reflects the reduction of payments for interest, dividends and profits by €0.382 billion.

The surplus of the current transfer balance, as a percent of GDP, was 2.06% against 2.65% in the corresponding period of 2013, a decrease of 22.3%. In absolute terms, the surplus was €2.76 billion compared to €3.64 billion. This negative development is attributable to a decrease of €1.1 billion of transfers to the general government (mainly from the EU).

1.3. The evolution of the Consumer Price Index (CPI) in Greece and the Eurozone

Yannis Panagopoulos

Despite the recorded trend of a forthcoming end of deflation in Greece from August 2014 onwards, the Consumer Price Index (CPI) has returned back to negative values. More specifically, during August 2014 the headline inflation decreased to -0.3% (y-o-y[1] basis) while in December 2014 the CPI rate of change, once again, decelerated to -2.6% (see Diagram 1.3.1). It is therefore observable that deflation continues to exist since March 2013. A similar trend is observed with respect to the core inflation. More specifically, in August 2014 the core inflation was around 0% on a y-o-y basis. However, in November 2014 its rate of change diminished to -0.9%. So, taking into account the lagged econometric correlation between core and headline inflation (see Box 1 in the current publication), we can infer that deflation is, again, a persisting issue in the Greek economy.

Additionally, according to the Hellenic Statistical Authority (ELSTAT), the aforementioned deflation level (-2.6%, y-o-y) in December 2014 can be mainly attributed to subsequent price decreases in five main sub-categories, namely: (a) the "Housing" category (by 7.1%) due to reductions in the price of house rents as well as reductions in the price of housing heating oil and natural gas. Part of this reduction was offset by increases in the price of electricity, (b) the "Transportation" category (by 4.2%) mainly due to decreases in the gasoline prices, (c) the "Clothing and Footwear" category (by 3.9%) due to price decreases on these products, (d) the "Education" category (by 3.1%) mainly due to decreases in fees for private school and technical colleges and (e) the "Miscellaneous goods and services" category (by 2.4%) basically due to price reductions for hair grooming services and for personal care products, etc.

Next, in Diagram 1.3.2, we present a comparison between the harmonized inflation rates (headline and core) in the Eurozone and Greece. As in the case of the general (headline) inflation, the Greek harmonized headline inflation, from August 2014 onwards, has returned to deflation (e.g. -1.2%, in November 2014). The same trend appears with respect to the harmonized core inflation rate of Greece (without non-processed fruits and energy). More specifically, the harmonized core inflation decelerated from 0.3%, in August 2014, to -0.4% in November 2014. Therefore, we observe that, like in the case of the general CPI, Greece has slipped back into deflation for both harmonized rates (headline and core).

On the other hand, in the Eurozone both harmonized inflation rates (headline and core) show a steady and very slow decline towards the zero level but from the positive side of the diagram (see Diagram 1.3.2). More analytically, in the last months, the harmonized headline inflation rate in the Eurozone is moving around 0.3%-0.4%. On the other hand, in the same time period, the core of the harmonized inflation rate appears rather rigid around 0.7%-0.9% (August-November 2014).

DIAGRAM 1.3.1
CPI, % change relative to the respective month of the previous years

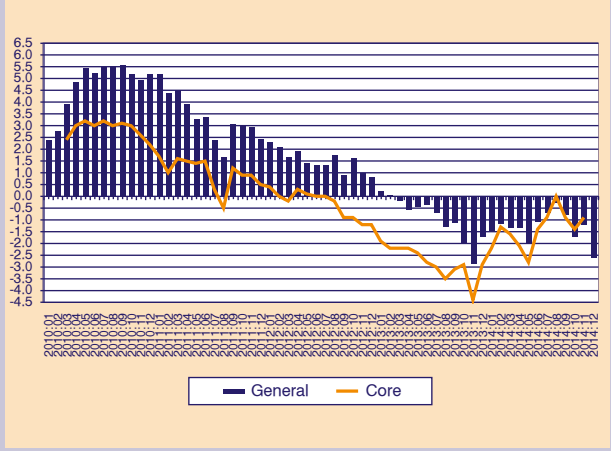
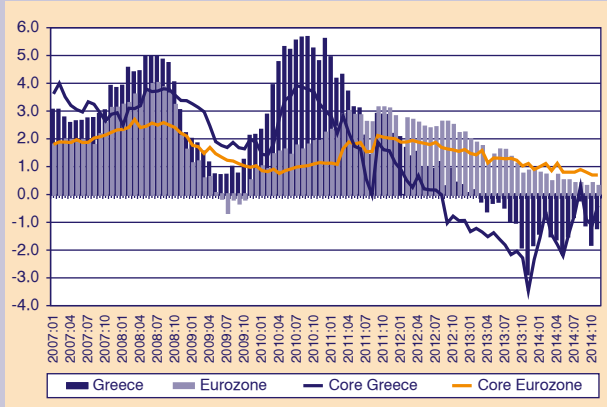


DIAGRAM 1.3.2
Harmonized indices of consumer prices, % change relative to the respective month of the previous years



1. y-o-y: year on year.

BOX 1
Testing for the convergence between harmonized inflation and its core in Greece

The aim of this empirical approach is to exploit the information contained in the core of the harmonized inflation. This can be done by testing whether the deviation of the harmonized inflation from its corresponding core level incorporates an explanatory power concerning the deviation of the present from the future harmonized inflation. This approach is implemented in order to evaluate the ability of the harmonized inflation to converge to its core level in the short, medium, and/or long run (i.e. 12, 18 and 24 months, respectively).[1] In empirical terms, this can be tested using the model developed by the OECD (2005),[2] which has the following adaptive form:

$$H_{t+j} - H_t = \alpha + \beta \times (H_t - C_t) + \varepsilon_t \,, \quad (1)$$

where, H = Harmonized inflation
C = Core of the harmonized inflation
j = 12, 18 & 24 months.

The ability of harmonized inflation to converge at its core level will be verified as long as the β coefficient of the $(H_{t+j} - H_t)$ variable turns out to be statistically significant and with a negative sign. The examined time period is: 2002M1-2014M11. Table 1.3.1 provides us with the corresponding empirical results regarding convergence.

TABLE 1.3.1 The empirical results regarding convergence of the two inflations

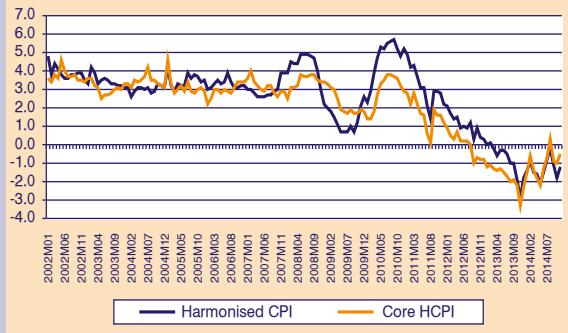
Dependent variable $H_{t+j} - H_t$	Independent variable $H_{t+j} - C_t$
j = 12 months	-1.59***
	(-12.81)
j = 18 months	-1.92***
	(-18.53)
j = 24 months	-1.55***
	(-11.22)

Note: t-statistics in parentheses.

*** Statistically significant at 1%.

According to the results of Table 1.3.1 we observe that the β coefficient is statistically significant in all cases (short, medium and long time-period). So, the core inflation rates contain potentially useful information about future harmonized inflation as there is a recorded tendency for the harmonized inflation to move back to its core rate. Additionally, the highest explanatory variable, regarding the information contained in the core rate, is obtained when the harmonized inflation of the medium time-period (18 months) is used in the independent variable.

DIAGRAM 1.3.3
Harmonized CPI, % change relative to the respective month of the previous year



1. For alternative empirical models, see also Clark, T. (2001), "Comparing Measures of Inflation", Federal Reserve Bank of Kansas City, *Economic Review,* 2nd quarter and Cogley, T. (2002), "A Simple Adaptive Measure of Core Inflation", *Journal of Money, Credit and Banking,* Vol. 34, No. 1.

2. OECD (2005), "Economic Outlook", Vol. 77/1, June, 2005, pp. 125-141.

1.4. Recession probabilities for the Greek economy – Current period and forecasts

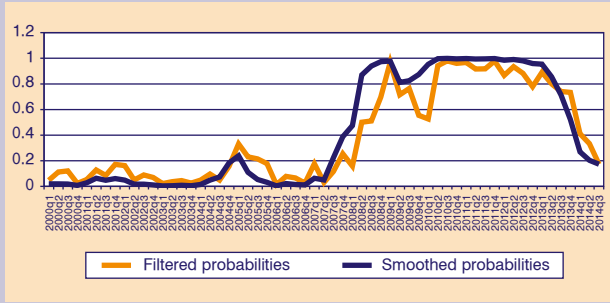
Ekaterini Tsouma

As has been analyzed in previous issues of the *Greek Economic Outlook*, it is possible to assess whether the Greek economy undergoes a recessionary (or expansionary) business cycle regime on the basis of recession (or expansion) probability estimates. Such estimates can be obtained by applying different models, like (a) Markov switching models and (b) probit models, and can either refer to the most recent time period and/or incorporate forecasts.

In the case of the Markov switching model,[1] which describes the business cycle as a process switching between an *expansionary* and a *recessionary* regime, the rate of change of the quarterly GDP[2] is used, whereby the GDP presents the selected measure of economic activity. The estimated filtered (based on information available up to time *t*) and smoothed (based on information available through time *T*) recession probabilities concern the most recent period for which economic data become available. Figure 1.4.1 depicts the estimates of the respective recession probabilities for the time period from the first quarter of 2000 to the third quarter of 2014.[3] It is noted that, according to the simple rule adopted, a recessionary period is signaled by a derived recession probability higher than 0.5.

Both the obtained filtered and smoothed recession probabilities indicate that the Greek economy entered a recessionary regime in the late 2000s and continued to undergo this specific business cycle phase at least up to the end of 2013. At the same time, and on the basis of the recession probability estimates for the most recent quarters, it follows that the Greek economy has exited the recessionary regime in the course of 2014. More specifically, according to the level of both the filtered and smoothed recession probabilities –which is equal

FIGURE 1.4.1
Recession probabilities from Markov switching model



in the two cases– for the last observation in the third quarter of 2014, estimated at 0.1734, the Greek economy no longer undergoes a recessionary regime, since the estimated probabilities lie below the 0.5 threshold value. It is worth mentioning that in continuing their downward course, both filtered and smoothed probabilities fell below the point of transition from the recessionary to the expansionary regime already during the first quarter of 2014.[4] This fact acquires particular importance as an indication for the continuation of the downward path in recession probabilities and the prevalence of low probability levels for three consecutive quarters (for the filtered probabilities at 0.4104, 0.3347 and 0,1734 and the smoothed probabilities at 0.2695, 0.2037 and 0.1734 in the first, second and third quarters of 2014, respectively).

Nevertheless, the above-described evidence cannot secure, by itself, that recession probabilities will continue to fall steadily and/or will settle at low levels. In other words, and given that the recorded recovery in Greek economic activity remains fragile, the indications of falling and low recession probability levels for a short period of time must be further investigated and confirmed for the upcoming quarters as well, as additional statistical data gradually become available. To that end, estimation of the recession probabilities on the basis of the probit model can offer an indicative view, since it enables the derivation of probability forecasts.

1. For the detailed presentation of the specific model according to Hamilton (1989) as well as an interpretation of the resulting probabilities, see *Greek Economic Outlook* 13, September 2010, p. 22-24.

2. Note that the most recent revision of the National Accounts data has been taken into account and that the Demetra+ software is used in order to obtain seasonally adjusted quarterly GDP figures.

3. Whereas the estimations are carried out for the period 1970-2014, the shorter time period used for illustration is chosen for reasons of comparison to the probabilities resulting from the probit model that is presented below.

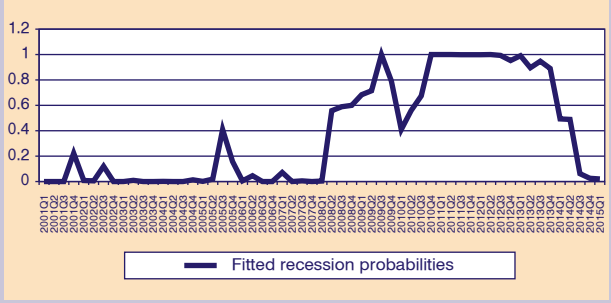
4. It is noted that some changes, as compared to the results of the preceding reference period, might be due to the fact that the present analysis incorporates the revised GDP figures.

The probit model,[5] which offers an additional estimation of the current phase of the business cycle assesses the state of the economy through a variable which takes two possible values, depending on whether the economy is in *recession* or not. The resulting fitted values from estimating the probability that the observable recession indicator takes the value of '1'[6] are interpreted as the estimated recession probabilities. The selected independent variables are the rate of change of quarterly GDP and the constructed monthly Leading Indicator [see Tsouma (2010)], which is converted to quarterly frequency for the purposes of the current application. The data used refer to the time period from the first quarter of 2000[7] to the third quarter of 2014, while recession probability forecasts are also included, with the forecast horizon amounting to two quarters. Consequently, recession probability forecasts are provided for the fourth quarter of 2014 and the first quarter of 2015. This particular evidence gains importance at the current conjuncture, during which any piece of information becomes crucial confirming or not the exit from the recessionary regime and the validity of this transition.

The estimates reveal, as illustrated in Figure 1.4.2, that high recession probabilities were forecast already at the onset of the recession which started in 2008 and have been retained until the end of 2013 (with the exception of the probability value of 0.41 for the first quarter of 2010).[8] At the same time, and in accordance with the evidence provided by the application of the Markov switching model, the results indicate that the Greek economy exited the recessionary regime in the first quarter of 2014, with the corresponding estimated recession probabilities moving, albeit marginally, below 0.5.[9] In addition, a significant fall in the estimated probability is recorded in the third quarter of 2014, below 0.1, while the probability forecasts for both the last quarter of 2014 and the first quarter of 2015 are considerably low and approach zero. As a result, the provided evidence reinforces the assertion that the Greek economy has moved from a recessionary to an expansionary regime wherein it is forecast to remain within the short term.

In summarizing and putting aside any potential sudden and unexpected negative disturbances in the interim, all indications provided by the applied models imply that 2014 constituted the year during which the Greek economy exited the deep and long-lasting recent recession. The incorporation of additional statistical data as they become available in the following periods of reference will offer further evidence on whether the Greek economy will gradually stabilize within the expansionary regime.

FIGURE 1.4.2
Recession probabilities from probit model



References

Estrella, A. and F. S. Mishkin (1998). "Predicting US Recessions: Financial Variables as Leading Indicators", *The Review of Economics and Statistics*, 80(1), 45-61.

Hamilton, J. D. (1989). "A new approach to the economic analysis of nonstationary time series and the business cycle", *Econometrica*, 57, 357-384.

Tsouma, E. (2010). "Predicting Growth and Recessions Using Leading Indicators: Evidence from Greece", KEPE, *Discussion Papers*, 114.

Tsouma, E. (2011). "Dating the Greek Business Cycle: Is there Evidence on a Late 2000s Recessionary Regime for the Greek Economy?", *Essays in Economics-Applied Studies on the Greek Economy*, *50 years anniversary publication*, Athens: KEPE.

Tsouma, E. (2014). "Dating Business Cycle Turning Points: The Greek Economy During 1970-2012", *Journal of Business Cycle Measurement and Analysis*. http://dx.doi.org/10.1787/jbcma-2014-5jz0sr0pnhs8.

5. For the detailed presentation of the specific model according to Estrella and Mishkin (1998), see *Greek Economic Outlook* 14, January 2011, p. 27-28.

6. Due to the lack of an official Greek business cycle chronology, the recession indicator used is based on a related specification applied [see E. Tsouma (2011) and Tsouma (2014)], where the exact switch points between expansion and recession are derived.

7. The estimates start at the first quarter of 2001 due to the calculation of growth rates and the inclusion of lags. For that reason the respective figure depicts results starting in 2001.

8. The fall of the respective recession probability below 0.5 was clearly temporary and did not signal an exit from the recessionary regime. This is reinforced by the fact that the recession probabilities turned up immediately thereafter and remained at high levels afterwards.

9. It is noted that some changes, as compared to the results of the preceding reference period, might be due to the fact that the present analysis incorporates the revised GDP figures.

1.5. Factor model forecasts for the short-term prospects in GDP

Factor Model Economic Forecasting Unit
Ersi Athanassiou, Theodore Tsekeris, Ekaterini Tsouma

The current section presents the updated short-term forecasts of KEPE concerning the evolution of the rate of change of real GDP in Greece in the final quarter of 2014 and the first two quarters of 2015. The forecasts are produced by implementing a dynamic structural factor model, a detailed description of which can be found in Issue 15 (June 2011) of the *Greek Economic Outlook*. The underlying time series database used to estimate the model and produce the forecasts encompasses the main aspects of economic activity in the country on a quarterly basis, spanning the time period from January 2000 up to September 2014. Specifically, the database incorporates both real economy variables (such as the main components of GDP from the expenditure side, general and individual indices concerning industrial production, retail sales, travel receipts, the labor market, the economic sentiment and business expectations) and nominal variables (such as the general and individual consumer price indices, monetary variables, bond yields, interest rates, exchange rates and housing price indices). It is noted that the seasonal adjustment of all time series was carried out by use of the Demetra+ software, which is freely available from Eurostat.[1]

According to the factor model forecasts presented in Table 1.5.1, the mean annual rate of change of real GDP is estimated at around 0.9% for the whole year 2014, incorporating actual seasonally adjusted data up to the third quarter of 2014. The two most central characteristics of this forecast relate, first, to the clear confirmation of the assessment that 2014 will be the year of transition from the deep, long-term recession, which began in 2008, to an economic expansion regime and, second, to the significant improvement in the forecast with respect to the size of GDP growth. In parallel, the forecasts for the first two quarters of 2015 point to a significant rate of growth in the first half of the year, in the area of 2.2%. More specifically, the quarterly evolution of the rate of change in real GDP from the fourth quarter of 2014 to the second quarter of 2015 follows an upward path, recording growth rates of 1.9%, 2.1% and 2.3% in the fourth quarter of 2014 and the first and second quarters of 2015, respectively, as compared to the corresponding quarters of the previous year.

The above presented positive rates of change in real GDP for the upcoming quarters, which point to the definitive exit of the Greek economy from the recession and the achievement of significant rates of growth for the first half of 2015, reflect several aspects of recent developments in the Greek economy. More specifically, they mirror the critical progress with respect to the rebalancing in the main fiscal aggregates, the reversal of the significant negative dynamics characterizing the main macroeconomic aggregates until the beginning of 2014, the recovery of part of the economy's lost competitiveness and the smoothing out of conditions pertaining to financial markets. The favourable estimates incorporate the positive effects exerted by all the above factors and their interactions towards the further improvement of the domestic economic climate and the enhancement of the credibility of the country.

More specifically, among the most important developments is the recent evolution of the main domestic demand components, such as private consumption and investment, with positive rates of change in the third

TABLE 1.5.1 Real GDP rate of change
(%, y-o-y)

	2014	2015	
Quarters	2014Q4	2015Q1	2015Q2
Quarterly rate of change	1.92	2.09	2.26
	[1.84 , 1.99]	[1.93 , 2.25]	[2.02 , 2.51]
Mean annual (2014) – and six-month (2015)	0.92*	2.18	
rate of change	[0.90 , 0.93]	[1.97 , 2.38]	

Note: Values in brackets indicate the lower and upper boundaries of the 95% confidence interval of the forecasts.
*The figure incorporates official seasonally adjusted data for the first three quarters of 2014.

1. The TRAMO/SEATS filter was used for the seasonal adjustment.

quarter of 2014, as compared to 2013, in both cases. Furthermore, the recorded positive path of exports, led mainly by the particularly favourable developments in services exports, is also quite notable.

In addition, the favorable short-term real GDP forecasts appear to incorporate the effects of the establishment of an upward course with reference to a considerable number of variables, some of which are related to hard data, while others concern soft data derived from economic surveys. Indicatively, it is worth mentioning the encouraging evolution in (a) the tourism sector, as demonstrated by the data on travel receipts and services exports, (b) transportation, as recorded on the basis of receipts from exports and investment in transport equipment, (c) the retail trade sector, as recorded on the basis of both the general volume index and the majority of individual categories, (d) the private passenger car market, as indicated by new registrations and the turnover index for motor trades, including sales of goods and services, (e) the competitiveness field, according to the real effective exchange rate and unit labour costs, and (f) expectations and the economic climate, as indicated on the basis of the overall economic sentiment indicator for Greece, business expectation indicators and the export expectations indicator. At the same time, it appears that the particularly adverse conditions, which continued until recently to characterize certain sectors of the economy, are confirmed to exhibit signs of reversal, as is the case of the construction sector, where the positive developments refer mostly to public construction works.

In contrast, the continuing downward course of the industrial production index and the turnover index in industry marks the ongoing absence of indications of an improvement with respect to conditions in manufacturing, although the recent positive course of the 'assessment of the order-book levels' index and the 'orders in recent months' index is worth mentioning. Finally, the conditions pertaining to the labour market remain particularly adverse, as mirrored by the key unemployment and employment aggregates. It should, however, be noted that the marginally increasing trends in employment are preserved, on the basis mainly of relevant developments in the tertiary sector, and the slight decrease in unemployment continues, mainly with regard to the newly unemployed.

The forecasted upward course in GDP during the upcoming quarters might be potentially further strengthened, or, on the contrary, it may be dampened, depending on the prevalence of positive or adverse factors prompting developments in the main macroeconomic variables in either direction. Such variables, with a decisive role in the prospective developments are: (a) investment and exports, which are bound to financing conditions in the Greek economy, (b) the main fiscal aggregates, in the more general framework of European fiscal stability and (c) broader aggregates, such as productivity and competitiveness, which are related to the main directions of Greece's economic model.

2. Public finance

2.1. State Budget execution 2014

Elisavet I. Nitsi

The execution of the 2014 State Budget, according to the most recent published data by the General Accounting Office,[1] shows reduced revenues, relative to 2013, as well as with the targets of the 2014 State Budget and the Medium-Term Financial Strategy 2015-2018 (MTFS), but also with the projections of the recently passed 2015 State Budget. Reduced State revenues did not create a shortfall in the primary deficit, as State expenditures were restricted as well.

More specifically, according to the most recent data, on a modified case basis, the State Budget execution for 2014 exhibited a primary surplus of €1,929 million or 1.08% of GDP, compared with the €609 million in 2013 (Table 2.1.1). The deviation, though, from the targets set is important, as the initial 2014 Budget provision was for a €4,597 million surplus, showing a deviation of €2.7 billion or 1.5% of GDP, and the latest estimate of the 2015 Budget is for a surplus of €4,939 million, showing deviation of €3,010 million or 1.7% of GDP. Regarding the MTFS target of a surplus of €5,293 million, the gap is even higher and amounts to €3,364 million or 1.9% of GDP.

The State Budget's deficit, including interest paid, reached €3.64 billion or 2% of GDP, reduced by about

TABLE 2.1.1 State Budget execution 2014, million € on a modified cash basis

	2013 Outcome	2014 Outcome*	2014 2015 Budget Estimates	2014 MTFS 2015-2018 Targets	2014 2014 Budget Targets
State Budget					
Net Revenue	53,018	51,327	55,280	55,935	54,695
Expenditures	58,459	54,967	56,041	56,542	56,248
Ordinary Budget					
Net Revenue	48,423	46,620	50,149	50,783	49,693
Expenditures	51,809	48,375	49,241	49,742	49,448
- Primary Expenditures	44,230	41,832	42,416	42,612	41,946
- Interest payments	6,044	5,569	5,700	5,900	6,150
Public Investment Program (P.I.P.)					
Net Revenue	4,595	4,707	5,131	5,152	5,002
Expenditures	6,650	6,592	6,800	6,800	6,800
State Budget Primary Balance **	603	1,929	4,939	5,293	4,597
State Budget Balance	-5,441	-3,640	-761	-607	-1,553

* Preliminary data.
** Deficit (-) / Surplus (+)

Source: General Accounting Office, State Budget Execution Monthly Bulletin, January 2015.

1. Data is presented on a modified cash basis as published in the State Budget Execution Bulletin, December 2014, General Accounting Office, Ministry of Finance.

33% compared to 2013, but higher by 57% in comparison to the deficit estimate of the 2015 Budget, 79% to the deficit target of the 2014 Budget and 83% with regard to the MTFS target.

Net revenues of the State Budget Execution for 2014 stood at €51.9 million, decreased by 3.2% compared to the revenues collected in 2013 or 0.9% of GDP. But they are definitely lower compared to the provisions of the 2014 State Budget by 6.6%, the MTFS by 8.9%, as well as the 2015 State Budget's estimates by 7.1%. Moreover, the net revenues of the 2014 Ordinary Budget reached €46.6 billion, which is less by 3.7% compared to the corresponding revenues of 2013 or by 1% of GDP. However, the 2014 Budget's provision provided additional revenues of 1.9% of GDP, while those of the MTFS 2.6% of GDP. It should be mentioned that, according to the 2015 State Budget estimates, higher revenue collection was anticipated by the order of 2.8% of GDP. To the contrary, the Public Investment Program's (PIB) revenue increased by 2.4% compared to 2013, but still lagged the targets set by the 2014 Budget by 6.3%, the MTFS by 9.4% and the 2015 Budget estimates by 10%. The reduced net revenues are mainly due to the country's political instability in the last quarter of 2014.

The State Budget expenditure amounted to €54.97 billion, reduced by 6% or 2% of GDP compared to last year's expenses, but also compared to provisions from the 2014 Budget (2.3% or 0.7% of GDP), the MTFS (2.9% or 0.9% of GDP), and the 2015 Budget estimates (1.9% or 0.6% of GDP). The Ordinary Budget expenditures amounted to €48.38 billion, of which €41.83 billion refer to primary spending, while interest payments amounted to €5.57 billion. It should be noted that the reduction in total expenditures of €3.5 billion or 6.6% compared with the previous year was due to both the reduction in interest payments (€6.2 billion or 50.6%) and the reduction in primary expenditure by 5.4%. The deviation from provisions and estimates of the State Budget's expenditure is small.

Finally, the cost of the Public Investment Program (PIP) is slightly decreased (€58 million or 0.9%) compared with those of 2013, but is significantly lower than the targets set by the 2014 Budget by 10.4% and MTFS by 6%.

Maintaining the primary surplus, albeit far lower than the provisions, is a positive effect which is threatened by the political instability that prevailed in the country in the last quarter of 2014 and continues in 2015. This volatility is firstly due to the presidential election and the parliamentary election that followed as expected, creating a climate of polarization and terrorization, since the government conducted an election debate that had a focus on the country's possible exit from the Eurozone in case of governmental change. Secondly, the situation worsened by the announcements of the opposition party for tax reduction and/or elimination that led taxpayers to refrain from paying tax obligations as well as participating in the programs for overdue tax and social security contributions, pending the outcome of elections, resulting in a significant reduction in revenue. Given the ongoing negotiations with the country's EU partners to change the current Fiscal Consolidation Program, the political instability will persist for as long as the negotiations take place and it will eventually lead not only to reduced revenues but also to the elimination of the primary surplus.

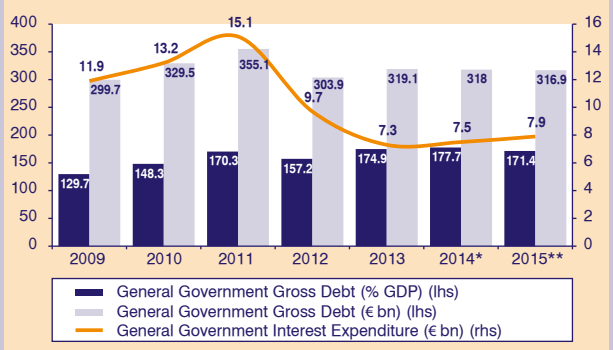
This trend can be reversed if the new government negotiates with its partners not only for debt relief, which will improve the budget's figures through a significant reduction in debt interest payments, but mostly for a Program for Development, that will stimulate the Greek economy, and reduce unemployment by creating new jobs. Moreover, special attention should be paid to capture tax evasion in order to increase revenue and, simultaneously, to promote structural reforms, so as to boost the Greek economy and finance all actions necessary to overcome the serious humanitarian crisis that the country faces as a result of the austerity programs and thus improving living conditions, health care and education.

2.2. Evolution and structure of public debt

Christos Triantopoulos

In 2014, public debt is estimated, according to the 2015 State Budget (December 2014), to stand at lower levels compared to the previous year. Specifically, the General Government debt is estimated to have reached €318 billion at the end of 2014 from €319.1 billion in 2013, while in relative terms to GDP, public debt continues to increase, as in 2014 it is estimated to reach 177.7% of GDP from 174.9% of GDP in 2013 (Chart 2.2.1). So, 2014 is the first year that a reduction –even marginal– of public debt occurs after the restructuring of public debt in 2012. This result is attributed, on the one hand, to the achievement of a primary surplus, the reduction of interest expenditure, and the returns of profits by the central banks of the Eurosystem; and, on the other hand, to the public debt management through the exploitation of repo agreements with General Government entities.

CHART 2.2.1
General Government debt and interest expenditure



Source: European Commission (2014) and Ministry of Finance (2014).
* Estimation.
** Forecast.

The State Budgetary Government Debt (which is the debt that occurs if the debts of the General Government legal entities, the local governments, and the social security organizations as well as the so-called intra-governmental debt are not included in the calculation) is estimated, according to data from the 2015 State Budget (December 2014), to close in 2014 to €321.8 billion (or 179.8% of GDP) from €321.5 billion in 2013 (or 176.2% of GDP). Until September 2014, according to the Public Debt Bulletin published by the Public Debt Management Agency (PDMA), the debt reached €321.7 billion from €322.4 billion at end-June of the same year, or €321.9 billion in late September 2013. The same levels were maintained in the coming months as well. According to data from the Monthly Bulletin of General Government Data published by the General Accounting Office (November 2014), in late November 2014 State Budgetary Government debt amounted to €321.8 billion. The characteristics of debt have changed significantly since the country's entrance to the EU/ECB/IMF Support Mechanism and, especially, after the restructuring of public debt in 2012. In particular, according to the Public Debt Bulletins of the Ministry of Finance and PDMA, in September 2014 the largest part of the debt was non-tradable (75.2%) and at floating rate (70.8%), reversing in both cases the ratios compared to 2011 (Table 2.2.1). This evolution in the debt composition is due to the continuous increase in the country's funding from the EU/ECB/IMF Support Mechanism, which is based on non-tradable and floating rate loans. Additionally, in September 2014 the share of debt denominated in currencies other than the euro doubled (4.6%) compared to 2011, as a result of the increase in IMF loans to Greece.

The greatest change lies in the structure of State Budgetary Government debt as, after entering the EU/ECB/IMF Support Mechanism and the restructuring of public debt, the largest part of the debt is held by the official sector (Table 2.2.2). Specifically, according to the 2015 State Budget, the share of debt that will be reflected in bonds is estimated to have reached 20.7% of the debt (€66.6 billion) from 70.6% (€259.8 billion) of debt in 2011. The decreased exposure to private sector bonds was covered by the loans after the entrance to the EU/ECB/IMF Support Mechanism. Totally, loans reflected 73.1% of debt (€235.1 billion) in 2014, from 25.3% (€93.1 billion) in 2011. In particular, the share of debt in 2014 concerning loans from the EU/ECB/IMF Support Mechanism is estimated at 68% of the debt, i.e. €218.9 billion. It is, however, a ratio of bonds to loans, which will gradually change when Greece further returns to borrowing from the international capital markets. Finally, in 2014 the exposure to Greek Government T-bills remained at an acceptable level of €15 billion, while part of the borrowing needs was covered through the exploitation of the repo method with entities of the General Government, which reached €5 billion.

In parallel, however, with the change in the structure, the State Budgetary Government debt has improved significantly both in terms of duration of its maturity, as well as in terms of its cost. Specifically, in 2014 the weighted average maturity of debt increased by 162% compared to 2011, reaching 16.5 years from 6.3 years in 2011, while the weighted average cost of new borrowing for

TABLE 2.2.1 Composition of State Budgetary government debt

	September 2011	September 2012	September 2013	September 2014
A. Rate				
Fixed rate[1]	64.0%	43.4%	28.4%	29.2%
Floating rate[1, 2]	36.0%	56.6%	71.6%	70.8%
B. Trade				
Tradable	76.7%	45.1%	28.3%	24.8%
Non-tradable	23.3%	54.9%	71.7%	75.2%
C. Currency				
Euro	97.7%	96.7%	95.7%	95.4%
Non-euro area currencies	2.3%	3.3%	4.3%	4.6%

Source: Public Debt Bulletin (September 2011, September 2012, September 2013, September 2014).
Notes: [1] Fixed/floating participation is calculated including Interest Rate Swap transactions.
[2] Index-linked bonds are classified as floating rate bonds.

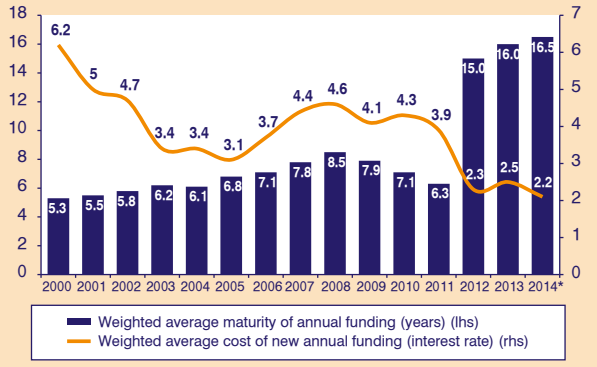
TABLE 2.2.2 State Budgetary debt by major categories

	2011		2012		2013		2014*	
	€ million	% of debt	€ million	% of debt	€ million	% of debt	€ million	% of debt
A. Bonds	**259,774**	**70.6**	**86,297**	**28.2%**	**76,296**	**23.7%**	**66,568**	**20.7%**
Bonds issued domestically	240,940	65.5	81,769	26.8%	73,415	22.8%	63,791	19.8%
Bonds issued abroad	18,521	5.0	4,308	1.4%	2,720	0.8%	2,640	0.8%
Securitization issued abroad	313	0.1	220	0.1%	161	0.1%	137	0.0%
B. T-Bills	**15,059**	**4.1**	**18,357**	**6.0%**	**14,971**	**4.7%**	**15,115**	**4.7%**
C. Loans	**93,145**	**25.3**	**200,883**	**65.7%**	**230,211**	**71.6%**	**235,117**	**73.1%**
Bank of Greece	5,684	1.5	5,212	1.7%	4,735	1.5%	4,264	1.3%
Other domestic loans	837	0.2	119	0.0%	116	0.0%	110	0.0%
Special purpose and bilateral loans	7,257	2.0	7,069	2.3%	7,004	2.2%	6,770	2.1%
Financial Support Mechanism loans	73,210	19.9	183,099	59.9%	213,152	66.3%	218,953	68.0%
Other external loans	6,157	1.7	5,384	1.8%	5,204	1.6%	5,020	1.6%
D. Short-term loans	**0**	**0.0**	**0**	**0.0%**	**0**	**0.0%**	**5,000**	**1.6%**
Repos	0	0.0	0	0.0%	0	0.0%	5,000	1.6%
Total (A+B+C+D)	**367,978**	**100.0**	**305,537**	**100.0%**	**321,478**	**100.0%**	**321,800**	**100.0%**

Source: 2015 State Budget and 2014 State Budget.
* Estimations, Ministry of Finance.

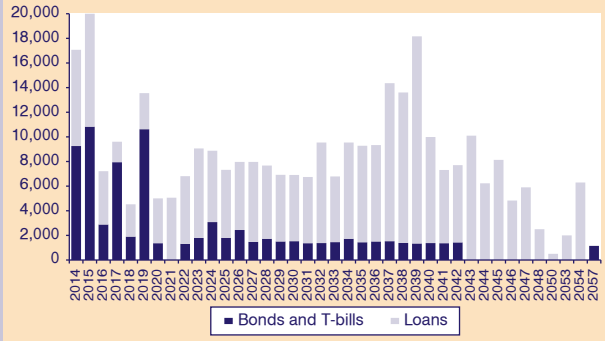
the debt was maintained in 2014 at a rate slightly higher than 2%, from around 4% in the pre-2012 period (Chart 2.2.2). These positive developments are the result mainly of the restructuring of debt that took place in 2012, under the EU/ECB/IMF Support Mechanism, where the maturity of debt was "transferred" in the coming decades and borrowing costs were reduced to half. Thus, the maturity of debt –securities and, mainly, loans– is allocated, now, on a long-term range that extends up to 2057 (Chart 2.2.3). The significant reduction of the cost of funding and the high expansion and dispersion of the debt's maturity profile, combined with the fact that most of the debt is held by the official sector, have contributed significantly to the long-term debt sustainability. Since this dispersion concerns mainly loans, the challenge is to achieve a corresponding dispersion of maturity of the securities, in particular bonds, which are accumulated until 2019 for the next decades. Towards this direction, of course,

CHART 2.2.2
Central Government debt: Weighted average maturity and weighted average cost of new annual borrowing



Source: PDMA (2014).

CHART 2.2.3
Central Government debt maturity profile* (million €)



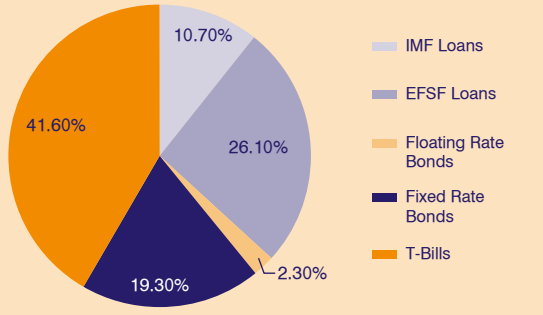
Source: 2015 State Budget.
* In 30/9/2014.

it is necessary to continue the country's gradual return to borrowing from the international markets. In 2014 the first steps back to the markets were made after four years, through issuing two fixed-rate bonds of five-year (€3 billion) and three-year (€1.5 billion) duration, contributing positively to the reconstruction of the yield curve of the securities.

The country's funding from the markets, coupled with the positive fiscal performance and the exploitation of repo agreements, enabled the country to meet its funding needs without being directly affected by the partial "freezing" of funding flows from the EU/ECB/IMF Support Mechanism. Specifically, in 2014, only €11.9 billion were disbursed –until July– and the total amount awarded from both loan agreements of the EU/ECB/IMF Support Mechanism stood at €226.9 billion from a total of €237.5 billion for the period 2010-2014 (see the relevant European Commission website for Greece). This difference between projected funding flows from the EU/ECB/IMF Support Mechanism and the realized disbursements used to cover the country's funding needs was, also, covered by borrowing from the international markets. In particular, according to data of the PDMA's Public Debt Bulletin, until September 2014, 19.3% of new borrowing was related to fixed-rate bonds, while 36.8% concerned loans from the EU/ECB/IMF Support Mechanism (Chart 2.2.4).

The ability to raise funding both through the gradual return to the markets and through the repo agreements

CHART 2.2.4
Composition of new borrowing (Jan.-Sept. 2014)



Source: Public Debt Bulletin (September 2014).

came up because both tactics took place within the secure framework of the Support Mechanism of the EU/ECB/IMF, allowing the country to cover its financing needs with resources beyond the EU/ECB/IMF Support Mechanism. It is critical, therefore, in order for the country to continue its gradual return to the markets and the further use of other methods of liquidity and funding, to continue public debt management in a funding environment of institutional security provided by Greece's European partners, which would prevent any speculative pressures and allow the country's funding needs for 2015 to be fully met.

3. Human resources and social policies

3.1. Labour market developments

Ioannis Cholezas

Labour Force Survey (LFS) data for the third quarter of 2014 (July-September) show that unemployment continued to decline, reaching 25.5% for individuals over 15 years of age, which is one percentage point lower compared with the second quarter of the year and 1.5 percentage points lower compared with the third quarter of 2013. Most unemployed are women, but men seem to be more sensitive to economic conditions. OAED data show an increase in the number of the unemployed, in October and November, who continue to be inadequately protected by the safety net provided by unemployment benefit. The decrease in the unemployment rate over the past year (2013c-2014c) is definitely welcomed, especially amongst the youth (1/3 fewer unemployed) and individuals with a low level of education, while the evolution of unemployed University graduates is troublesome. Further, the number of employed women increased on a year-on-year basis contrary to men, while the number of employed youth also increased significantly. Generally, youth exhibit a much greater volatility during recession compared with older individuals. Employed Tertiary Technical Education graduates and Master or PhD holders seem to do better, while employed University graduates are a point of concern, since their number decreased significantly. The creation of new jobs in certain industries over the past year is certainly a positive sign, but these industries, with the exception of tourism, are small in terms of the number of employed individuals. The labour force declined over the past year and this decline was stronger in certain age groups (25-64) that are often considered more active, which is, of course, worrying but not without an explanation. The results from the field of paid employment coming from the informative system ERGANI are inferior to 2013, probably due to market fatigue, while full-time hires continue to decline as a share of overall hires.

3.1.1. Unemployment

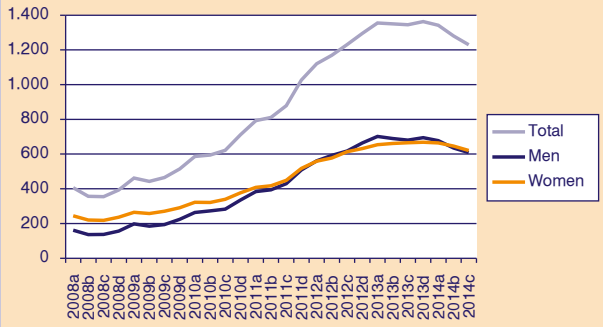
The fall in the unemployment rate continued in the third quarter of 2014 (2014c) reaching 26%, close to the 2012 level. This is certainly an optimistic observation. The unemployment rate for individuals over 15 years of age is 25.5%, lower compared with both the previous quarter and the respective quarter of 2013 (2013c). Women continue to have a higher unemployment rate compared with men (29.2% vs. 22.6%) without any signs of a closing unemployment gap between genders. The most recent data from LFS are monthly and include results through October 2014.[1] These data show that unemployment continues to fall: the seasonally adjusted unemployment rate reached a low of 25.8%, which is lower compared with October 2013 (27.8%) and compared with September 2014 (26.0%). It should be stressed, though, that the number of the unemployed marginally increased in October, but it was compensated by the increase in the number of the employed.[2]

In the third quarter of 2014 there were 12,000 more unemployed women contrary to the picture drawn in previous issues of the *Greek Economic Outlook*, when it was underlined that since the end of 2012 most unemployed were men. On the other hand, the decrease in unemployment is more pronounced amongst men. Compared with the third quarter of 2013 the number of unemployed men fell by 10.6%, while compared with the second quarter of 2014 the number of unemployed men fell by 4.1%. The relevant figures for women are 6.7% and 3.9%, respectively. Further, compared with the labour market back in 2008, i.e. before the recession, based on Graph 3.1.1, it turns out that unemployed men increased faster than unemployed women (4.4 times vs. 2.8 times). According to these observations, it seems that unemployed men face higher volatility in recessionary times compared with unemployed women.

Monthly OAED data are an alternative source of information for unemployment, apart from ELSTAT. It should be noted that there are sometimes serious deviations

1. These are actually the results of the gradual processing of LFS quarterly data, which are made public as soon as they become available.
2. The reader should bear in mind that the unemployment rate is calculated as a share of the labour force, i.e. the sum of employed and unemployed.

GRAPH 3.1.1
Number of unemployed by gender, 2008a-2014c



Source: Labour Force Survey, ELSTAT, KEPE processing.

between ELSTAT and OAED data on the unemployed.[3] For instance, the number of the unemployed based on LFS is estimated at 1.2 million for October 2014, while based on OAED data the unemployed hardly exceed 1 million, including those who do not actively look for a job (approximately 206 thousand)[4]. At the time of writing there were available data for November 2014. According to the evolution of the unemployed over the last years, October marks the end of the tourist season, in other words, the fall in the number of the unemployed stops. This year was no exception, since the number of the unemployed increased by 5% in October and another 4.3% in November, following the expected course, which will probably be reflected in LFS data for the last quarter of the year (October-December 2014).

One of the most interesting pieces of information that can be drafted from OAED data involves the share of the unemployed who receive unemployment benefit. In previous issues of the *Greek Economic Outlook* it was shown that this share is unjustifiably low, given that the unemployment benefit aims at relieving the unemployed from the economic consequences of unemployment. In November 2014, for instance, the share of unemployed entitled to unemployment benefit was 14.1%, i.e. circa three for every twenty unemployed, if only those registered who are actively looking for a job are included (otherwise the share drops further to 11.4%). The respective share in November 2013 was 15.3% and in November 2012 it was 27.3%. The decline in the share of the unemployed who are entitled to unemployment benefit is probably the result of the increase in long-term unemployed who are not entitled to unemployment benefit and less so the result of tighter restrictions set by Law 3986/2011.[5] It should be noted that, based on OAED data, long-term unemployed increased as a share of total unemployed who actively look for a job from 40.2% in November 2011 to 52.8% in November 2014. This increase is also reflected in LFS data, where the share of long-term unemployed was always much higher (e.g. 50.8% in the third quarter of 2011), but this divergence seems to widen during the recession (75.4% in the third quarter of 2014 based on LFS).[6]

Given the low share of the unemployed who are entitled to unemployment benefit, the short duration (12 months) of the unemployment subsidy, and its low level (€360 with a 10% increase for every dependent member of the household), it becomes easily understandable that the unemployment benefit as a passive employment policy tool is far from being characterised as adequate.

Age

The younger someone is, the harder it is to get a job. It is typical that the unemployment rate for youth aged 15-19 is 2.3 times higher than for the entire population. The unemployment rate reaches 58.6% for the first age group (15-19), it falls by approximately 10 percentage points to 48.4% for the second age group (20-24) and it falls even further to 39.7% for the third age group (25-29). Thereafter the unemployment rate lies below the population average, but it remains high by any standard. If one combines gender with age, the unemployment

3. OAED data and ELSTAT data may differ substantially sometimes. The main reason is that registering as unemployed in OAED is optional, thus it is highly probable that some may not register at all, if they do not have a motive to do so (for example, they are not entitled to an unemployment benefit). In LFS on the other hand, data on unemployment are collected at the house of the interviewee by the interviewer, so there is no extra trouble for the former involved.

4. The correct term for those who do not have and do not look for a job is "inactive" ("aergi" – άεργοι in Greek) and according to the International Labour Office (ILO) definition, which is used by ELSTAT, they are not included in the number of unemployed in LFS, therefore the deviation between OAED and ELSTAT data is even larger.

5. According to Law 4203/2013, as of 1.1.2014 the unemployed cannot be subsidized for more than 400 days, in total, for a four-year period beginning from the date of application for unemployment benefit. This clause involves primarily seasonal unemployed, who represent a highly volatile share of the unemployed: 13.1% in November 2011, 22.2% same month in 2012, 14.9% in 2013 and 27.5% in 2014, respectively.

6. As long as long-term unemployed are not entitled to unemployment benefit (although as of 1.1.2014 they are entitled to a benefit of €200 for up to 12 months, given their family income is lower than €10,000), they have little motivation to stay registered in OAED, especially when they do not expect to find a job through the organisation.

rate for young women (15-29) is extremely high. It is also interesting that the differential of the unemployment rates between men and women narrows with age. It is worth mentioning that women in the first age group (15-19) face an almost twenty percentage point higher unemployment rate compared with men, but just 5.6 percentage points in the third age group (25-29), while only women over 65 enjoy lower unemployment rates than men.[7]

As already mentioned in previous issues of the *Greek Economic Outlook* the number of the unemployed increased sharply during the recession for all age groups. Over the past year (2013c-2014c), though, it seems that the picture is reversed, as a drop in the number of the unemployed by 8.6% or 116 thousand persons is recorded. The larger decrease marginally exceeds 33% and it involves unemployed in the first age group (15-19) followed by the third age group (25-29) with a decrease of 11.6%. Since 2013c the only age group of unemployed which increased is for those over 65. As far as gender differences are concerned, the number of unemployed men in the first three age groups (15-29) fell more than women in the respective age groups. Given that the decrease in the number of the unemployed seems to originate primarily from younger cohorts, one cannot rule out the possibility that it feeds from employment schemes implemented as part of active labour market policies. Obviously this is not something blameworthy, since it might prevent youth from leaving the country in search of a job abroad and at the same time avoid the depreciation of their skills and competencies to some extent.[8] In addition, subsidised employment schemes could minimise situations of social exclusion. On the other hand, there are concerns that such schemes can only be available for a short period of time due to their high cost and, finally, such schemes do not create new jobs, which is the only safe and permanent solution.

Education

The educational composition of the pool of unemployed is important because it allows the implementation of targeted active labour market policies, such as subsidised work schemes or training programmes. Most unemployed in the third quarter of 2014 are Lyceum graduates (38.8%) followed by Tertiary Technical Education graduates (20.2%). Despite the fact that during the recession unemployed with different educational backgrounds increased disproportionately, the educational composition of the pool of unemployed has not changed significantly. For example, Tertiary Technical Education graduates tripled since the beginning of the recession and up to the third quarter of 2014, but the remaining educational groups more than tripled. Interestingly, University graduates almost quadrupled, matched only by Lyceum graduates.

Nevertheless, the unemployment rate is still low for higher education graduates and it continues to exhibit an almost linear negative correlation with education: the higher the level of education, the lower the unemployment. University graduates, for instance, face a 20.6% unemployment rate, which is the second lowest after Master and/or PhD holders (12.7%). Developments over the past year (2013c-2014c) are not very good for the former though, since it is the only education group with an increasing unemployment rate (0.3 percentage points) and an increasing number of unemployed, by 9.9%. On the other hand, the unemployment rate for Gymnasium graduates decreased (8.3 percentage points) more than the average unemployment rate for the population (4 percentage points) and so did the unemployment rate for Primary education graduates (11.8 percentage points). Thus it seems that the decrease in the number of the unemployed is fuelled mainly by low education levels. It remains to be seen in the next section whether this decrease is translated to increased employment or a reduction in the labour force.

3.1.2. Employment

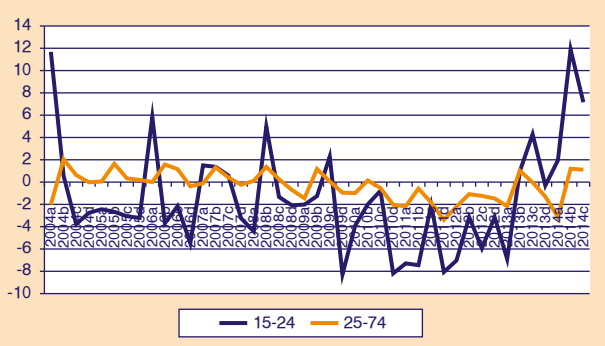
Regarding employment, the male employment rate (employed/population) is still higher than the female rate (46.6% vs. 31.3% in 2014c), but the difference in favour of men during the recession shrunk (from 23.9 percentage points in 2008c to 15.3 percentage points in 2014c), partly because employed men decreased faster. It is worth mentioning that since the beginning of the recession in 2008, employed men decreased by 25.3%, while employed women decreased by just 16.5%. This observation seems to verify the fact that men were hurt more by the recession compared to women. In contrast with the big picture, comparing the situation in the labour market today (2014c) with the situation before the recession, it turns out that employed men decreased by 4.2% (92.1 thousand less jobs), but employed women increased by 3% (43.1 thousand more jobs). Women seem to do better even compared with the second quarter of 2014, since employed women increased by 1.8%, a much stronger increase compared with men (1%). The increase in employment recorded in the third quarter of the year is expected given the boost in the economy by tourism.

7. One should not jump to conclusions since there are few observations in this age group.
8. It could be the case that subsidised jobs do not fully utilise labour force knowledge and skills.

Age

Over 80% of employed aged 30-64 and approximately six out of ten are men, two figures which remained almost unaltered during the recession. Although age group 15-19 has the smallest share of employed (just 0.4% of total employed) it suffered the greatest losses in percentage terms during the recession (61.8%). Age groups 25-29 and 20-24 follow closely in terms of employed lost. This means that the recession more severely affected younger cohorts, probably because they are more weakly attached to the labour market (higher share of part-time employment and employment under temporary contracts), but also because of the legal framework which provides older employed with larger compensations, since they usually have more years of work experience. On a year-on-year basis, i.e. comparing 2014c with 2013c, it is comforting that youth employed (15-29) increased significantly, while employed aged 30-64 continued to decrease.

GRAPH 3.1.2
Quarterly change of employed by age group (%), 2004a-2014c



Source: Labour Force Survey, ELSTAT, KEPE processing.

Graph 3.1.2 shows the percentage change in the number of employed separately for youth (15-24) and older individuals (25-74). The first observation that should be made is that youth exhibit a much greater volatility compared with older employed: the coefficient of variation[9] is four times larger for youth in period 2004a-2014c (30.8% vs. 7.6%). The second observation is that the recession led to increased employment variations, slightly more in the case of youth: the coefficient of variation went up 3.2 times for youth during the recession and 3 times for older employed. The third observation which demands a closer look at the graph is that before the recession employment expands during the first and the second quarter of the year, while during the recession employment increases or at least decreases less in the second and third quarter. In addition, up to 2009 youth employment seems to lead older individuals' employment movements, while the opposite is true since then. The shift in maximum/minimum value in the case of increase/decrease of youth employment by approximately a quarter may be related to the strengthening of the tourist sector over the past two years or the change in the duration of the tourist period, partly because of more tourists arriving and partly because the activity of the rest of the economic sectors are losing ground due to the recession.

Education

Master and/or PhD holders have the highest employment rate (76.4%) and Primary education graduates (or with less education) have the lowest (19%), which is in accordance with the Human Capital Theory.[10] Due to the relaxing of the restrictions applied to Tertiary education entry since the 1980's, younger individuals tend to be more educated. In conjunction with the increase in women's participation in the labour market, who typically are more educated compared with men, the differential in employment rates between more and less educated individuals can be easily explained. During the recession (2008c-2014c) the reduction in employment rates is smaller for Master and/or PhD holders, while in absolute numbers employed graduates from this educational group increased by more than 50%. Strangely enough, University graduates show a larger reduction in their employment rate (17.5 percentage points) which translates to a reduction in the number of employed graduates by 14.2%. Graduates of Tertiary Technical Education follow closely with a reduction in their employment rate of 16.3 percentage points. In absolute terms, though, (i.e. in terms of the number of employed), the relationship between education and employment is negative over time, in the sense that employed with low education decreased more: employed Primary education (or less) graduates decreased by 44.3% (approximately 40 thousand jobs

9. The coefficient of variation is the quotient of the standard deviation to the mean of the distribution and it allows, among others, for the comparison of distributions of different size, just like the situation here where youth and older individuals are compared.
10. As long as education is treated as a type of investment, more educated individuals have spent more for their education (direct and indirect cost) and, thus, they have a stronger motive to enjoy the returns on their investment, i.e. education, by looking for paid employment. For a more detailed presentation of the Human Capital Theory, see Cholezas (2005), *Private returns to education in Greece and the European Union,* Doctoral Thesis, Athens University of Economics and Business.

lost), employed Gymnasium graduates decreased by 29.4% (approximately 150 thousand jobs lost), etc.

Over the past year (2013c-2014c) employed graduates of Tertiary Technical Education increased (3.7%) and so did employed who hold a Master or/and PhD (9.2%), a phenomenon which is reflected in the employment rates of these groups. It seems, then, that these two might be the groups in demand in what is characterised by some as the first timid advances towards economic recovery. The employed with a low level of education either increased marginally (<1 percentage point) or decreased (Primary or less). Thus, the reduction in the number of the unemployed mentioned in the previous section must be a result of a reduction in the labour force. Given that most individuals with a low level of education are older, the logical explanation is that many retired or were simply discouraged and stopped looking for a job.

Developments for employed University graduates are a source of concern, since their employment declined even further over the past year (2013c-2014c): 6.5% less employed (47.3 thousand jobs lost) and a 4.1 percentage point drop in their employment rate. Given the important active labour market policies implemented that target youth and University graduates, the problem seems to become even more important. A plausible explanation is the substitution of employed University graduates with cheaper Tertiary Technical Education graduates. Another explanation is the inadequate targeting of active labour market policies towards older University graduates (they tend to target younger graduates), while a third explanation could be the problematic link between education and the labour market and the consequent mismatch between skills and competencies demanded by firms and those embodied by University graduates. Without rejecting other possible explanations, it would be useful to examine in depth the causes of this phenomenon.

Industry

Despite the fact that the number of employed continued to decrease over the past year (2013c-2014c), it is interesting to examine whether there are any differences across industries. Table 3.1.1 reports changes in the number of employed for three selected quarters: 2008c, 2013c and 2014c. That way, a complete picture can be drawn regarding the overall change in employment by industry during the recession, but also about the changes that took place over the past year. Certain industries, which have a key role in employment in Greece, in terms of the number of people they employ, were hit more by the recession, such as Construction (60.7% reduction in employed), Manufacturing (42.1% less employed) and Wholesale and retail trade (24.1% less employed). Tourism, on the other hand, seems to have done better by managing to retain its employment levels, partly because it relies less on domestic demand compared with other industries.

Increased employment in a number of industries over the past year is undoubtedly a positive sign, even if it involves smaller industries. Some of the industries that managed to increase the number of employed are Accommodation and food service activities (17.4% or 49.9 thousand new jobs) and, to a smaller extent, Education (2%). A number of smaller industries managed to increase employment such as Real estate activities (39.5% or 1.5 thousand new jobs), despite the decrease in construction activities and issuing loans, Arts, entertainment and recreation (8.5%) and Administrative and support service activities (37.2%). The question which comes to mind is whether these new jobs recorded are the result of active labour market schemes, which subsidise wages and/or social security contributions, or of job training in order to relieve the unemployed and facilitate their entry to the labour market, and whether they reflect the actual creation of income, since registering as self-employed, for instance, does not necessarily mean getting paid. These are issues which would be interesting to investigate in depth so that suitable policy interventions can be drawn for supporting or reinforcing various industries.

3.1.3. Labour force

Labour force participation does not change drastically over time. An indicative fact is that over the past year labour force participation changed by more than one percentage point only for age group 20-24 (it increased by 1.4 percentage points). This does not mean of course that there are no flows. It just means that the flows are comparably small in size and cannot affect the indicator. An interesting point which has been noted in previous issues of the *Greek Economic Outlook* is the reduction in the participation rate for men (4.8 percentage points) and the increase in the participation rate for women (1.6 percentage points) during the recession.[11] Over the past year male labour market participants continued to decline, since in 2014c there are 5.7% fewer men participating, i.e. 163.9 thousand, compared with 2013c. The number of women also dropped over the past year by 0.1% or 1.1 thousand persons. As already mentioned, the only age group of labour force participants which becomes larger is group 20-24 (7.2%), both men (1.3%) and mainly women (14.9%). One point of concern is that the

11. A plausible explanation is that women enter the labour market in order to support household income, whether they are married or not.

decreases in participation are more pronounced amongst men aged 25-29 (6%), 30-44 (5.8%) and 45-64 (6.7%). Some possible explanations might include emigration for the first two groups and early retirement for the latter group, without, of course, ruling out a turn towards unsecured and undeclared labour or discouragement.

Labour force changes with respect to education are interesting because they reflect changes in the educational composition of the labour force and, in particular, the increase in the number of persons with high educational credentials and the decrease in the number of persons with low educational credentials. Over the past few years and despite the recession, or perhaps because of it,[12] participants in the labour market who hold a Master or/and PhD increased by 64.1%, the largest increase amongst the educational groups, while Primary education (or less) graduates decreased by 29.9%. As a result, the share of the former in the labour force increased from 2.2% to 3.6% and the share of the latter decreased from 19.7% to 14.2% during the recession (2008c-2014c). Over the past year labour force developments are negative for all educational groups except for those who hold a Master and/or PhD, whose number actually increased. The decrease in the number of Primary education (or less) graduates by 7.3% is noteworthy, while the decrease in the number of University graduates who participate in the labour force is once more troublesome. The most plausible scenario for the former in conjunction with the changes in the age composition of the labour force and changes amongst the unemployed and the employed described earlier is retirement, probably early retirement, of persons with low educational attainment.

3.1.4. Paid employment facts - ERGANI

The last report from the information system ERGANI was published in January 2015 by the Ministry of Labour, So-

TABLE 3.1.1 Employment change by industry

	2008c-2014c		2013c-2014c	
	('000)	(%)	('000)	(%)
Agriculture, forestry and fishery	-30.3	-5.9	-19.6	-3.9
Mining and quarrying	-6.3	-35.6	2.1	22.6
Manufacturing	-228.4	-42.1	-21.9	-6.5
Electricity, gas, steam and air conditioning supply	-6.0	-18.1	-0.2	-0.7
Water supply, sewerage, waste management and remediation activities	-9.0	-27.9	-0.3	-1.3
Construction	-241.9	-60.7	-9.6	-5.8
Wholesale and retail trade, repair of motor vehicles and motorcycles	-199.8	-24.1	-20.2	-3.1
Transportation and storage	-43.4	-20.4	-8.7	-4.9
Accommodation and food service activities	-2.9	-0.9	49.9	17.4
Information and communication	-0.5	-0.7	-1.3	-1.7
Financial and insurance activities	-28.3	-24.2	-24.0	-21.3
Real estate activities	-3.5	-39.8	1.5	39.5
Professional, scientific and technical activities	-35.4	-15.0	-8.2	-3.9
Administrative and support service activities	11.6	14.9	24.2	37.2
Public administration and defence, compulsory social security	-65.3	-17.4	-23.8	-7.1
Education	-34.1	-10.8	5.6	2.0
Human health and social work activities	-21.3	-9.2	-1.5	-0.7
Arts, entertainment and recreation	-12.8	-21.3	3.7	8.5
Other service activities	-19.3	-20.5	1.6	2.2
Activities of households as employers, undifferentiated goods -and services- producing activities of households for own use	-26.5	-34.9	1.0	2.1
Activities of extraterritorial organizations and bodies	0.4	28.6	0.7	63.6

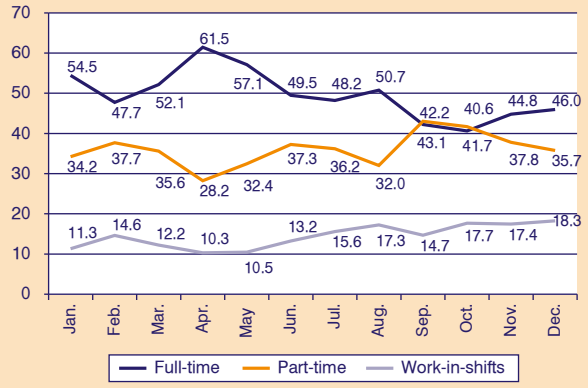
Source: Labour Force Survey, ELSTAT, KEPE processing.

12. The recession and the subsequent increase in unemployment may have pushed people towards acquiring more education, in order to facilitate finding a better paying job.

cial Security and Welfare and it involved developments in paid employment in December 2014 and the entire year. According to this report there were 834 less hires than fires in December, when one year ago the balance was positive and 19,999 new jobs were created. That could be considered[13] as the end of the positive climate which seemed to prevail in the Greek labour market until now, perhaps as a result of the recent political uncertainty. The comforting thing is that there is a positive sign on a yearly basis, since 99,122 more hires than fires are recorded, but once more the results fall short when compared with those of the previous year, when hires exceeded fires by 138,488.[14] As noted in previous issues of the *Greek Economic Outlook*, it seems that labour market flexibility increased and continues to increase further: in December and throughout the year both hires and fires (voluntary quits or layoffs) are higher compared with the respective variables in 2013. Undoubtedly, increased flexibility was often considered a necessity for the Greek labour market, but given the circumstances, there is a risk that this flexibility may result not from movements in search of better job prospects (higher position or better compensation), but as a need due to job loss which leads to looking for another, i.e. involuntary mobility.

In the context of a flexible labour market, it is imperative to examine the type of employment hires involve. Graph 3.1.3 presents the shares of different types of hires and their monthly evolution in 2014. The share of full-time hires started to drop from April 2014, when the maximum share of the year was accomplished (61.5%), and continue to drop steadily to 46% in December. Compared with 2013[15] (53.9%), full-time hires represent a significantly smaller share of total hires, which is not particularly good. Consequently, flexible types of employment seem to be further reinforced, especially the typical ones. Thus, while in 2013 hires involving work-in-shifts represented 9% of total hires, their share climbed to 14.3% in 2014 marking the deterioration of the terms of employment for employees. In addition, hires involving work-in-shifts exhibit am upward trend from May 2014 with no signs of fatigue. The share of part-time hires, on the other hand, is almost steady on an annual basis (36.2% in 2014 vs. 37.1% in 2013), showing a decrease following September, when seasonal hires probably are responsible for the boost in part-time hires, like hires in education.

GRAPH 3.1.3
Monthly evolution of hires by type of contract



Source: Ministry of Labour, Social Security and Welfare, ERGANI Report, December 2014, KEPE processing.

Converting full-time job contracts to flexible forms of employment (part-time or work-in-shifts employment) is another piece of evidence that can be used to evaluate the conditions in the labour market. In December 2014, 1,509 full-time contracts were converted to part-time contracts compared with 4,350 in November (a reduction of 35.3%) and 3,837 in December 2013 (a reduction of 26.7%), which is naturally a positive sign. As far as full-time contracts converted to work-in-shifts contracts are concerned, their number is lower compared both with November 2014 and December 2013, but the share of converted job contracts is similar to that in December 2013 (46.4% vs. 48.3%). Thus, certain stability is evident. Last but not least, the most pronounced negative sign identified regarding the conversion of job contracts is the large share of full-time job contracts converted to work-in-shift contracts without the consent of the employee (18.6%), which is smaller than the respective share in December 2013, but it is larger than the respective share in November 2014.

13. The phrase "could be considered" is chosen on purpose, since according to the available data for the previous months, the performance of the labour market is inferior to the one recorded in 2013 starting as early as August 2014 (see Table III, p. 6, ERGANI Report, December 2014).
14. At this point is should be made clear that the type of hires requires more analysis, since they may include, for example, hires of seasonal employees in the public sector or subsidised jobs in the context of active labour market policy schemes. Such hires and other similar to those can hardly be considered to reflect the dynamism of the private sector.
15. March-December 2013 data (see ERGANI report, December 2013).

3.2. Recent developments in poverty and social exclusion

Nikolaos C. Kanellopoulos

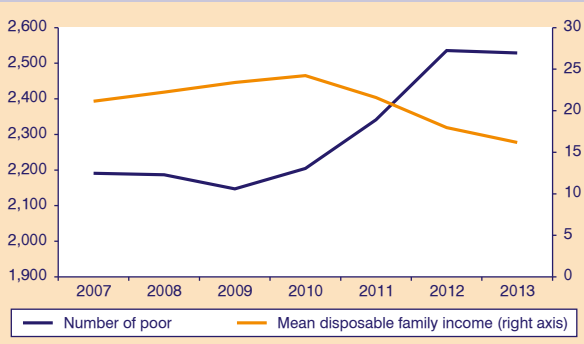
The current economic depression has two distinctive characteristics which distinguish it from previous ones: it is very deep and prolonged. In times of economic downturn, especially in times of crisis, the welfare state implements relief and reintegration policies in order to support individuals or social groups who face serious problems. In times of fiscal consolidation, such as the current, resources for social policies inevitably become scarce and they should be used more carefully and targeted so as to achieve the maximum benefit. Perhaps it is appropriate for programs or policies, which are inadequate or ineffective, to be redesigned and their resources to be redeployed more efficiently. For any formulation and implementation of social policy it is necessary to know which households and social groups face serious problems and to what extent. This section will present some key features of poverty and social exclusion, as well as their evolution over time.

To measure the welfare of households at national and European levels, the main source of statistical data is the Survey on Income and Living Conditions (EU-SILC). The survey is conducted annually by ELSTAT, is coordinated by Eurostat and provides comparable EU-wide data on the distribution and composition of income and social exclusion. Moreover, it collects information on demographic characteristics of individuals, their position in the labour market, etc. The data used here is the EU-SILC for the recent years to the latest available, namely those of 2013 (EU-SILC 2013), which were published in the autumn of 2014 and concern incomes of 2012.

According to the EU-SILC, the average annual disposable family income for 2013 amounts to €16,170, recording a decrease for the third consecutive year. The decline in family income compared to 2012 is 10%, while compared with 2010, when the prolonged fall began, it is estimated at 33%. In other words, within three years, 2010-2013, the average disposable household income declined by one third (see Figure 3.2.1). Although household disposable income fell dramatically during the economic depression, the total rate of relative poverty has not increased accordingly. According to the definition of Eurostat, which is adopted by ELSTAT, an individual is poor when his equivalised disposable income is less than 60% of the median of the respective national equivalised disposable income. Thus, the concept of relative poverty is utilized. Therefore, 23.1% of the population of Greece, i.e. 892,763 households with a total number of 2,529,005 members were facing the risk of poverty in 2013. The proportion of poor in 2013 did not change compared to 2012, while in 2011 it was 21.4% and 20.1% in 2010 (see Figure 3.2.2). Thus, it can be argued that a stabilization of the poverty rate is observed. However, from 2009 to 2013, the poor have increased by 18% or an additional 382,000 new poor have been added to the existing poor (see Figure 3.2.1). In monetary terms, in 2013, the poverty line is estimated at €5,023 per person per year, while the corresponding figure for households with two adult members and two members under 14 years is €10,547 per year. The corresponding amounts for 2012 are estimated at €5,708 and €11,986, respectively.

Moreover, in 2013 the most vulnerable groups to poverty are the unemployed, especially unemployed men (50.7%), households with three or more adults and dependent children (38%), single parent households with at least one dependent child (37.2%), non-economically active excluding pensioners (30.3%), those who rent a house (30.3%), children up to 17 years (28.8%), those who work part-time (27%) and households with a single adult aged under 65 (24.4%).

FIGURE 3.2.1
Number of poor and average disposable family income, 2007-2013 (in thousands)



Source: ELSTAT, EU-SILC.

The poverty rate counts all persons below the poverty line but considers them equally poor. A qualitative characteristic of poverty is the intensity of poverty, i.e. how poor are the poor. To measure this, one can use the poverty gap, which is defined as the difference between the poverty line and the median income of the poor as a percentage of the latter. In other words, the poverty gap indicates, on average, how much below the poverty line the poor are. In 2013 the poverty gap is estimated at 32.7% (see Figure 3.2.2). Therefore, 50% of the poor enjoy higher income than 67.3% of the poverty line, i.e. more than €3,380 per year per person. Between 2009

and 2013 the poverty gap continuously increased and grew in total by 8.6 percentage points. Therefore, while the poor as a percentage of the total population did not dramatically increase, they seem to become poorer with even lower family income available.

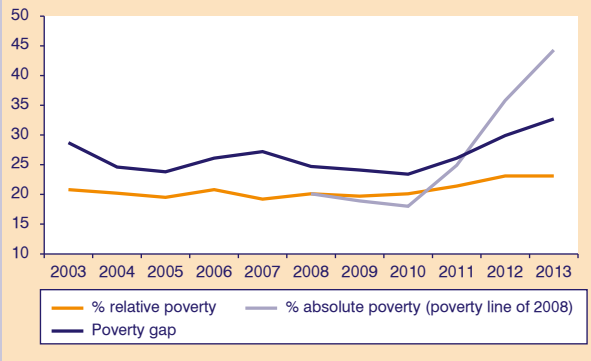
So far the analysis defined poor individuals in relation to the median equivalent income of each year. An alternative approach, also used by Eurostat, is to measure the evolution of poverty if this is defined relatively to a fixed poverty line used in an earlier year, usually during the period of prosperity. Specifically, the poverty line of 2008 expressed in 2013 prices, based on the evolution of the consumer price index, is used. In this case the difference between the aforementioned relative poverty and poverty in absolute terms is impressive, although expected. For 2013, the poverty rate calculated based on the poverty line of 2008 is estimated at 44.3% while, with the same method of calculation, a year ago it was 35.8%. Interestingly, poverty in terms of 2008 and 2010, i.e. the first years of the crisis, marginally decreased; while from 2010 onwards it records an impressive growth. Hence, the great deterioration in the living standard of people took place not in the early years of the crisis, but in the following years. This, as will be later seen, is predominantly due to the dramatic rise in unemployment and the severe austerity measures adopted. These developments led to the aforesaid collapse of household income. For this reason the dramatic decline in income, while practically keeping the poverty line unchanged, is statistically expected to classify many more households below it.

Another social indicator that is often used is the part of the population that, in addition to the risk of poverty, is also facing the risk of social exclusion.[1] Specifically, the percentage of people at risk of poverty or social exclusion is 35.7%, whereas before the crisis, in 2009, it was 27.6%. Furthermore, in order to assess the welfare of a country, the percentage of people aged 18-59 living in households with low work intensity, i.e. households where members worked less than 20% of their normal employment in the previous year, is also used. The relevant figure for 2013 was 19.6%, increased by 3.5 percentage points in one year (2012: 16.1%) as a result of the rise of unemployment.

It is noteworthy that changes in the risk of poverty were not equal for different population groups. More specifically, a shift in poverty from the elderly and pensioners to youth and children is observed. Furthermore, a shift in poverty from rural areas to urban areas and from less educated people to those with higher qualifications is also found (Mitrakos, 2014).

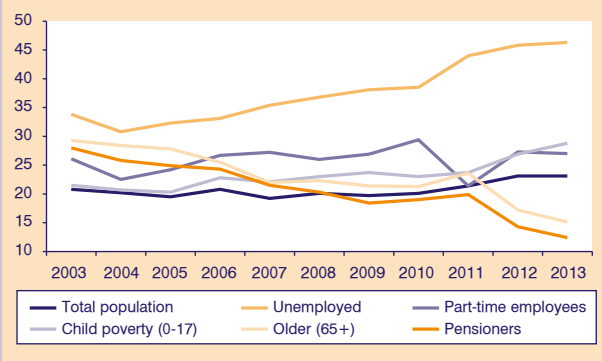
Figure 3.2.3 shows the evolution of poverty for the entire population and some specific population groups for the past ten years. All population groups in the beginning of the examined period record poverty rates higher than the national rates, in other words, they are high-risk groups. However, in 2013 pensioners and elderly over 65 years old do record poverty rates well below the national rates, while over time the proportion of poor in these groups has declined by almost half (pensioners from 28% in 2003 to 12.4% in 2013, while for the elderly the corresponding figures were 29.3% and 15.1%). It seems that despite the reductions in their disposable income, pensioners and the elderly generally maintain a guaranteed income from pensions, unlike the unemployed.

FIGURE 3.2.2
Evolution of poverty and the poverty gap, 2007-2013



Source: ELSTAT, EU-SILC.

FIGURE 3.2.3
Evolution of poverty risk for specific population groups from 2003 to 2013



Source: ELSTAT, EU-SILC.

1. As such are individuals who are at risk of poverty or experience material deprivation (lack at least 4 out of 9 from a list of specific goods and services) or live in households with low work intensity (i.e. working less than 20% of their normal employment in the previous year).

However, we should not overlook the fact that the position of pensioners is likely to have deteriorated in terms of "social wage", e.g. they pay more for health services (Matsaganis, 2014).

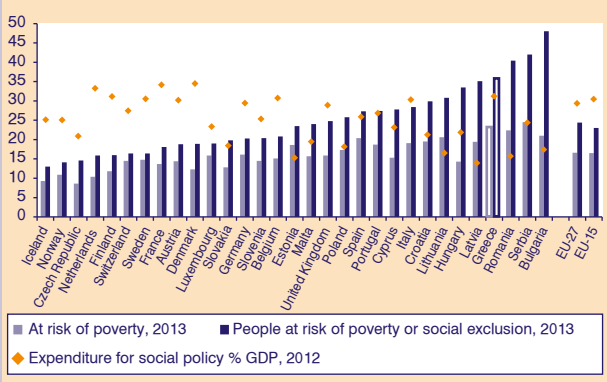
In contrast, the proportion of children up to 17 years old living in a poor family has increased by about 7 percentage points (2003: 21.5% 2013: 28.8%), indicating that the population groups facing more severe poverty problems are the young and not the older. Also, the risk of poverty for the unemployed was and remains extremely high –two times higher than the national average. If we take into account the fact that the number of unemployed has increased dramatically and that for many households labour income was the only source of income, then one realizes the magnitude of the problem. In that regard it is worth noting that although the poverty of part-time employees is higher than the national average (2013: 27%) it is in no case as high as the poverty of the unemployed and it is relatively stable over time. Consequently, employment, full-time or part-time, is a very important poverty deterrence factor and policies for its protection and stimulation should be implemented.

A peculiarity of Greece is the low impact that social benefits seem to have on reducing poverty. Social transfers include pensions (old age, survivor, disability, etc.) and all social benefits (family allowances, unemployment benefits and long-term unemployment, EKAS, etc.). Using EU-SILC 2013 the percentage of relative poverty net of all social transfers is estimated at 53.4%. If only pensions are included in the households' disposable income, the poverty level is reduced by 25.4 percentage points to 28%, whereas the effect on poverty reduction for all other social benefits is only 4.9 percentage points. In other words, pensions seem to have a big impact on the reduction of poverty, while this is not the case with the other social benefits. Given that social transfers account for 44.6% of total equivalised disposable income, and this is 40% pensions and only 4.6% social benefits, it seems that room for social policies for population groups (unemployed, low-income families, the disabled, etc.) other than pensioners, is rather limited. The economic crisis and the increased demand for social protection have exposed the weaknesses and shortcomings of social protection schemes, offering an opportunity for their redesign and modernization.

Using data from Eurostat (see Figure 3.2.4), Greece, with 23.1%, has the second highest poverty rate in Europe after Serbia (24.5%), while it is much higher than the European average (EU-27: 16.6% and EU-15: 16.5%). Based on the index that combines poverty and social exclusion, Greece ranks fourth with 35.7%. The only countries that are worse off are Bulgaria (48%), Serbia (42%) and Romania (40.4%). In contrast, the countries with the lowest poverty rate are Iceland and the Czech Republic, where the poverty rate is below 10%, while the countries with the lowest percentage of people at risk of poverty or social exclusion are Iceland, Norway and the Czech Republic, which record rates below 15%.

An interesting fact is that although Greece spends a higher proportion of its GDP on social protection than the EU average, it performs worse in all social indicators.[2] Countries such as the Netherlands, Finland, Sweden, Austria, Belgium and Italy spend about the same percentage of their GDP as Greece, but record much lower poverty rates. Even compared to other southern European countries, which spend less of their GDP on social protection than the European average, the performance of Greece is clearly lower. It appears that social policy in Greece, which is largely depleted in pensions, is inefficient and leaves a lot of protection gaps, since many countries with a corresponding share of funds record a significantly better performance.

FIGURE 3.2.4
Risk of poverty and social exclusion in European countries and expenditure for social protection



Source: Eurostat, EU-SILC.

To sum up, in relative terms, poverty rose during the crisis, but it seems to have stabilized, while the poverty gap has widened. Moreover, a clear shift of the risk of poverty from the elderly and pensioners to the youth, especially the unemployed, who record the highest poverty rate in

2. Increase of the share of GDP spent on social protection is partly due to a sharp drop in the GDP recorded in recent years. However, the convergence with the European average of 27 had taken place before the crisis. In 2008, Greece spent 26.2% of GDP, while for the EU-27 the corresponding figure was 26.7%.

Greece, is observed. In recent years, reforms towards the right direction have taken place. For example, the enactment of unemployment benefits for the self-employed and the means-tested unified child support allowance for all, the pilot implementation of a Minimum Guarantee Income Scheme, the inspection of eligibility to collect certain allowances, etc. However, it seems that the welfare state, although utilizing a significant part of the GDP, it is unable to meet the needs for social protection and thus poverty rates much higher than other European countries with similar resource allocation are recorded.

Consequently, an appropriate reaction is to implement policies to combat extreme poverty with the universal application of the minimum guaranteed income and, at the same time, to implement policies for the reintegration of the unemployed back into the labour market. In that regard, the minimum guaranteed income should be applied throughout the country, complementary to other benefits, but it should not be limited solely to the payment of a small fee. It should also be accompanied by supportive actions (free healthcare, etc.) and training programs. Additionally, the extension of unemployment benefits should be reconsidered,[3] the criteria for eligibility for the long-term unemployment benefit could be less stringent (perhaps by using means-tested criteria but no age limit[4]) and also the responsible bodies (OAED) should efficiently inform the beneficiaries. In addition, other social benefits should be provided under common criteria and they should not vary depending on the profession (e.g. various allowances for the blind), or perhaps it may be appropriate to consider their unification and an integration of their eligibility criteria. A developed democratic society should primarily be interested in the relief and reintegration of destitute individuals into the labour market, as well as the protection of children, and, secondly, to restore income losses of professional groups protected and privileged over time. At the same time, friendly policies towards employment should be promoted. Such policies should encourage hiring, whether these are structural reforms, as the liberalization of markets, or the ongoing active labour market policies. Each of these can act as a key enabler for reducing unemployment and the associated poverty.

References

Matsaganis M. (2014), "Poverty and social protection in Greece of the crisis" in *Social Cohesion and Economic Crisis: Data, Lessons and Prospects for Development,* edited by Jennifer Cavounidis, KEPE, Athens.

Mitrakos Th. (2014), "Inequality and Poverty: Trends and challenges during the crisis" in *Social Cohesion and Economic Crisis: Data, Lessons and Prospects for Development,* edited by Jennifer Cavounidis, KEPE, Athens.

3. See previous article of current issue on developments in the labour market, where the percentage of unemployed receiving an unemployment benefit is estimated.

4. Even though in Law 4093/2012 there is a provision for a reduction of the age limit from 45 to 20 years, a legislative act stipulates that the total expenditure for this allowance may not exceed €35 million, which is not enough for all the beneficiaries (Matsaganis, 2014).

4. Development policies and sectors

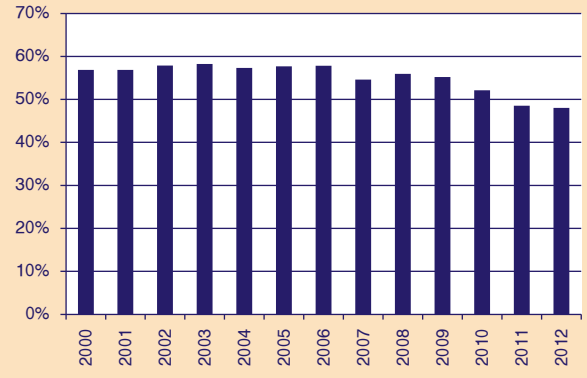
4.1. The evolution of the Greek transport fuels market, 2009-2014

Vassilis Lychnaras

4.1.1. Overview of the petroleum products sector in Greece

In our country, the petroleum products market is an important parameter that affects both the development of the domestic energy sector and the national economy. For several years, petroleum products have had the main share in gross domestic energy consumption. Up to 2010, the consumption of petroleum products was more than 50% of the total consumption of the country. Due to the economic recession and other factors, the participation of petroleum decreased after 2008 (Figure 4.1.1).

FIGURE 4.1.1
Share of petroleum products in gross domestic energy consumption

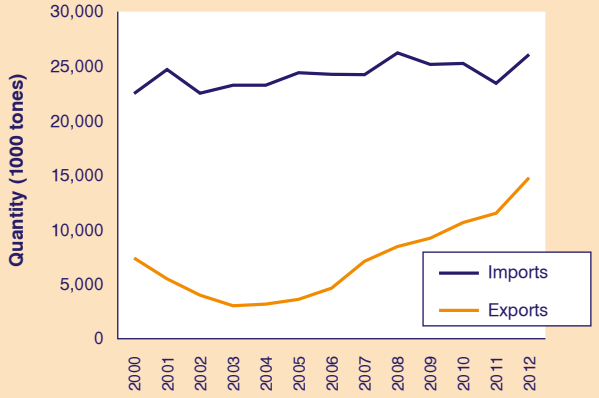


Source of primary data: Eurostat.

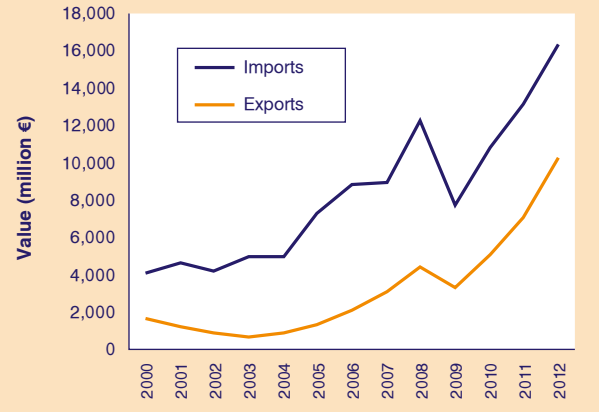
Our country shows high dependence on imports of energy products, mainly oil and petroleum products. According to Eurostat data for 2012, approximately 67% of the gross energy consumption of the country comes from imports, while the corresponding average figure for the EU28 is less than 54%. As a result, Greece's energy dependency on oil imports is an essential factor for the security of the Greek energy sector. Additionally, the changes of the international crude oil prices have a direct impact on the domestic energy market and the national economy. Petroleum products imports in the country are high, but it is also encouraging that in recent years exports have also increased (Figure 4.1.2 (a) and (b)).

FIGURE 4.1.2
Oil and petroleum products balance of trade

(a): Quantities in 1000 tons



(b): Value in million €

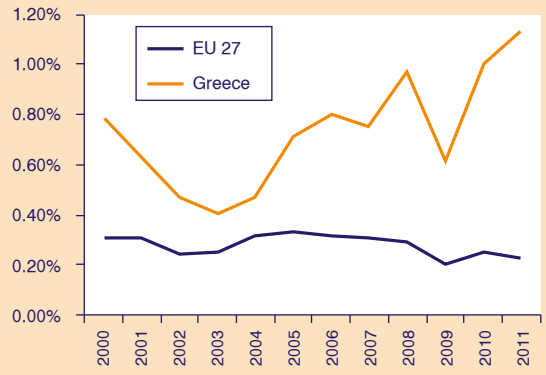


Source of primary data: Eurostat.

In general, the petroleum market and, more specifically, the crude oil refining sector is a major economic and extrovert field of the Greek economy. The share of the refining petroleum sector in national GDP is substantial and higher than the average of the 27 EU countries

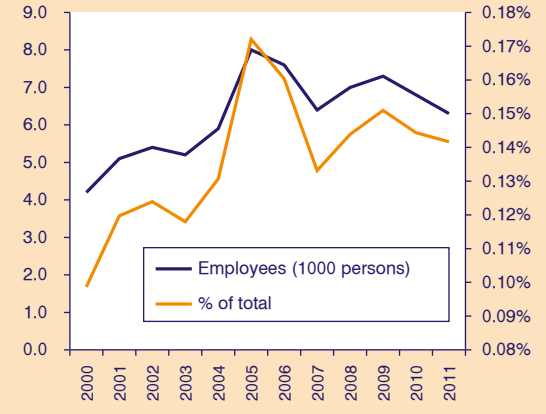
(Figure 4.1.3). Also, the employment of the sector has increased in recent years covering about 0.15% of total employment (Figure 4.1.4), about the same level as the EU average. Greece has great crude oil refining capacity as 2 companies with 4 refineries of 26.4 million tones total annual nominal capacity, are operating in the sector.

FIGURE 4.1.3
Share of the refining petroleum sector in national GDP (in current prices)



Source of primary data: Eurostat.

FIGURE 4.1.4
Employment in the refining petroleum sector



Source of primary data: Eurostat.

However, Greece is a small market and acts as a price receiver from the international market. Consequently, any changes in international crude oil prices have direct positive or negative impacts on the domestic market. The following sections present the evolution of the domestic fuel prices and consumption, as well as international oil prices, trying to identify any interactions between the domestic and international markets.

4.1.2. Evolution of the fuel prices in Greece for the period 2009-2014

It is interesting to examine the evolution of the domestic fuel prices during the last six years. Figure 4.1.5 (a), (b), (c) and (d) present the annual average prices and the range of the prices for unleaded petrol and diesel, both as final consumer prices (pump prices) and prices before taxes and other charges. From the first two diagrams related to unleaded petrol, it is clear that there is an important difference between the pre-tax and the final prices. There is also a strong increase in the prices of unleaded petrol before taxes, during the period 2009-2012, followed by a decrease in the prices for the next years (Figure 4.1.5 (a)). These changes are directly related to the trends of crude oil's international prices. Respectively, the final prices of unleaded petrol (Figure 4.1.5 (b)) follow an upward trend until 2012 but their decrease afterwards is smoother. This is probably related to the level of charges on the product, as is discussed in more detail below. Regarding diesel, we observe similar trends in prices before taxes, because of the international prices, but a stronger decrease, too, in final prices after 2012, due to lower charges compared to unleaded petrol.

4.1.3. Evolution of the prices in 2014

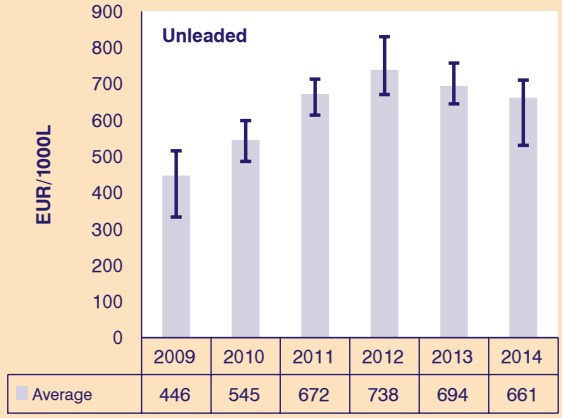
As is well known, recently, the international price of oil had a significant decrease that also affected the domestic fuel prices. Therefore, it is very interesting to examine the trend of prices throughout this year. Figure 4.1.6 (a) and (b) show the average monthly prices before taxes, as well as the final consumer prices. We can notice the great decrease in the pre-tax prices after September 2014, while the decrease in final prices was not so strong. This is due to the constant taxation and other charges that represent a significant proportion of the final price. We can also note that even if the price of unleaded petrol before taxes is lower than the price of diesel, the final prices are opposite, because of the lower tax rates on diesel. However, the above remarks are just an illustration of the price trends. In order to draw safe conclusions about the impact of the international price changes in the domestic market, a more detailed analysis is required.

4.1.4. Evolution of the international oil prices

As mentioned, a key factor that affects the domestic fuel prices is the level of the international crude oil prices. Figure 4.1.7 shows the trends of the average monthly international prices for 2009-2014. The diagram shows the significant decrease in the international prices over

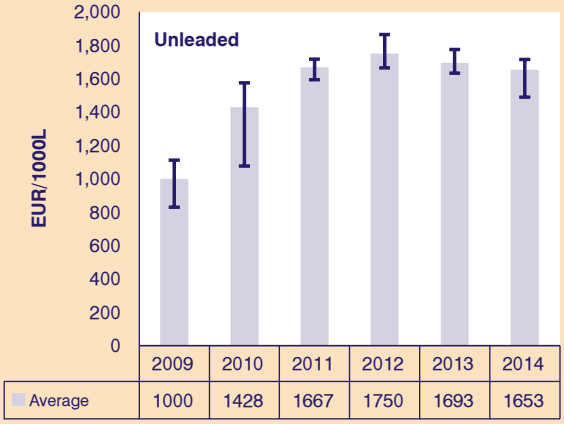
FIGURE 4.1.5
Evolution of transport fuels prices in Greece, 2009-2014 (in euro/1000 litres)

(a): Average annual price before taxes of unleaded petrol



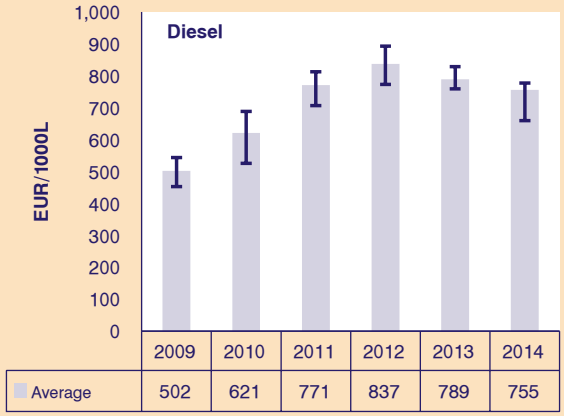
	2009	2010	2011	2012	2013	2014
Average	446	545	672	738	694	661

(b): Final average annual price of unleaded petrol



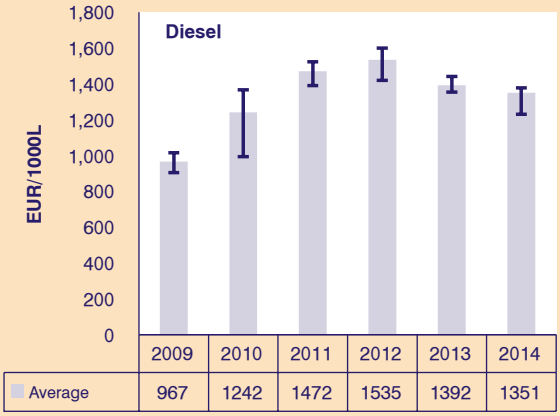
	2009	2010	2011	2012	2013	2014
Average	1000	1428	1667	1750	1693	1653

(c): Average annual price before taxes of diesel



	2009	2010	2011	2012	2013	2014
Average	502	621	771	837	789	755

(d): Average annual final price of diesel

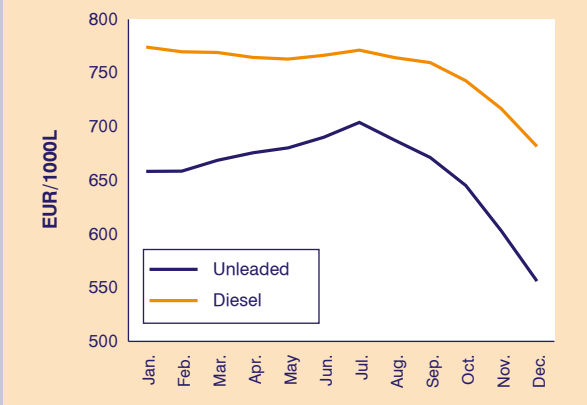


	2009	2010	2011	2012	2013	2014
Average	967	1242	1472	1535	1392	1351

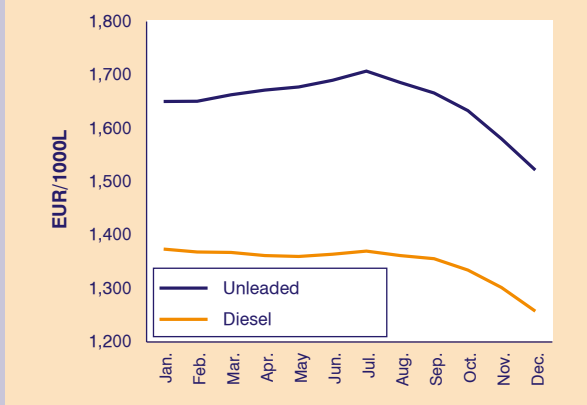
Source: European Commission, Energy, Market observatory & Statistics, *Oil bulletin* (http://ec.europa.eu/energy/observatory/oil/bulletin_en.htm)

FIGURE 4.1.6
Evolution of transport fuels prices, 2014 (in euro/1000 litres)

(a): Average monthly prices, before tax



(b): Average final monthly prices



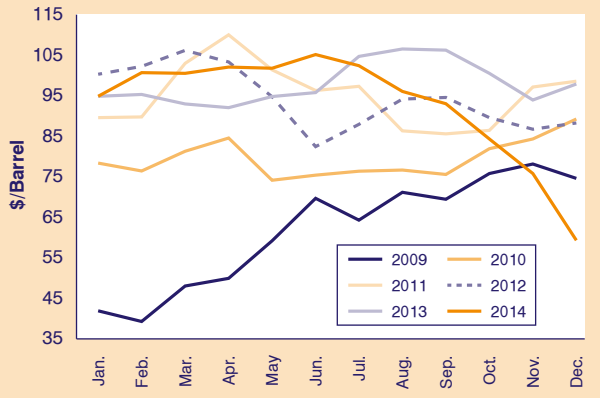
Source: European Commission, Energy, Market observatory & Statistics, *Oil bulletin* (http://ec.europa.eu/energy/observatory/oil/bulletin_en.htm)

the last five months of 2014. Recently, the prices reached the level of 2009 prices. Therefore, the decrease in the international prices affects directly the domestic fuel prices, but as expected, the decrease of the final domestic price is lower, because of the remaining lump sum charges, as defined in the next section.

4.1.5. Charges and Fuel Taxes

Another factor that affects the level of the final price of fuels in our country is taxation. Apart from the VAT, the main charge for the consumer is the Excise Duty. Table 4.1.1 presents the evolution of the Excise Duty for unleaded petrol and diesel from 2009 until today. We notice the significant increase in the Excise Duty for unleaded petrol from 359 to 670 €/1000 liters. This change had great influence on the evolution of the final prices but, additionally, reduced the positive effect from the decrease of the international oil prices. Moreover, in Figure 4.1.4 (a) and (b) it is obvious that there is great difference between the pre-tax and the final prices. In contrast, the Excise Duty for diesel is lower and has decreased after 2012. Thus, there is less difference between the pre-tax and the final prices, while, as already mentioned, the effect of the international crude oil price changes is stronger and more visible.

FIGURE 4.1.7
Average monthly international crude oil price evolution



Source: U.S. Energy Information Administration (http://www.eia.gov/)

4.1.6. Transport fuels consumption in Greece

Figure 4.1.8 presents the monthly trends of the domestic fuels consumption for the period 2009-2014 (for 2014 only the available provisional figures are presented). The main remarks for the consumption are presented below. Traditionally in Greece the consumption of unleaded petrol was higher than diesel consumption, but lately this tends to equate. The fuel consumption during the summer months is increased. During the last six years, the use of petrol decreased, while diesel use remained relatively stable. It seems that the economic crisis, coupled with the increase in international prices of crude oil until 2013, as well as the increased taxation of unleaded petrol, has resulted in a significant reduction in petrol consumption. However, the lack of data for the consumption during the last months of 2014 does not allow us to exclude conclusions regarding the impact of the recent drop in international prices on domestic consumption.

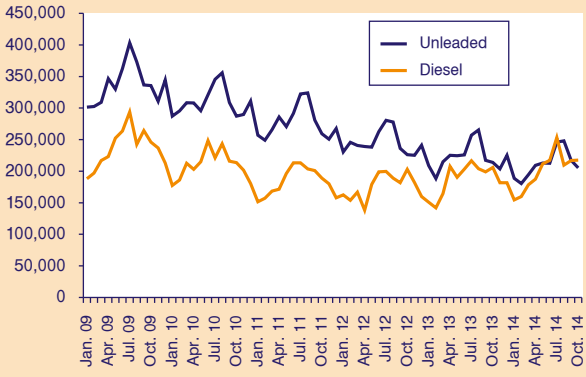
4.1.7. Summary-Conclusions

The Greek energy sector is characterized by a high share of petroleum products in domestic consumption, while, at the same time, shows high energy dependency from imported oil. As a result, our country acts as receiver of international crude oil prices allowing their changes to have a direct impact on the domestic market. However, it seems that the fuel prices in Greece are also affected by the high taxation rates. The increase in Excise Duty for unleaded petrol in recent years, coupled with the burden of VAT, as well as the effects of the economic crisis in the country, has resulted in a nega-

TABLE 4.1.1 Excise Duty of fuels in euro/1000 litres

Period	Unleaded	Diesel	Legal Framework
From 1/2009 to 7/2009	359	302	L.3483/2006
From 7/2009 to 2/2010	410	302	L.3483/2006 & L.3775/2009
From 2/2010 to 3/2010	530	352	L.3828/2010
From 3/2010 to 5/2010	610	382	L.3833/2010
From 5/2010 to 11/2012	670	412	L.3845/2010
From 11/2012	670	330	L.3845/2010 & L.4092/2012

FIGURE 4.1.8
Transport fuels consumption (in tones)



Source: Ministry of Environment, Energy and Climate Change.

tive impact on consumption. At the same time, the high share of taxes in the final price acts as a brake to the downward trend of prices, due to the recent reduction of the international prices.

On the contrary, the Excise Duty for diesel seems to have smaller impact on both the final prices and the consumption. Additionally, the effect of the international price changes is more direct on consumer prices. Moreover, due to the difference in the Excise Duty between unleaded petrol and diesel, it is observed that even if the pre-tax price of unleaded is lower than that of diesel, final prices react in the opposite way. Finally, even if, traditionally in Greece, the consumption of unleaded petrol is greater than the consumption of diesel, lately, due to the factors mentioned before, the consumption of the two types of fuel has been equated.

In any case, this work is only an introductory part of ongoing research and the conclusions presented here are only primary estimations based on the observation of the price trends. It should be noted that in order to extract accurate and safe conclusions about the impact of the changes of the international prices on the domestic market, a more thorough analysis is required.

4.2. Analysis of the Greek food supply chain

Ioanna Reziti

4.2.1. Introduction

The food supply chain links major economy sectors that are crucial for economic, social and environmental prosperity, as well as for citizens' health. Moreover, it involves a wide range of goods and firms operating in different markets distributing various food products. Its regulatory framework affects all the associated sectors, from agriculture to retail.

The market power of firms along the supply chain varies depending on the product category and relevant markets in which such firms operate. This has an impact on the contractual relationships among the key stakeholders along the chain and may affect the extent to which price rises of basic agricultural products are transmitted to consumer prices. Due to this complexity, attention needs to be paid when drawing conclusions on the functioning of the food supply chain.

High consumer prices on food have triggered concern in the European Union, because they put household income under pressure. Pressures are particularly high on socio-economically weak households that spend a large part of their income on food. Due to this concern, a high-level forum was set up in 2010 to assist the Commission in elaborating the industrial policy of the agricultural food sector.[1]

This analysis of the food supply chain does not arrive at concrete policy proposals, but calculates the distribution of added value to the associated industries and identifies a series of issues that need to be further analysed.

4.2.2. Structure of the food supply chain

The agro-food industry in Greece has been constantly evolving, mainly guided by the economic crisis, the subsequent changes in consumer preferences and the trading relationships among the stakeholders of the food supply chain. As a result, two main trends are observed in the industry:

- Increase in the market concentration rate in food retail;
- Increasing consumer preference for private label products.

In view of the economic crisis, the Hellenic Competition Commission has placed new emphasis on the anti-trust legislation on the food manufacturing and retail trade, while further stepping up its efforts to:

(a) Monitor the market in order to identify inefficiencies and asymmetric price transmission along the food supply chain for specific products; and

(b) Advocate, in order to identify regulatory barriers to competition that may lead to market rigidities.

The food supply chain brings together three main sectors (Chart 4.2.1): the agricultural sector,[2] the food and beverages manufacturing and the distributive trade (wholesale and retail) sectors. The agricultural sector produces primary goods, a small part of which is intended for immediate consumption; however, the largest part constitutes input for the production of manufactured food items. Food items are distributed through wholesale trade to retailers (super markets, special food retailers, open air markets, etc.), who supply end consumers with the majority of the food and beverages that they consume.[3]

The food supply chain is characterized by the large diversity of its stakeholders, such as farmers, food manufacturing firms, traders, wholesalers and retailers. Both very large companies and SMEs operate therein as competitors, suppliers or customers. The problems generated by the relationships among them inhibit the full use of the chain's potential. However, it is necessary to foster sustainable and market-based relationships among stakeholders, in order to improve the functioning of the chain.

The Gross Value Added (GVA) of any industry measures the difference between total output and intermediate consumption of raw materials and goods used in production. The GVA is considered an appropriate variable to assess the economic significance of an industry in the total economy. Therefore, this analysis will focus on the development of the chain's GVA over time and on how GVA is distributed among the chain sectors. In this manner, we will establish any imbalances in the negotiating power of the stakeholders. Besides, the GVAs of the different sectors of the food supply chain are intercon-

1. The Commission will be able to ask the opinion of the forum on every issue related to the competitiveness and operation of the food supply chain within the internal market and to formulate new recommendations depending on the supply chain development.

2. Agricultural sector means agriculture and fisheries.

3. We also include food service activities supplying consumers with the food and beverages they consume.

nected – the output of the upstream sector forms part of the intermediate inputs to the downstream sector.

The food supply chain is a significant industry of the Greek economy. According to interim data of the National Accounts, the contribution of the food supply chain GVA to the Greek economy[4] was approximately 20% in 2013. The distributive trade[5] dominates with 10%, where wholesale contributes 5.30% followed by retail with 4.51%. As for the remaining sectors, agriculture and fisheries come next with 3.76%, food service activities with 3.58% and, finally, the food, beverages and tobacco sector contributes 2.54% (Chart 4.2.2). However, as shown in Chart 4.2.3, the GVA shares of trade in 2013 were equally reduced (-11%) versus 2010, while the agriculture and industry shares increased by 16% and 18%, respectively. The share of food service activities rose by 3.5%.

Using GVA data from the business structure of the manufacturing, distributive trade and food service activities sectors, we calculate the contribution of the individual sectors to the supply chain GVA[6] (Table 4.2.1). In this analysis, we define supply chain sectors on the basis of the EU NACE Rev. 2 classification:

- The agricultural sector includes codes 01 (crop and animal production, hunting and related activities) and 03 (fishing and aquaculture).
- Manufacturing includes codes 10 (manufacture of food products) and 11 (manufacture of beverages).

CHART 4.2.1
Illustration of the food supply chain

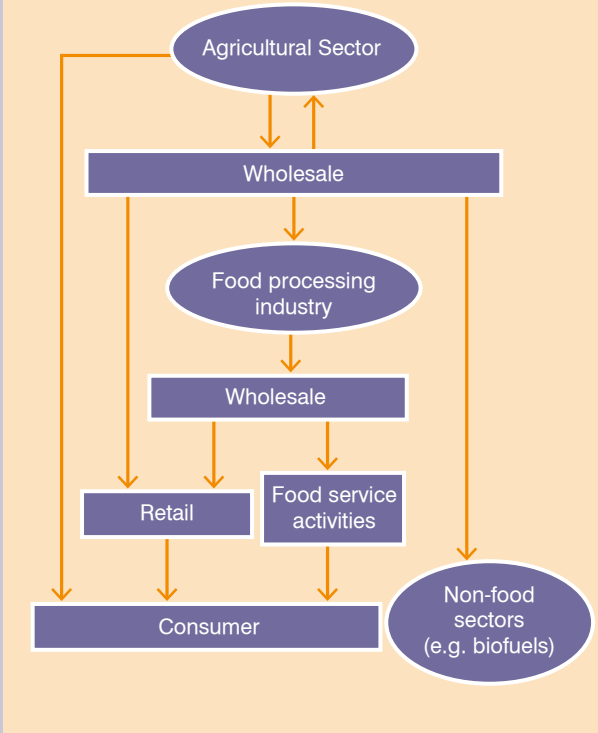
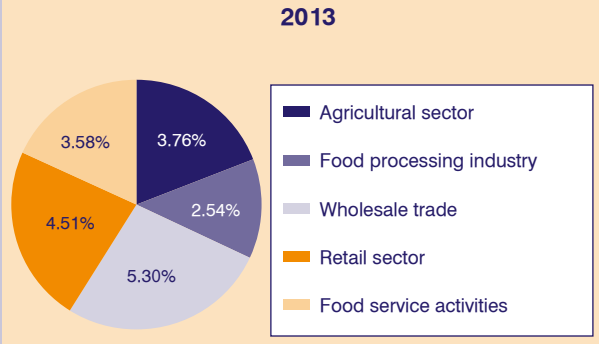


CHART 4.2.2
Contribution of GVA to the Greek economy, per individual food supply chain sector



Source: National Accounts, ELSTAT.

CHART 4.2.3
Time change of GVA contribution to the Greek economy, per supply chain sector

Source: *National Accounts,* ELSTAT.

4. As a percentage of the 64 economy sectors.

5. Based on the National Accounts classification, distributive trade includes code 46 (wholesale trade, excluding motor vehicles and motorcycles trade) and code 47 (retail trade, excluding motor vehicles and motorcycles trade).

6. We attempt to approach the food supply chain GVA using a more analytic sector classification according to the business structure rather than the National Accounts.

- For wholesale trade we use code 46.3 (wholesale of food, beverage and tobacco).[7]
- Retail trade includes code 47.2 (retail sale of food, beverages and tobacco in specialized stores) and code 47.1.1 (retail sale in non-specialised stores with food, beverages or tobacco predominating) excluding codes 47.26 and 47.19 (retail sale of tobacco products in specialised stores and other retail sale in non-specialised stores, respectively).
- For food service activities we use code 56.

In Table 4.2.1 we observe that in the 2008-2011 period, the sectors followed different growth rates. The agricultural sector increased its share to 39% and remains the most significant sector of the supply chain. Distributive trade preserved its share at 29%, higher than manufacture of food. Manufacturing remained stable at 22%, while the wholesale and food service shares declined. In the 2008-2011 period, the GVA of the supply chain contracted by approximately 7.5% as a result of the economic crisis. In the same period there have been sharp decreases in wholesale trade (-13%) and food service activities (-24%), but a minor rise (+2%) in the retail trade GVA. The supply chain GVA declined by -7%, down to 9%.

The GVA of the food distributive trade sector accounts for 25% of total distributive trade (Table 4.2.2). Twenty-nine percent of the turnover and employment of total trade concerns food trade. The shares of food retail trade in total retail trade are considerably larger than the respective shares of the food wholesale trade.

In the 2008-2011 period, there was a major rise (+24%) in the GVA of the food distributive trade as a percentage of total trade. In the same period, a major increase is observed in the labour cost share of food distribution in total trade (+20%) due to the considerable cost hike in retail trade.

4.2.3. Developments in food prices

In recent years, sharp price fluctuations of agricultural products have been observed. In the second half of 2007, the prices of basic agricultural products rose steeply due to temporary structural factors resulting in an increase in consumer prices of food. In the next two years (2008-2009) agricultural product prices decreased and major price volatility has been observed since. Despite the decline in the prices of agricultural products, consumer prices of food continued to increase and it was only in the second half of 2013 that prices ebbed slightly (Chart 4.2.4).

The divergences noted between the development of basic agricultural product prices and consumer prices are owed to structural weaknesses in the supply chain system and to the competition structure in certain parts of the chain. This different price trend has a negative impact on the food supply chain, because not only does it prevent consumers from taking advantage of lower prices, but it also inhibits the recovery of agricultural prices due to a decline in the demand for food.

The current conditions of economic crisis make it more imperative than ever to a) ensure that any reduction in

TABLE 4.2.1 Sector contribution to the food supply chain GVA (€ mn.)

Year	Agriculture & fisheries	Food and beverage manufacture	Food wholesale	Food retail	Food service activities	Total supply chain	Total of 64 sectors
2008	6,565 (37%)	3,923 (22%)	2,288 (13%)	2,644 (15%)	2,106 (12%)	17,526 (8%)[1]	213,933
2009	6,598 (37%)	4,085 (23%)	2,415 (13%)	2,857 (16%)	2,050 (11%)	18,005 (8%)	212,216
2010	6,453 (36%)	4,035 (23%)	2,122 (12%)	3,006 (17%)	2,212 (12%)	17,828 (9%)	199,645
2011	6,262 (39%)	3,367 (22%)	1,997 (12%)	2,696 (17%)	1,606 (10%)	16,212 (9%)	182,302

Source: ELSTAT, *National Accounts and Business Structure* – in brackets, % of total supply chain,
[1] % of the total of 64 sectors. There are no recent data.

7. We include the wholesale trade of tobacco products in the food supply chain because there is no separate NACE Rev. 2 code in order to exclude it.

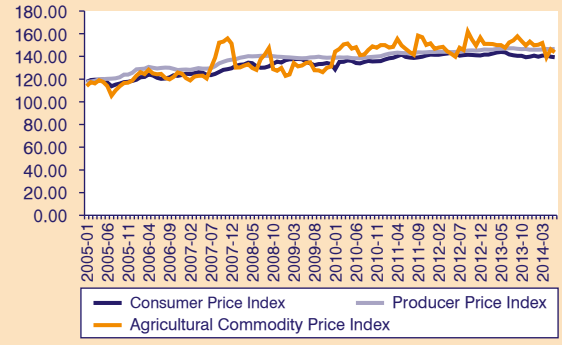
TABLE 4.2.2 Share of food distributive trade in total trade

	2011			% share change (2008-2011)		
	Food wholesale trade (1)	Food retail trade (2)	Total food distributive trade (3)	Food wholesale trade	Food retail trade	Total food distributive trade
GVA	19%	37%	25%	+11%	+23%	+24%
Turnover	24%	39%	29%	-6%	+18%	+10%
Salaried and wage-earners	22%	41%	29%	-7%	+34%	+16%
Labour cost	18%	43%	26%	-7%	+36%	+20%

Source: ELSTAT, Distributive Trade: (1) % of total wholesale trade, (2) % of total retail trade, (3) % of total distributive trade (wholesale + retail).

prices of basic agricultural products prices be passed on to consumers and b) improve the competitiveness of the supply chain sectors.

CHART 4.2.4
Development of prices along the food supply chain (2005:01-2014:06)



Source: ELSTAT.

4.2.4. Conclusions

The food supply chain brings together the agricultural, the food manufacture and the distribution sectors that jointly contribute 9% of the economy's added value. The most significant sector of the Greek supply chain is agriculture (39% of GVA) followed by distributive trade (29%), with retail dominating over wholesale trade. The food manufacturing industry holds the third place (22%). This structure contrasts that of the European food supply chain where the distribution sector is the most significant (43%) followed by the food manufacturing industry (33%) and agriculture (25%).

Given that the food manufacturing industry and the distribution sectors have a lot of interactions with other economy sectors, market malfunction along the food supply chain may have severe effects on the economy. Inequalities in stakeholders' negotiating power are conducive to the deceleration and contraction of price change transmission along the supply chain, which explains the asymmetry. Additionally, the delayed transmission of price changes stalls the necessary adjustments and allows inefficiencies to persist in all stages of the supply chain. Such inefficiencies may intensify price volatility in the markets of basic agricultural products. An improvement in the competitiveness and organization of the agricultural sector and an increase in its GVA share in the food supply chain are necessary, because there is higher fragmentation noted in the agricultural sector than in the other supply chain sectors, which are better organized and, therefore, have higher negotiating power.

Due to the importance of distributive trade in the food supply chain, it is necessary to constantly monitor its structure to identify and lift any market distortions that have contributed to the asymmetries in price transmission along the food supply chain.

4.3. Economic programming issues

Vassilis Kafouros

A program of economic development should –apart from setting goals– explain, analyze and suggest ways and means by which these goals will be accomplished, to avoid becoming another 'wish list' like others that have been published in the past.[1] Given the current Greek economic and public administration conditions, such a program should, probably necessarily, consist of three parts, i.e. two short-term and one medium-term part.

4.3.1. Exploring the available economic instruments

The saying 'given the economic tools you have got, your goals, and consequently, your economic plan must be relevant' is the basic principle of economic programming.[2] Nowadays, Greek government economic tools (fiscal policy, monetary policy, public enterprises control, funding, introducing incentives, control and correction mechanisms for implementing the national economic program or its sub-programs, etc.) are *de facto* limited. Consequently, it makes no sense to set goals that cannot be accomplished or depend on extrinsic circumstances.

Therefore, it will be much more productive and useful, before setting any goal and proceeding, to record all available economic instruments and explore their potential.

For example:

i) What is the point of implementing an economic plan, aimed at increasing exports of a sector, when this particular sector is not at all influenced by the implementation of the plan itself?
ii) What is the point of raising incentives for the development of certain types of tourism when we are not in the financial position to do so or do not have the necessary mechanisms for their implementation nor for monitoring their effectiveness?

4.3.2. Exploring goals that can be achieved under the available financial tools

On the basis described previously, and only then, we are in the position to set achievable goals. Such goals are those that can be accomplished under the already existing financial instruments, administrative and monitoring mechanisms or others that can be obtained in the near future. After prioritizing the goals, according to their contribution to the Greek economy, or the urgency of their character and their multiple direct or not effects, their ease of implementation and strategic importance in the medium term, and, finally, according to various criteria set by the government, we move on with the implementation procedure.

For example:
Before making any reform, it would be advisable to consider whether the necessary structures exist (administrative, technological, material, legal, adequate human resources, etc.) and if not, our attention and efforts must first focus on creating them.

4.3.3. Necessary reforms for the implementation of an economic plan

Under the current economic and political conditions, one reform should be the priority ('the mother of all') in order to succeed when implementing a specific financial plan: streamlining the public sector. Nevertheless, such reform has too many parameters and expressions and, as experience has shown both in Greece or abroad, it takes too much effort to carry this out. Consequently, it would be more useful to explore the reasons why the goals set are not met and propose ways to accomplish them, rather than continuing to set unachievable goals.

For example:

i) A consistent, simple tax system and development framework not changeable every year or more frequently.
ii) Merger of entities that have no particular responsibilities or duties.
iii) Reducing bureaucracy in ministerial procedures, clear delimitation of competences of each Ministry or their bodies, to avoid the overlapping of responsibilities.

In short, the implementation of economic programming requires:

i. Consistency and internal rationality.
ii. Realistic goals.
iii. Goals aiming at economic and social prosperity.
iv. Suitable tools and monitoring mechanisms.
v. Motivating public or private entities involved.

1. See, among others, Centre for Planning and Economic Research (KEPE), 1965, 1976, 1980, 1985.

2. See, among many others, Katiforis (1984), Arrow (1984), Chow (2011), Hare (2006), Lewis (2003), Mihalyi (2011), Musgrave (1977), Tinbergen (1967), United Nations (1970).

vi. Monitoring and correction mechanisms.
vii. Funding.
viii. Political will.

Ensuring all the above, we can proceed with the realistic implementation of the economic programming and not lose time creating one more 'wish list'.

Bibliography

In Greek

Katiforis, Georgios. 1984. *General Principles of Programming.* Athens: Centre for Planning and Economic Research (KEPE).

Centre for Planning and Economic Research (KEPE). 1965. *Economic Development Programme Plan of Greece 1966-1970.* Athens: KEPE.

Centre for Planning and Economic Research (KEPE). 1976. *Five-year Economic and Social Development Programme 1976-1980* (28 Studies). Athens: KEPE.

Centre for Planning and Economic Research (KEPE). 1980. *Regional Development Programme 1981-1985.* Athens: KEPE.

Centre for Planning and Economic Research (KEPE). 1985. *Economic and Social Development Programme 1983-1987.* Athens: KEPE.

In English

Arrow, Kenneth J. 1984. *Collected Papers of Kenneth J. Arrow. Volume 4, The Economics of Information*. Cambridge, Mass.: Harvard University Press, Belknap Press.

Chow, Gregory. 2011. *Economic Planning in China.* Princeton University, Department of Economics, Center for Economic Policy Studies, Working Papers: 1381.

Clark, David Alexander, ed. 2006. *The Elgar Companion to Development Studies*, Cheltenham, U.K. and Northampton, Mass.: Elgar.

Hare, Paul G. 2006. "National Economic Planning". In Clark (2006), p.p. 409-14.

Lewis, W. Arthur. 2003. *The Principles of Economic Planning,* London: Routledge Library Editions.

Mihalyi, P. 2011. "The 2011 Governance Reform of the Eurozone: Two Well-Known Problems of the Centrally Planned Economies", *Acta Oeconomika*, 61 (3): 281-291.

Musgrave, Richard A. 1977. "National Economic Planning: The U.S. Case", *American Economic Review*, 67 (1): 50-54.

Tinbergen, Jan. 1967. *Development Planning*, London: World University Library.

United Nations. 1970. *Multi Level Planning and Decision Making: Papers Presented to the Sixth Meeting of Senior Economic Advisers to the E.E.C. Governments*, New York: United Nations.

A critical approach to the new framework for creating tourism investment during the current period of economic crisis 2010-2014

Efi Sarantakou, Paris Tsartas***

Entrepreneurship in tourism depends on several parameters regarding taxes and growth, environment, culture, transportation, security, etc. Any policies that the state implements in these areas create a framework which has a specific orientation (less or more friendly to private or public investment, a specific size of investment, etc). However, such orientation only becomes understood retrospectively, since the "Greek reality" presents many contradictions and a wide inconsistency between the intentions declared by the central state strategy and the policies implemented through a number of exemptions at a local level.[1]

This article refers to the new framework created during the current period 2010-2014, under certain circumstances and with specified objectives. Within the economic crisis, which was translated into the State's and bank system's lack of liguidity, the focus was shifted from the economic incentives to spatial and urban planning benefits, to the effort to simplify the processes and the mechanisms of planning and environmental licensing and to the creation of a series of new tourist products that emphasize the tourist real estate.

The methodological approach

The subject has three levels of methodology. The paper initially records how the situation was before the crisis in connection to the construction features of the Greek touristic areas and the applied state policies.

Secondly, it describes the trends and the negotiations of the previous period (2000-2009). It describes the period of reference, 2010-14, through the critical analysis of a large amount of introduced new legislation related to the creation of tourism investment (introduction of new tourist products, spatial and environmental provisions, changes in the process of licensing).

The criteria for analyzing the new framework is effectiveness, consistency with the stated objectives and the level in which it forms a coherent policy for investments by the licensing bodies involved.

1. The characteristics of the Greek touristic space in relation to the implemented spatial and developmental policies

The Greek case has unique *structural characteristics*: small properties and, consequently, the dominance of an indigenous "artisanal" model of tourism development.[2] This characterization concerns organization (small family touristic units, low level of specialization, multi-employment). The Greek touristic areas present intense division in land property. As noted in the relevant report of the Bank of Greece,[3] only 17% of the country's properties are larger than 500 stremmas (0,5 square kilometers) –when the average in Europe is 66%– while 25% are properties of less than 25 stremmas (25,000 square meters) and 17% are properties between 50 and 100 stremmas (50,000 to 100,000 square meters). This wide dispersion in properties is the result of specific historical and social facts,[4] as well as of the spatial planning policies implemented over the years.

At a local level, property directly affects tourism development.[5] (Table 1):

* PhD in Spatial Planning – Tourism Development.

** Professor of Tourism Development at the University of the Aegean.

1. Sarantakou 2010:127.

2. Sarantakou 2010:113.

3. Bank of Greece 2014:4.

4. It was mainly the result of the agricultural reform of 1917-1923, resulting in the distribution of small land plots. The problem was intensified over the years due to the inheritance law that allows the division of the land plots and the transfer of ownership to the beneficiaries as many separate properties.

5. Ikonomou 2000.

TABLE 1 Size of land property and tourism development organization

Characteristics	Dominance of large properties	Dominance of small properties
Rate of building development	Large units. Creates homogeneous zones of land use	Fragmentary. Mixed land use
Size of units	Large units, possibility for smaller ones	Small units, difficulty in land concentration
Mobility in land purchase	Tends to be small	Tends to be large
Dispersion of economic benefits	Small	Large

Source: Sarantakou 2010:44.

The lack of consistent complete planning[6] for the Greek tourist destinations, which would have developmental, land planning and legal dimensions, results in the application of incoherent and, in many cases, controversial policies that affect their development and their perspectives. Specifically, land and tourist policies have shown, over time, a wide discordance between the intentions of state planning and the policies implemented at a local level, as well as lack of uniformity and consistency applied by a wide number of competent authorities such as the Greek Tourism Organization (GNTO), the Ministry of Culture, The Ministry of Environment, Energy and Climate Change (previously Ministry of the Environment, Regional Planning and Public Works and Ministry of Town Planning, Development and Environment), Regional (previously Prefectural) and Local Authorities and the Council of State.[7] Such practices promoted further division of land in areas where there was a possibility for tourism exploitation since the beginning of tourism development in the 1960s. Intensive exploitation of private ownership, which concerned a wide working class,[8] also served the development of many sectors in the Greek economy, since construction and tourism[9] were considered the "locomotive" of the economic development.

As a result, such practices led to the dominance of small and very small tourist units over time. The average size of the total accommodation capacity (any type of accommodation) in Greece is only 31 beds, while in Turkey it is 200 beds, in Portugal 138, in Cyprus 102 beds and in Italy 47.[10] The average size of hotel capacity in Greece is also small (76 beds/40 rooms). It is notable that more than 50% of tourist beds in Greece belong to small units with up to 50 beds, while units of more than 400 beds represent only 10.7% of the total beds.[11]

A look at the previous legislative framework for the creation of tourist accommodation

According to L2160/93[12] (OG Issue No A118 "Regulations on tourism and other regulations"), tourist accommodation is defined as *basic* (different types of hotels, traditional guest houses and camping sites) and *non-basic* (rooms, apartments, furnished residences and villas to rent).

Compared to houses/habitats, hotels have four times higher allowable building area on a plot,[13] the obligation of a larger property and more restrictions on location.[14] Moreover, since they are considered production facilities, they followed a six-phase licensing process which involved different authorities (Table 2). Non-basic accommodation built as residences, could be located almost anywhere (Table 2).

6. Tsartas 2010:162-170.

7. Sarantakou 2010:127.

8. Ikonomou 2000:13.

9. For the multiplying effects of tourism, see Tsartas 2010:205-11.

10. Research Institute for Tourism 2008.

11. Bank of Greece 2014.

12. In force until replaced by L4276/14 (OG Issue A155/30-7-2014). Simplification of the procedures for the operation of tourism businesses and facilities, special forms of tourism and other regulations.

13. Building coefficient 0.2 instead of 0.05 for areas outside urban planning zones.

14. In Greece, the first attempt to regulate the siting of resorts was the regulations on "congested areas" (OG Issue No 427/86, 797/86 and 550/B/91). Today, the restrictions on siting basic accommodation are set by the Special Framework for Spatial Planning in Tourism (OG Issue No 3155/B/2013) and by secondary spatial planning tools per case (Urban Control Zones, General Development Plans, etc.).

TABLE 2 Process for licensing tourist accommodation facilities (until 2010)

	Preliminary environmental assessment & evaluation	Land Suitability approval	Approval of environmental terms and conditions*	Approval of architectural design	Building permit	Operating license
	Ministry of Environment, Energy and Climate Change/ Regional Authorities	GNTO	Ministry of Environment, Energy and Climate Change/ Regional Authorities	GNTO	Town Planning Authority	GNTO
Hotels	YES	YES	YES	YES	YES	YES
Rented rooms & apartments		YES		YES	YES	YES
Tourist residences & villas				YES	YES	YES

Source: Analysis of L1650/86, L3010/2002, PD/8.7.93/OG715/B/93, PD//43/OG43/A/2002, PD337/OG281/B/2000, MD 530992/87/OG557/1987.

TABLE 3 Process for tourist accommodation licensing within the new legal framework 2015

	Approval of environmental terms and conditions* Ministry of Environment, Energy and Climate Change/ Regional Authorities	Building permit Town Planning Authority	Operating license GNTO
Hotels	YES	YES	YES
Rented rooms & apartments		YES	YES
Tourist residences & villas		YES	YES

Source: Analysis of L4014/2011 L4030/2011 L4276/2014, MD 277/OG3118/B/2013, MD 21185/OG2840/B/2014, MD213/OG10/B/2015.

* For the approval of environmental terms & conditions a number of bodies give their opinion, such as the Ministry of Culture, the competent Forest Administration department, the Directorate for Water Management of the Decentralized Administration Authority and, in some cases, the Regional Authority, the Ministry of Rural Development, etc.

2. The trends formed during the 2000s focusing on the organized "tourist residence" in Greece

Organized real estate for holiday houses, also known as residential tourism,[15] is a development practice which combines holidays with a residence offering the tourist services of hotels, as well as a number of special tourist facilities (spa, golf courts, etc.) at a large-scale organized development area. As a product, it was first introduced in central and south America and then spread to southern Europe – mainly to Spain, Portugal and France and, more recently, to Croatia, Bulgaria and Turkey.[16]

In Greece, the organized "tourist residence"[17] has been the center of attention for tourism professionals for over a decade, as well as for investors in other sectors as

15. As the term appears in the international bibliography. Also see Kokkosis, Tsartas, and Griba 2011:453.

16. Mitraki 2007.

17. In the Greek legal framework, the term "tourist residence" is used for residences for sale in organized resorts (i.e. mixed use resorts, as defined by L4002/11 and "Tourist Villages" defined by L4092/12). The use of the adjective "tourist" is used by the rapporteurs of such products in order to reinforce the touristic aspect in this real estate development practice.

well, such as construction and banking, but also for the intelligentsia, the leaders of the competent ministries, the environmental organizations and the Council of State since its development creates the need to reevaluate the restrictions set by the country's Constitution on the spatial planning of the Greek territory, the issues of private urban planning, the use of land, as well as tourism and civil laws. The first effort to combine tourism activity and real estate was in 1997[18] when the Integrated Tourist Development Areas (P.O.T.A.) were introduced as a tool in the Greek legal framework, which allowed the development of an organized spatial area that would include hotels, special tourism facilities and tourist residences that can be transferred independently and in full ownership to third parties. The application of this tool was limited to the creation of the Integrated Tourist Development Area (P.O.T.A.) in Messinia, which was completed after 20 years of procedures and is today the only large-scale integrated organized tourism infrastructure in Greece.[19]

Residential tourism development in Greece is proposed by a series of studies[20] which argue that there is a significant demand in Southeast Europe, however, there is an important counter-argument which pinpoints that there are signs of recession of the specific product in the European market.[21] From the late 1990s, various investment ventures, which see an investment opportunity in this direction, began to concentrate land[22] and press in a more organized way for legal reforms that would permit the creation of organized residential tourism in Greece.

2.1 Factors that discourage medium and large investments in tourism

The identified lack of medium and large-scale tourism investments in Greece was reintroduced in the public dialogue as an important issue, after the beginning of the financial crisis and the significant decrease in investment activities.[23] During the period of reference, it seems that a number of initiatives coming from banks[24] and business bodies (SEV[25] and SETE[26]) applied coordinated pressure for specific changes. Such initiatives were included in the policies defined by the "Memorandum of Understanding" (MoU) between Greece and its lenders and were implemented during the period of reference. Analyzing such initiatives, as well as studies of independent bodies,[27] shows that there are important discouraging factors for the emerging of large and medium investments in tourism, such as the following:

A. The lack of large land properties

The existence of many small land properties increases the amount of legal acts that are necessary in order to acquire the adequate size of land and, therefore, makes the process more complicated and time consuming. The P.O.T.A. in Messinia is a characteristic example, since more than 1,300 land plots were necessary to be acquired.[28]

B. A vague property ownership framework

With the Greek state claiming almost 60% of the land in the Greek territory and individuals claiming almost 50%, the percentage of overlapping claims rises to 10% at the moment, a rather high percentage that constitutes an important obstacle for possible investments.[29] According to NBG estimations (2014), lifting such obstacles would lead to a further tourism return of €8.1 billion annually (€6.3 billion in additional tourist receipts and €1.8 billion in further investments).

18. L2545/1997 "Industrial and Business Areas and other regulations".

19. http://www.kathimerini.gr/365652/article/oikonomia/ellhnikh-oikonomia/h-odysseia-mias-megalhs-toyristikhs-ependyshs.

20. A relevant ALPHA BANK study in 2006 estimates that there is demand for 3 million Europeans which could be covered by offering 1,000,000 residences. The McKinsey and Company study (2012) which defines, among others, the strategies and the tourism development model, estimates that there is a capacity for building 25 new integrated resorts of a total area of about 4.5 million m^2.

21. Avgerinou, Spiropoulos, and Toufeggopoulou 2013.

22. Analyzing investment project files shows that land purchase was, in many cases, performed in the late 1990s and early 2000s.

23. Research Institute for Tourism 2011.

24. ALPHA BANK 2006; Bank of Greece 2014.

25. Hellenic Federation of Enterprises (SEV) 2010, SEV 2014, McKinsey and Company 2012.

26. Greek Tourism Confederation (SETE) 2011.

27. The Greek Ombudsman 2004:146-153.

28. Forced expropriation, provided by the law on P.O.T.A., was also necessary for a small area.

29. An index on property rights (Heritage Foundation) grades Greece with only 40/100, while the average European grade is 74/100. The factors taken into consideration include the ability of individuals and businesses to execute contracts, the possibility to expropriate private property and the independence of the judicial system, Bank of Greece 2014.

C. A vague land use framework

Structural problems of spatial planning include the *lack of specific objectives and coordination with development policies*,[30] the unstable framework for land use of private businesses that is in force[31] and, consequently, the *insecurity created by business laws*.[32]

Specifically, the framework for land use is characterized by the following:

- Multiple superimposed and overlapping planning tools which create chaos and make the process for completing spatial and urban planning time-consuming and ineffective.
- The lack of recording and defining protected areas (forests, archeological sites, streams, the seashore, etc.).
- The lack of organized spatial areas for productive activities.
- Conflicts in land uses.
- Frequent changes in regulations for the establishment of productive activities and the occurrence of permits that risk being contested because they are based on unconstitutional laws.

D. Legal and administrative malfunction[33]

A general legal and administrative malfunction opposes the principles of sustainable development and undermines business competitiveness:

- Over-regulation and complex administrative procedures facilitate contradictory interpretations, lack of transparency and a "legal-like" bypass of the existing provisions.
- Poor staffing and computerization of the competent services make it difficult for the state to adequately perform controls and impose sanctions.

3. A critical analysis of the new framework

In the statements of reasons of the legal provisions examined for this article (Annex 1) the intended strategy is the formation of a "reforming" framework, which has the following objectives:

- To create an investment-friendly environment; to simplify and accelerate processes; to form a clear and stable framework for siting and environmental licensing that promotes large investments.
- To attract large tourist investments and, at the same time, decrease the dispersed tourist buildings by encouraging organized tourist areas.
- To introduce tourist products and infrastructure that the country lacks, in relation to the "tourist residence".
- To utilize public property (and repay public debt).

During the period of reference, there was exponential activity in legislating the domains in question. As for the issue in question, 26 laws and legislative decrees were voted with the initiative of the competent ministries (Annex 1) and a large number of presidential decrees, joint ministerial decisions and ministerial decisions were issued, which proves that, under the pressure of our MoU obligations and the prerequisite actions demanded, the relevant legal texts were changing every day. The analysis of the aforementioned legal provisions reveals two contradictory directions: a) a reforming rationale based on the objectives described above and b) the reinforcement of the existing pathologies which undermine competition. Specifically:

3.1. Initiatives according to a reforming rationale

The stages for receiving loans was reduced from 6 to 3 (Table 3, see p. 48), having the restriction of state inspection for environmental and construction permits.[34] For small businesses –which constitute 85% of total enterprises[35]– the process is further simplified with the introduction of the Environmental Standards Commitment.[36] Finally, inspection and certification was transferred from public services to individuals, such as the inspection of ongoing constructions for new buildings[37] as well as hotel classification.[38] Large investments are facili-

30. SEV 2014.

31. The Greek Ombudsman 2004.

32. SEV 2014.

33. The Greek Ombudsman 2004.

34. Through a combination of legal acts and, mainly, L4014/2011, L4030/2011 and L4276/2014.

35. http://www.ypeka.gr/LinkClick.aspx?fileticket=JZXU2DEf7Q8%3D&tabid=37&language=el-GR.

36. Following MD1958/12 (Environmental Standards Commitment in Tourism) which was issued based on L4014/2011, the entrepreneur automatically assumes responsibility for observing the provisions.

37. Following L4030/2011, the responsibility for building permits lies with the designer engineer and the control with the construction inspector who is a private sector engineer.

38. Following L4276/2014, classifying tourist accommodation passes from GNTO to the Hellenic Chamber of Hotels (HCH).

tated by creating "one-stop shops" such as Enterprise Greece[39] and special mechanisms, such as *Strategic Investments,*[40] a special privileged framework for strategic investments. The Hellenic Republic Asset Development Fund (HRADF)[41] was established to utilize public property. New products were introduced (such as *mixed use resorts*[42]) and spatial planning tools were established by special town and spatial planning laws in order to create large tourist investments (*Special Plans for Spatial Development of Public Properties* [*ESCHADA*][43] and *Special Plans for Spatial Development for Strategic Investments in Private Real Estates [ESCHASE*])[44]. At the same time a Spatial Planning Framework on Tourism,[45] which gives priority to large scale organized facilities, was approved.

*Mixed Tourist Resorts we*re introduced by L4002/2011 as a separate accommodation category, but practically operate as a hybrid between an organized spatial area and a tourist product. They are sited on a land plot of 150 to 800 stremmas and include a 5* hotel, special tourism facilities and tourist residences that can be leased or sold. The process is managed by the Ministry of Tourism. Eleven proposals[46] have been submitted so far for the construction of mixed use resorts, 4 of which (in Kea, Milos, Ios and Lakonia) are at an advanced stage of construction (they have received the approval of environmental terms and conditions and the Decision for the development of the mixed use resort has been issued [see Annex 2]).

The framework for Strategic Investments. Any investment with strategic importance according to the provisions in force is characterized as a "Strategic Investment". The process is initiated by the Ministry of Development. Data of the Ministry of Development[47] show that until the end of 2014 three investment proposals for Strategic Investments of a total estimated budget of €1,408.6 million have been included in the process (see Annex 2).

3.2. Reinforcing existing pathologies which undermine competition

A series of regulations perpetuate the ongoing stretching of the limits for legalizing existing illegal buildings of any use, such as LM4014/11 & L4178/13 on "legalizing" illegal constructions, and, more recently, L4315/2014[48] extending the possibility to legalize encroachment of forests. Up until October 2014[49] the applications for inclusion in the provisions of L4014/11 & L4178/13 are more than 700,000, which is estimated to represent more than 41 million m^2 of construction. It is estimated that the process of "legalizing" such illegal constructions has brought to the state €2.4 billion.

Preserving constructions outside urban zones and a number of beneficial provisions for small accommodation units (direct permit without inspection, legalizing extra constructed areas, i.e. increasing the space to be exploited, siting without restrictions) has brought an incredible increase in accommodation of this category. In 2014 alone, 3783 self-serving units have been accredited around the country.[50]

Finally, until the end of the period of reference, many delays and omissions have preserved complex issues which are important for investments. The lack of a forest register and seashore recording result in a large part of the Greek territory remaining in a gray zone. Delaying the completion of the real estate register preserves unclear real estate property ownerships, creates obstacles to their productive use and becomes the reason for many court conflicts.[51]

3.3. Commenting on the current framework based on the set criteria

Regarding the effectiveness of the new framework and its consistency to the goals set, we believe that the aim *to*

39. L3894/2010.

40. L3894/2010, L3986/2011, L4072 /2012, L4146/2013.

41. L3986/2011.

42. L4002/2011.

43. L3986/2011.

44. L4146/2013.

45. Special Framework for Spatial Planning in Tourism (EPCHSAA), OG Issue No 3155/B/2013.

46. Source: Ministry of Tourism.

47. http://www.investingreece.gov.gr/default.asp?pid=173&la=2.

48. See the related WWF statement "Ministry of Environment, Energy and Climate Change – Ministry of Limited Responsibility & Encroachment", http://www.wwf.gr/news/1337-2014-12-09-14-00-01.

49. http://portal.tee.gr/portal/page/portal/INFO_TEE/INFO_2014/oct_2014/NEWSLETTER20141013.pf.

50. Data taken from the Ministry of Tourism.

51. Taken from the speech of the former Chairman of the Council of State, Mr. K. Menoudakos, at the WWF workshop for a "Living Greek Economy", 2014.

TABLE 4 Characteristics of Mixed Use Resorts

Provisions for the development of mixed use resorts:	Advantages of mixed use resorts:
• A land plot of 150-800 stremmas is necessary • A 5* hotel, special tourism facilities and tourist residences should be included	• Simpler and faster process than the process used for organized tourist hosts (P.O.T.A., areas under special zoning regulations, etc.) • Simpler and clearer process than the process used for Strategic Investments • Possibility to sell part of tourist residences (30% to 70% according to the construction coefficient from 0.5 to 1.5) • Possibility to be located anywhere, following the Special Framework for Spatial planning in Tourism • Location of residences at a distance of 10 meters from the seashore

TABLE 5 Characteristics of Strategic Investments

Provisions in order to be included as a Strategic Investment:	Advantages of Strategic Investments:
• The investment should have a minimum cost of e.g. €100,000,000 or it should create a specific number of jobs, e.g. more than 150 jobs.	• Seashore use concession without a tender • Possibility for special construction and spatial planning bypasses through ESCHASE and ESCHADA • Larger opportunities for utilization and sales than in mixed use resorts • Possibility to establish tax motivation • Possibility for forced expropriations • File management by Invest in Greece, as the only contact point between the investor and the State • Granting administration permits within 45 days (not yet implemented)

attract new large investments seems to have been satisfied to an extent, since the new tools have offered the possibility to introduce investment proposals on products that did not exist in the Greek market to date (Annex 2). However, the larger part concerns "stuck" cases rather than new proposals.[52] On the contrary, the aim to reduce dispersion in tourism constructions has not been fulfilled, which was rather expected since the current framework –as concluded by the results– benefits small and very small tourist units.

We see that the applied policies recognize tourism as an essential factor for economy and growth. At the end of the period of reference and through a series of corrective provisions that reinforced *consistency* of partial policies, a rather coherent strategy has been created among the competent bodies (Ministry of Town Planning, Development and Environment, Ministry of Tourism and Ministry of Development), which was positively received by tourism professionals. However, certain choices of development directions did not ensure stability for investors.[53]

52. Sarantakou E., 2013.

53. WWF Hellas submitted a petition for the annulment of the Special Framework for Spatial Planning in Tourism to the Council of State in February 2014. The main reason given for the petition concern provisions which allow the creation of organized areas for tourism activities in areas that are included in the Natura 2000 network, among which are very small islands (<300 meters). A petition for annulment was also submitted by other bodies and environmental organizations, such as the Hellenic Society for the Environment and the Cultural Heritage, as well as the Municipalities of Kimolos and Lipsos.

The aim to *simplify the licensing process* has also been achieved, as the analysis shows. The political choice to reduce state inspections and introduce private classification and inspection shall be tested at a medium term. However, for the new framework to work, the state mechanisms must be given the chance to work in this direction. The aim is not to minimize the time needed by the administration to work on the complex matters related to the various investment projects, but to provide it with the tools to address the matters in a credible way.[54]

Preserving a vague property ownership framework (delays in real estate register) and land use (definition of forests and the seashore), as well as the lack of a wider consensus and the ongoing increase in case-specific and sporadic regulations,[55] do not form a clear and stable environment.

Unfair competition between lawful and unlawful investors is created by including thousands of "legalized illegal buildings" with privileged financial terms in the market of holiday and tourist residences, without any essential inspection of their siting and their quality, as well as the ongoing toleration of the Greek state on the encroachment of its property.

4. Conclusions

A critical analysis of the new framework for the creation of tourism investments formed in the period 2010-14 leads to the conclusion that the policies implemented are consistent to their objectives and try to attract large tourism investments, as well as to promote the creation of tourist products and facilities that the country has lacked to date, by making the development of "tourist residence" a priority.

The aforementioned strategy was based on the need for reform in spatial planning and developmental policies and it was connected to the investment initiatives and proposals of the Greek banks and bodies of the Touristic and Industrial sectors. Moreover, the MoU directly or indirectly supported the simplification and acceleration of investment licensing. However, it is concluded that, for the moment, some practices which enforce existing pathologies and undermine the effort to create a clear investment environment endure.

Bibliography

Alpha Bank – Economic Bulletin, 2006, *Holiday residence and spatial planning* (in Greek).

Avgerinou S, Spuropoulos I., Toufeggopoulou A., 2013, *Tourist residence and its institutional consolidation in Greece,* ERSA GR 11^{o} Annual Scientific Conference, 2013 (in Greek).

Bank of Greece, 2014, Sectoral study: *Land use and Tourism* (in Greek).

Giannakourou G. and Kafkalas G., 2014, "Reevaluating spatial planning in the time of economic crisis: necessity, content and provisions for the reform", in Masourakis M. and Gortsos Ch., (ed.), *Competitiveness and Growth: proposals for policies*, Athens, Hellenic Bank Union, pp. 511-522 (in Greek).

Greek Ombudsman, 2004, *annual report* (in Greek).

Ikonomou D., "The System of Spatial Planning. 2000, The Greek reality and the international experience"*, Social Research Review,* Issue 101-102, Athens, pp. 3-58 (9) (in Greek).

Ikonomou D., 2008, "Worldwide systems of spatial planning today: a comparative review" in Gospodinis A. (ed.), *Dialogues for space planning and development,* Athens, Kritiki: 171-198 (in Greek).

Klambatsea E., 2012, *Space planning as a means to manage the crisis in Greece*, Minutes of the 3rd Pan-hellenic Town Planning and Regional Development Conference, Volos (in Greek).

Kokkosis Ch., Tsartas P., Griba E., 2011, *Special and alternative forms of Tourism, Demand and offer of new tourist products,* Kritiki Editions (in Greek).

Mitraki E., 2007, *Tourist residence in Greece. Problems and perspectives.* Final paper for the Hellenic School of Administration (in Greek).

NTUA, 2011, Meeting on the Economic Conditions and Spatial Planning in Tourism, *Minutes of the Meeting,* Athens: Propobos Editions (in Greek).

Research Institute for Tourism, 2008, *The image of hotels in Greece. The need for change in the policies for investment incentives,* Athens (in Greek).

Research Institute for Tourism, 2011, *Developments in Basic Figures of the Greek Hotel Market during 2010-2011,* Athens (in Greek).

Sarantakou E., 2013, *Large tourist investments. Applying the New Licensing Framework*, speech at NTUA.

54. It is still early to judge the acceleration of processes, since time is needed for the adjustment of the administration to the new framework. This is a period of time to have all necessary corrective regulations that would solve possible administrative malfunctions.

55. For example, after the initial provisions for *Mixed Use Resorts* in L4002/11, a series of changes and additions to the product (as amendments put in laws that followed) were introduced in order to adjust it to the existing investment proposals.

Sarantakou E,. 2010, *Mature tourist destinations. Evolution and possibilities to transfer to a sustainable model of summer-cultural tourism. The Greek case,* PhD thesis for the National Technical University of Athens, Department of Architecture, Town and Spatial Planning (in Greek).

Sarantakou E., 2009, *Investigation of the impact of state policies on the development of Greek tourism destinations under the existing institutional framework. The case of the island of Aegina*, 4th International Scientific Conference, University of the Aegean.

SETE, 2011, Greek Tourism 2020: A proposal for the new development model (in Greek).

SEV, 2010, *Enterpreneurship without obstacles, 30 domains of action to create an investment friendly environment, Dialogue Plan,* Athens (in Greek).

SEV, 2014, *The National System for Spatial Planning in the perspective of entrepreneurship*, Athens (in Greek).

Souki S., 2008, "The holiday residence can bring 150 billion euros to Greece", in the Electronic magazine *Tourism* (in Greek).

Tsartas P., 2010, *Greek Tourist Development, characteristics, inquiry, proposals*, Kritiki editions (in Greek).

Tsartas P., and Lagos D., 2013. *Critical Evaluation of the Greek Tourism Policy. European Socio-Economic Integration, Innovation, Technology, and Knowledge Management Springer*, (28), pp. 203-221.

Tsartas P., Papatheodorou A., 2013, *Greek Tourist Product pathology and the Effort to Upgrade it*, EMEKA Meeting (in Greek).

Tsartas P., Papatheodorou A., Lagos D., Sigala M., Christou E., Spilanis I., and Stavrinoudis Th., 2010, *The significance of tourism for the Greek Economy – society and policy proposals for tourism development,* A study sponsored by the Greek Tourism Confederation - SETE (in Greek).

Vagionis N., 2014, "Luxury tourism in Greece: Significance and possibilities", in *Greek Economy*, Issue 11, November 2014, pp. 38-48 (in Greek).

Vagionis N., Kassimatis E., Kafourou B., 2011, *Luxury hotels in Greece. Dynamics and development perspectives.* Center of Planning and Economic Research, report No 66 (in Greek).

ANNEX 1

Laws issued during the period 2010-2014, which formed the new framework for the development of tourism investments L3843/2010 (OG ISSUE NO 62A/28.04.2010)

1. L3852/2010 (OG ISSUE NO 87A/ 07.06.2010)
2. L3882/2010 (OG ISSUE NO 166A/22.09.2010)
3. L3889/2010 (OG ISSUE NO 182A/14.10.2010)
4. L3894/2010 (OG ISSUE NO 204 A/2.12.2010)
5. L3986/2011 (OG ISSUE NO 152A/01.07.2011)
6. L3937/2011 (OG ISSUE NO 60A/31.03.2011)
7. L4002/11 (OG ISSUE NO 180A/22.08.2011)
8. L4014/2011 (OG ISSUE NO 209A/21.08.2011)
9. L4030/2011 (OG ISSUE NO 249A/25.11.2011)
10. L4046/12 (OG ISSUE NO 28A/14.02.2012)
11. L4049/2012 (35 A/23.02.12) – Chapter 4
12. L4067/2012 (OG ISSUE NO 79 A/09.04.2012)
13. L4070/2012 (OG ISSUE NO A 82/10.04.2012), Section 5, ch. 2
14. L4072/2012 (OG ISSUE NO A 86/11.04.2012)
15. L4092/12 (OG ISSUE NO 220A 8/11/2012)
16. L4117/2013 (OG ISSUE NO A 29/05.02.2013), article 2, par. 6 & 7
17. L4146/2013 (OG ISSUE NO A 90/18.04.2013)
18. L4179/2013 (OG ISSUE NO A 175/08.08.2013)
19. L4242/2014 (OG ISSUE NO A 50/28.02.2014)
20. L4258/2014 (OG ISSUE NO 94 A/14.04.2014)
21. L4262/2014 (OG ISSUE NO 114 A/10.05.2014)
22. L4269/2014 (OG ISSUE NO 142 A/28.06.2014)
23. L4276/2014 (OG ISSUE NO 155 A/30.07.2014)
24. L4280/2014 (OG ISSUE NO 159 A/08.08.2014)
25. N. 4315/2014 (OG ISSUE NO 269 A/24.12.2014)

ANNEX 2

Large tourism investments that are at an advanced phase of licensing at the end of 2014.

They are at the stage of the issue of a Joint Ministerial Decision, following the process for Mixed Use Resorts:

- The Mixed Use Resort in Kea "Kea Resort" which includes a hotel of 350 beds, thallasotherapy facilities and tourist residences on an area of 645 stremmas (645,000 m^2) located at Vroskopos in Kea. The Joint Ministerial Decision for its creation has already been issued and the project is now at a stage waiting for the architectural permit to be issued.
- Mixed Use Resort of 216 beds in Milos with tourist residences and spa facilities on an area of 450 stremmas (450,000 m^2) in Milos, property of Axsite Agricultural Tourism Company. The Joint Ministerial Decision has been issued.
- Mixed Use Resorts in Magnisia, Ios and Achaia at a stage waiting for the JMD to be issued.

Following the process of Strategic Investments, so far the following projects have been included:

- ITANOS GEA in Crete, having a total capacity of 1,936 beds and golf facilities. Its inclusion to the Strategic Investments has been approved (12/12) and a Special Plan for Spatial Development of Public Properties (ES-

CHADA) has also been approved (10/13). Estimated budget: 267.7 million euros.

- PRAVITA ESTATE, a Mixed use resort in the Municipality of Poligiros, Chalkidiki. Its inclusion to the Strategic Investments has been approved (10/13). Estimated budget: 796 million euros.
- "KILADA HILLS" in Kilada, Prefecture of Argolida, for the creation of a luxury holiday-tourist village which includes a 5* hotel, golf course and golf club. Its inclusion to the Strategic Investments has been approved (10/13). Estimated budget: 344.9 million euros.

The determinants of Greek exports: Analysis of the effects of international demand and domestic competitiveness on the Greek sectoral exports*

Platon Monokroussos**,

Dimitrios Thomakos*

Summary

In this paper we present some empirical results of a large study on the determinants of Greek exports. Using new data on international demand and domestic competitiveness, the real exchange rate, and other qualitative and quantitative indicators of competitiveness, we consider the effects on exports of changes in their determinants. The analysis results show (a) the sectoral differences in estimated elasticities of the determinants and allow a better understanding of potential changes we can expect in future exports and (b) a series of applicable proposals in export economic policy.

1. Introduction

Growth prospects of the Greek economy, in the post-crisis period in which we hope we are now, appear inextricably linked with a variety of structural changes at economic and social levels. One of these changes is the reorientation of the commercial activity of the country with emphasis on exports, which, to many people, can be an important supporting factor for a new development attempt.

Greece was always a country with strong commercial attributes which varied over time depending on the prevailing economic and social circumstances. During the last decade, there was a significant increase in imports which fueled mainly private consumption. With the onset of the economic crisis, the fall in demand and the changes in the productive structure of the country, the significant role of Greek exports comes to the fore. Note that in the pre-crisis period, Greek exports were several orders of magnitude smaller than imports –hence the problems with the trade balance of the country.

In order to get a fuller picture of how exports could be rendered as the driving force for economic growth, we have to consider their defining factors and their progress across time. A study in both global and sectoral levels is needed for understanding the different paths that export sectors react to changes in their determinants. In order to exert an effective export policy, one must additionally comprehend the concept of induction through the implementation of the appropriate econometric models. This article summarizes the results of a new study on the determinants of Greek exports.

This study has two important novelties compared with prior Greek and foreign literature studies. First, we use new, monthly data (which were not available prior to analysis) by ELSTAT for a time period between 1998 and 2013 based on the coding SITC (Standard International Trade Classification). Secondly, we use new data to measure the international demand and competitiveness of the Greek economy. Third, and most important, we use, for the first time to the best of our knowledge, a number of determinants of competitiveness factors not related to the relative prices of products. These factors include: quality of governance and market operation indicators, procedures for initiating business, business access to bank loans and many other similar quality indicators of Greek competitiveness. In the following, we elaborate on these indicators as well as our methodology and the analysis/discussion of the conclusions drawn from it.

2. Research Data: Sources and transformations

The data we hold for nominal exports, expressed in values, refer to eight sectoral categories of the SITC classification and the aggregated categories of total industrial and total non-industrial exports. Moreover, we have an additional aggregate export category, that of total exports excluding mineral fuels and related products. For the construction of the time series of real exports, the above nominal series are deflated by the overall producer price index for exports, they are expressed in logarithmic values and have undergone seasonal adjustment. The data on exports and the producer price index for exports are from ELSTAT. For the presentation of foreign international demand we constructed a new index based on the real GDP of the 37 largest trading partners covering most of the export activity of the country. The index uses the weighted real GDP according

* This study is based on results from the presentation entitled «Competitiveness, extroversion, incentives and disincentives for Greek exports» in the workshop Greek Exports Convention of Eurobank on 26/11/2014. Any errors or omissions are attributed to the authors.

** Deputy General Manager and Chief Market Economist, Eurobank.

*** Professor of Applied Econometrics, Department of Economics, University of Peloponnese and Senior Fellow, Rimini Center for Economic Analysis, Rimini, Italy.

to the relative commercial significance of each partner. These partners are the economies of EU 28, Australia, Canada, Japan, Mexico, New Zealand, Norway, Switzerland, Turkey and the USA. The original data were quarterly and were preferred instead of monthly international demand indicators data for a more complete picture. In contrast to indicators that refer exclusively to a product, a GDP-based index reflects the potential, and not only the realized, exports. The quarterly data were converted to monthly with cubic interpolation[1] and their annual rate of change (as seasonal difference of logarithms) was also calculated.

To present domestic price competitiveness, a new index was also constructed based on the actual exchange rate (weighted by consumer price indices) using 138 trading partners with monthly data. For domestic price competitiveness a broader index was preferred, for the same reason as GDP was preferred instead of a simpler index on international demand. The use of more trading partners for the construction of the real exchange rate of the international demand reflects two factors: on one side, the importance of the size of the markets where exports are targeted (where a large proportion of exports go to a smaller number of trading partners), and, on the other hand, the importance of increased commercial competition for Greek exports through access to more markets (markets which perceive the increase of Greek competitiveness and see potential commercial partnerships). As in the variable of international demand, here as well the final variable for domestic price competitiveness used in the models was the annual change rate of the real exchange rate.

We note that our variable selections for global demand are not the only ones we could have chosen. For example, for the domestic price competitiveness we could make use of the real exchange rate weighted by unit labor costs or with a different trading partner's composition. The time series rows have been preferred both for their economic foundation and their *ex post* statistical reliability, while other indicators used do not give results that are reliable between export sectors and in indices combinations in models.

These variables are those traditionally analyzed as determinants of exports in appropriate models for export demand (e.g. Anderson and Wincoop [2003], Athanasoglou and Bardaka [2008] and references therein), and consist of the reference variables in this analysis. But one of the problems encountered and constantly discussed for Greece is the lack of competitiveness, not on price but on structural changes and other competitive factors not contained in the real exchange rate. The screening of these respective variables of competitiveness has never been done, as far as we are concerned; nevertheless, it is important to examine this, especially after the crisis where changes in domestic demand and wage reductions significantly improved the competitiveness of the real exchange rate; but this is not the case for changes in other more qualitative factors of competitiveness. We collected several data sets for such factors that affect Greek competitiveness, and hence the potential Greek exports, and analyzed them by including them in relevant models that make use of international demand and the real exchange rate. In our analysis we included governance variables such as political stability, quality of governance, control of corruption and competitiveness variables such as the efficiency of product and labor markets,[2] innovation, the size of the domestic market, etc. In addition, we included relative competitiveness variables for the EU, such as ease of access to bank credit, ease of payment and the amount of taxes, investor protection, ease of starting a new business, etc; and finally, indicators of performance of exports such as indicators of exports concentration, indicators for Foreign Direct Investment (FDI), indicators for the output of high tech products, etc.

These data series all have annual frequency and, unfortunately, cannot be used in monthly data models. We implement necessarily interpolation methods to turn them into monthly data. For this purpose instead of traditional methods of direct interference, a gradual approach was preferred: initial annual series were converted gradually to biannual, quarterly and eventually to monthly series by successive application of interference at every stage. In this way we ensured that it (a) retained the annual trend (and generally the central tendency of each final monthly series in relation to direct interference) and (b) there is sufficient volatility for use together with other monthly data (i.e., more than with direct interference).

The time series for the international demand, the real exchange rate and other competitive factors mentioned above are derived from a combination of sources (AMECO, IMF, UNCTAD, ELSTAT).

3. Research methodology

The starting point for our empirical analysis is obvious qualities and characteristics of the export time series

1. There are several methods of interpolation for data transformation.

2. These measures derive from the World Competitiveness Report of the World Economic Forum and are associated with various measurements in terms of functions of labor and product markets (e.g., structures and wage contracts, tension and competition policies, etc.).

we use. Two of these properties exist for all time series of real exports: first, there is a strong linear trend and, secondly, this trend is reversed after the crisis of 2008. In addition, the above-mentioned time series show a relatively narrow range of variance. These properties, in combination with appropriate statistical tests, enable us to analyze the time series at their initial levels (logarithms) rather than in a transformation of them. This observation for the time series is important because it indicates that the average performance of exports, before the crisis, followed a rather deterministic trend (with different slopes per sector) which was interrupted and changed (different, again, by sector) after the crisis. We make use of this observation and create models that take into account these changes in the average trend of exports, to assess more accurately the effects of other stochastic factors, such as international demand and price competitiveness.

Our basic models use four factors for the actual export as reference factors: the general deterministic trend of exports and its change after 2008, the annual percentage change in the index of external demand and the corresponding annual percentage change in the index of price competitiveness (or cost work). In these key factors, we add and specify the remaining qualitative competitiveness factors as described in the previous section. The estimates of coefficients referred to the trend in external demand and price competitiveness are expressed as elasticities and measure the average percentage change in real exports per unit percentage change of the respective factor. These elasticities are a guide to understanding the behavior of exports in changes in international demand and domestic competitiveness. Estimates for the variables of the previously discussed qualitative factors of competitiveness are expressed either as elasticities or as semi-elasticities, but in these factors we give more importance to the sign of the estimates rather than the absolute magnitude of their effects.

The regression models estimated for export sectors are checked for their qualitative features so as to render them reliable for further induction regarding real exports progress. We believe two of these tests are the most significant: the first one is a specification test for the presence of dynamic conditions in the models and the second is the specification test concerning the stability of the coefficients of the models related to international demand and domestic price competitiveness. The first specification test enables us to understand whether: (a) the trend together with stochastic factors explain adequately the volatility of exports or whether exports of prior periods need to be added (lags), and (b) changes in international demand and domestic price competitiveness conditions affect directly or with a time lag the corresponding export sectors and, if so, what is the lag for the exports response time per sector. Our second test is helpful to understand if reference factors affect export in a stable manner, on average, or exhibit significant structural changes in their respective elasticities.

4. Summary of results

The analysis results are summarized in Tables 1 and 2. In the first table we have estimates of the respective elasticities of exports on the international demand and the real exchange rate in the short and longer term, the estimates of the lagged response of exports on the international demand and the real exchange rate and estimates of trend elasticities – all estimates presented in the table are statistically significant at least at 5% significance level. Table 1 also presents the explanatory power R^2 of each model. Table 2 shows those qualitative competitiveness variables found to be statistically significant (also at least 5% significance level) in addition to the variables in international demand and the real exchange rate.

The results of the estimates in Table 1 show that, with the exception of the sectors of food and beverages, all sectors are affected by the expected sign of both international demand and the real exchange rate. The two above sectors are affected only by the actual rate. Moreover, we note that apart from the sectors of animal/vegetable fats and raw materials, all sectors show a significant trend either throughout the time period of the sample or before and after the crisis of 2008. In some areas, the positive trend before the crisis disappeared after the crisis, while in other sectors the positive trend became negative.

The observation of estimated elasticities, and the lagged reactions to changes in explanatory variables, allows us to have a sense of how exports will –on average– change if the conditions of international demand and/or the real exchange rate change. Starting from the estimates of lagged responses, we see that their responses are similar to both international demand and the real exchange rate –except in the sectors of raw materials and various exports where the estimates for the lagged response in international demand is greater than in the exchange rate. Also, notice that the estimates of lags not exceeding three months are about 70% of all the sectors analyzed and therefore the respective sectors react relatively faster to changes in demand and the exchange rate.

It is interesting to see which sectors have the highest and (longer) elasticities of demand and exchange rate. The sectors of animal/vegetable fats, the other export sector and the fuel sector have higher elasticities of demand. The higher flexibility in the real exchange rate, respec-

tively, is shown again in the sectors of animal/vegetable fats and fuel, as well as the sector of drinks and refreshments. Moreover, we observe that the sector of total non-industrial exports shows greater estimated elasticities with respect to the total industrial exports sector. Finally, for all exports, other than fossil fuels and related products, we discern that the estimate coefficient of long-term flexibility on the international demand is practically unit with the corresponding estimate for the real exchange rate at one third of the estimate on demand.

Finally, it is worth mentioning that the estimated models have high statistical explanatory power on changes in real exports. With the exception of the sector of raw products, all models have an explanatory power over 40%, in 8 out of 13 categories of exports which are presented in Table 1, the explanatory power is more than 60%, while in 5 out of 13 categories more than 75%.

The fact that these models explain a large proportion of the variability of exports in conjunction with all other specification tests, which are not presented here,[3] enables us to observe how reliable these models are to future changes in demand and in the exchange rate.

The results in Table 2 are also interesting in terms of statistically significant variables, besides the reference variables, which are referred to in Table 1. Note that all the above variables were or are under discussion and negotiation for structural markets, which could conditionally benefit exports.

A comprehensive look at Table 2 shows that we have essentially two groups of qualitative characteristics of competitiveness which may be useful for Greek exports. The first group refers to characteristics related to procedures: procedures concerning the opening of a business, trade dispute procedures, processes (and size) for the payment of taxes on businesses and the quality of the regulatory framework. The second group refers to characteristics of the economy and markets: size of the domestic market, access to bank credit, the technological value of exports, the concentration of exports and related FDI.

This is the first time, at least for the exports issue, that the characteristics of both groups of variables (although much debated) are documented empirically. The results show that a potential further increase in exports will require not only simplified procedures, tax breaks and better regulatory framework, but, most significantly, a redirect in exports of high-tech products and increased concentration through economies of scale.

5. Conclusions and policy recommendations

The problem of the increase in exports, as a factor for a country's growth rate, is obviously multidimensional. However, economic theory suggests international demand and domestic price competitiveness are the two most critical factors affecting exports. With this perspective, in this paper we presented a series of empirical results to answer how much and in what way changes in international demand and domestic competitiveness are likely to influence future Greek exports at total and sectoral levels.

Our results show that international demand has, on average, greater elasticity to exports than to domestic competitiveness –both throughout the economy and the sectors examined. This shows, on one hand, the importance of an international development and increased demand for the absorption of Greek products, especially when there has already been a large increase in the domestic price competitiveness through internal devaluation and the consequent reduction in the real exchange rate. Moreover, we find that a number of qualitative domestic competitiveness factors are potentially important for the future of exports –perhaps most important of the two aforementioned, since these latter qualitative factors are related to structural changes in the Greek economy.

Based therefore on the results of the study, a number of policy proposals arise as a consequence of our analysis. For example, regarding the issue of demand needed:

1. Demand-side policies should be reconsidered, especially in the countries of the European North. Without such policies, in Europe and elsewhere, it is futile to expect absorption of Greek exports. There must be a planned, possibly selective, removal of austerity policies.
2. Proper design and implementation of the new ambitious 3-year investment plan amounting to €300 billion from the European Commission and the appropriate use of tools for redirecting funds to southern Europe (EIB, private equities, financial system).
3. Strengthening the investments plan for the country, especially in areas of infrastructures that will help the export business activity.
4. Strengthening employment prospects with targeted incentives to industries with export potential.

3. Available upon request.

TABLE 1 Estimates of the average trend and average response of exports to changes in international demand and in real exchange rate

Sector	Trend	Trend before 2008	Trend after 2008	Short-term response of international demand	Lag of exports response on international demand	Long-term response of international demand	Short-term response of real exchange rate	Lag of exports response on real exchange rate	Long-term response of real exchange rate	R^2
Food and stock farming	NA	0.0009	NA	NA	NA	NA	-0.4400	3	-1.2571	57%
Drinks, Beverages and tobacco	-0.0020	NA	NA	NA	NA	NA	-2.5100	1	-4.0484	42%
Animal and vegetable oils, fats and waxes	NA	NA	NA	2.9700	7	9.9000	-2.0300	7	-6.7667	66%
Products and services, except SITC	NA	0.0100	NA	6.1300	1	6.1300	-2.1300	1	-2.1300	54%
Fossil fuels, lubricants and relevant products	NA	0.0060	NA	1.7400	1	5.1176	-1.4700	1	-4.3235	91%
Total non-industrial products	0.0013	NA	NA	0.7500	1	2.8846	-0.4900	6	-1.8846	88%
Raw products, excluding fuel	NA	NA	NA	1.3600	6	2.4727	-0.4100	3	-0.6949	28%
Industrial products per category of production	NA	0.0030	NA	1.5100	2	2.2206	-0.2800	2	-0.4118	67%
Production and transportation equipment	NA	0.0037	-0.0060	2.0300	4	2.0300	-0.8200	4	-0.8200	42%
Total industrial exports (SITC 5-8)	NA	0.0032	-0.0033	0.9500	1	0.9500	-0.2600	1	-0.2600	77%
Total exporting products besides fossil fuels, lubricants and relevant products	NA	0.0027	-0.0019	0.8800	3	0.8800	-0.2800	3	-0.2800	69%
Various Industrial Products	NA	-0.0038	-0.0048	0.7800	8	0.7800	0.9000	1	0.9000	95%
Chemical Products	-0.0050	0.0157	0.0090	0.6100	1	0.6100	0.3500	1	0.3500	91%

Notes:

Trend: the estimate for the average monthly trend of exports in the entire sample.

Trend before 2008: the estimate for the average monthly trend of exports before October 2008.

Trend after 2008: the assessment of the average monthly trend of exports after October 2008.

Short-term response of international demand/real exchange rate: The short-term expected elasticity of international demand/real exchange rate.

Lag of exports response on international demand/real exchange rate: The expected number of months needed for short-term response of international demand/real exchange rate.

Long-term response of international demand/real exchange rate: The long-term expected elasticity of international demand/real exchange rate.

R^2: Coefficient of determination.

5. Accelerating real convergence between the EU countries.

Regarding domestic competitiveness, we could say the following:

1. There is little positive impact for export industries to further reductions in the real exchange rate and enhancing price competitiveness; not all branches should react the same way to such further reductions.
2. Additional competitive advantages for Greek exports need to be created. For example:
   a. Increase the market size and the degree of concentration in exports sectors by promoting strategic partnerships (intra-industry and inter-disciplinary through mergers & acquisitions) to generate economies of scale. Such economies of scale will enhance the power of Greek export enterprises and facilitate their access to international markets.
   b. Enhance domestic production structures for import substitution, as these structures will not only meet the domestic needs, but will operate on multiple levels (in development, products and value added) for export industries without necessarily competing with them.
3. Enhance the technological content of exports, in conjunction with the restructuring of the research and development at company and national levels.
4. Strengthen export sectors with high added value, as these industries can fill existing gaps in competitiveness more quickly and easily.
5. Strengthen the banking system further to support healthy businesses with new credit and lower borrowing costs.
6. At the same time, distribute important paperwork and information/education of business establishments about export procedures.
7. Improve the business environment by fighting corruption, simplifying the tax system, and reducing taxes.
8. Continuously emphasize the development of human capital while upgrading the quality and effectiveness of political institutions.

Only time will tell if proposals like these will have a positive effect on efforts to increase exports and revive the economy.

TABLE 2 Competitiveness variables, except real exchange rate, which potentially affect exports

Jointly statistically significant variables

Market size: It measures the size of the domestic market on the basis of the relative value of imports and exports in terms of purchasing power.

Starting a business procedures: It measures the time, cost and number of procedures required to start a new business.

Access to bank lending (getting credit): It measures the availability, quality and accessibility of information from lenders to borrowing businesses.

Procedures for taxes (paying taxes): It measures the amount of taxes and levies on a medium-sized enterprise and the time, cost and number of procedures for their payment.

Procedures for resolving trade disputes (enforcing contracts): It measures the time, cost and number of procedures required to resolve commercial disputes in courts.

Statistically significant variables

Technology content of exports: Index that measures the production of manufactured goods of high and medium-high technology as a percentage of the total manufacturing output of Greece in relation to the EU-27 and the German index.

Export concentration index (Herfindahl-Hirschman concentration index): Index that measures the degree of market concentration. In this study, this indicator shows whether exports goods of Greece to the EU-27 countries and the world are focused on certain products or alternatively distributed more homogeneously among a series of products.

Relative index of attracting FDI: Ratio of stock of foreign direct investment in Greece (% of GDP) to the stock of foreign direct investment in the EU-27 (% GDP).

Quality of regulatory framework: Index which measures the perception of the ability of the authorities of a State to formulate and implement sound policies and regulations that promote private sector development.

References

Anderson, J.E. and Van Wincoop, E. (2003): "Gravity with Gravitas: A Solution to the Border Puzzle", *The American Economic Review,* Vol. 93/No. 1.

Athanasoglou, P. and Bardaka, I (2008): "Price and Non-Price Competitiveness of Exports of Manufactures", Bank of Greece Working Paper, 69.

Athanasoglou, P., Backinezos, C., and Georgiou, E. (2010): "Export Performance, Competitiveness and Commodity Composition", MPRA Paper, No. 31997.

Athanasoglou, P., Backinezos, C., and Georgiou, E. (2010): "Export Performance and Commodity Composition", Bank of Greece Working Paper, 114.

Bayoumi, T., Harmsen, R., and Turumen, J. (2011): "Euro Area Export Performance and Competitiveness", IMF Working Paper, 11/140.

Bower, U., Michou, V. and Ungerer C. (2014): "The Puzzle of the Missing Greek Exports", European Commission DG for Economic and Financial Affairs, Economic Papers, 518.

Ca' Zorzi, M. and Schnatz, B. (2007): "Explaining and Forecasting Euro Area Exports. Which Competitive Indicator Performs Best?", European Central Bank Working Paper, No. 833.

Del Gatto, M., Di Mauro, F., Gruber, J., and Mandel, B.R. (2011): "The Revealed Competitiveness of U.S. Exports", Board of Governors of the Federal Reserve System, International Finance Discussion Papers, No. 1026.

Di Mauro, F. and Forster, K. (2008): "Globalisation and the Competitiveness in the Euro Area", European Central Bank Occasional Paper Series, No. 97.

Directorate General for Economic and Financial Affairs (2010): "II. Special Topics on the Euro-area Economy, 2. A Structural Picture of Greek Exports: Insights from Disaggregated Data", *Quarterly Report on the Euro Area,* Vol. 9/No. 3.

Edwards, L. and Alves, P. (2005): "South Africa's Export Performance: Determinants of Export Supply", University of Cape Town, School of Economics, Africa Region Working Paper, No. 95.

Gros, D. (2014): "What makes Greece special?", CEPS Commentary.

Hausmann, R. (2012): "Ireland can show Greece a way out of the crisis", *Financial Times,* Feb 8th 2012.

International Monetary Fund (2008): "France, Greece, Italy, Portugal, Spain – Competitiveness in the Southern Euro Area", IMF Country Report, No. 08/145.

Klitgaard, T. and Orr, J (1998): "Evaluating the Price Competitiveness of U.S. Exports", Federal Reserve Bank of New York, *Current Issues in Economics and Finance,* Vol. 4/No. 2.

Koukouritakis, M. (2006): "EU Accession Effects on Export Performance: The Case of Greece", *South-Eastern Journal of Economics,* 2, 147-166.

Leichter, J., Mocci, C. and Pozzuoli S. (2010): "Measuring External Competitiveness: An Overview", Italian Ministry of Economic and Finance, Department of the Treasury, Working Paper, No. 2.

Mann, C.L. (1999): "Is the U.S. Trade Deficit Sustainable?", Institute for International Economics.

Mitsopoulos, M. (2014): "Greece: From Exit to Recovery", Brookings Institution, Athens Private Roundtable.

Mitsopoulos, M. and Pelagidis, T (2014): "Why Did Forceful Internal Devaluation Fail to Kick-Start Export-Led Growth in Greece?", *Challenge*, Vol. 57/No. 6.

Pelagidis, T. and Mitsopoulos, M. (2014): "Greece: From Exit to Recovery?", The Brookings Institution.

Redding. S. and Venables A.J. (2002): "Explaining Cross-Country Export Performance: International Linkages and Internal Geography", CEP Discussion Paper, Centre for Economic Performance, London School of Economics and Political Science.

Rose, A.K. (1997): "Dynamic Measures of Competitiveness: Are the Geese still Flying in Formation?", Haas School of Business, Draft.

Stanton Chase Athens (2012): "Exports, A Driving Force to Recovery", Executive Newswire, 06/12.

Stobbe, A. and Pawlicki P. (2012): "Greece, Ireland, Portugal: More Growth via Innovation", Deutsche Bank, DB Research, EU Monitor.

Stollinger, R. and Holzner, M. (2013): "State Aid and Export Competitiveness in the EU", The Vienna Institute for International Economic Studies, Working Papers, 106.

Task Force of the European Monetary Policy Committee (2005): "Competitiveness and the Export Performance of the Euro Area", European Central Bank Occasional Paper Series, No. 30.

The Economist (2012): "Decline and Small. Small Firms are a Big Problem for Europe's Periphery", from the print edition Mar 3rd 2012.

Trefler, D. (1995): "The Case of the Missing Trade and Other Mysteries", *The American Economic Review,* Vol. 85, No. 5.

United Nations – Conference on Trade and Development (2005): "Determinants of Export Performance", Developing Countries in International Trade 2005: Trade and Development Index Working Paper.

Van Dijk, M. (2002): "The Determinants of Export Performance in Developing Countries: The Case of Indonesian Manufacturing", Eindhoven Centre for Innovation Studies Working Paper, 02.01.

Zou, S. and Stan, S. (1998): "The Determinants of Export Performance: A Review of the Empirical Literature between 1987 and 1997", *International Marketing Review,* Vol.15/No. 5.

Greek banking support framework: A first attempt

Christos Triantopoulos*

1. Introduction

The contagion of the 2007/2008 global financial crisis to the European economies hit inevitably the Greek economy with a small delay due to two facts. Firstly, because the level of extroversion of the real economy was particularly low (the current account deficit reached 15% of GDP in 2008). Secondly, the exposure of the banking system to "toxic" products was minimal (Pagoulatos and Triantopoulos, 2009). However, along with the external deficit, the Greek economy at the break of the crisis faced a high fiscal deficit, which (after a series of reviews in the following years) reached 9.9% of GDP. Substantially, it was the peak of the "twin-deficit" problem, which, on the one hand, was characterized by an extensive state intervention and an orientation towards domestic consumption and, on the other hand, was based on the excessive borrowing of the public and private sectors –mainly– from the international markets (Pagoulatos and Triantopoulos, 2014). The unwillingness of the international markets to continue funding the Greek economy –in an environment of global turbulence– led the Greek economy to a recession and to a sovereign crisis. As long as the international markets were not willing to fund the Greek state, the official sector appeared as the only funding solution. Thus, a Support Mechanism was set up by the European Union (EU), the European Central Bank (ECB) and the International Monetary Fund (IMF).

The recession and the debt crisis greatly affected the domestic banking system, reversing the route crisis spillover against what happened in other developed countries. This means that it was not the financial system's "toxicity" that undermined the public finances (due to the need of credit institutions' bailouts) and the real economy –as happened in other countries; it was the public debt crisis and the recession that undermined the sustainability of the domestic banking market. The latter was a main component of a statist, bank-centered financial system of South Europe which had entered a phase of rapid growth. After the financial deregulation that started at the end of the '80s (Pagoulatos, 2003) the domestic banking market took advantage of the general stabilization of the economy and the great reduction of the funding cost in order to achieve significant growth. This led the total assets of the credit institutions from 96% of GDP in 1995 to 193% of GDP in 2008 (Pagoulatos, 2014) and to greater openness through the expansion of the Greek banks in other economies, like those in Southeast Europe (Koutsomanoli *et al.*, 2010).

However, as a structural component of developing the domestic growth paradigm, the banking system was closely connected and exposed to uncompetitive and non-tradable economic sectors (consumer credit, housing market, media, construction, services, etc.). Consequently, the system could not resist the outbreak and the deepening of the crisis of the Greek economy (Pagoulatos, 2014). Since 2008, the need of providing support to the domestic banking system by the state emerged, in order –initially– to cope with the consequences of the international financial crisis of 2007/08 and –consequently– to deal with the structural difficulties of the period between 2010 and 2014, like (1) the domestic banks' exclusion from funding from the international markets, (2) the downgrades of the country's credit rating by the international credit rating agencies, (3) the reduction of bank asset value and the weakening of their operating profits, (4) the large deposit outflows, (5) the significant worsening of the quality of their loans portfolio due to the crisis, (6) the large losses attributed to the public debt restructuring of Greece and (7) the bail-out need of many credit institutions (Bank of Greece, 2014).

Therefore, after 2008 a new support framework for the banking system emerged. This covered the institutional gaps, responded to the needs created by the crisis and the participation of Greece in the Support Mechanism and was aligned with the institutional developments at the European level. The specific framework was based on two pillars: (a) the institutional strengthening of banking stability and (b) the securing of the necessary financing for the banking system in order to avoid a wider systemic crisis. This paper is a first approach and analysis of the initiatives, during the period 2008-2014, for the establishment of the support framework for the Greek banking system.

2. Institutional strengthening of banking stability

Before the crisis, the Greek supervisory framework of the financial system followed the traditional structure of the "three pillars", of which the most important institution was the Central Bank. Thus, since the 1930s the Bank of Greece had undertaken the general monitoring and supervision of the financial system, as the core institution of the supervisory framework, while its competences

* Research Fellow, Centre of Planning and Economic Research (KEPE).

expanded also to rest of the economy (Pagoulatos, 2003; Psalidopoulos, 2014). From the '90s the Bank of Greece's supervisory responsibilities were limited to the banking market, after the creation of the Hellenic Capital Market Commission –which undertook the supervision of the capital markets– and the Hellenic Private Insurance Supervisory Committee – which undertook the supervision of the private insurance sector.

During the period 2008-2014, the framework was strengthened as the supervisory role and the activities of the Bank of Greece were enhanced, following the general trend of the supervisory architecture in Europe (Triantopoulos, 2014). In parallel, new actors and legal procedures have been created in the framework of the EU/ECB/IMF Support Mechanism due to the needs for restructuring credit institutions in order to maintain systemic stability. In particular (apart from the harmonisation process with the institutional developments in the Euro Area and the EU), the basic components of this institutional strengthening during the period 2008-2014 were:

(1) In 2008, after the approval of law 3601/2007 on the new framework for the calculation of the capital adequacy ratio (known also as Basel II) and the operation of the financial institutions (Directives 2006/48/EC and 2006/49/EC), the Bank of Greece enhanced and enriched supervision with a macroeconomic dimension. In this framework, the scope and the frequency of data submission by the credit institutions increased. A Directorate of Financial Stability was also established, aiming to strengthen macro-prudential supervision by monitoring the stability of the financial system, analyzing the developments at a systemic level and supervising payments in order to contain the systemic risk (Bank of Greece, 2014).

(2) The deposit guarantee regime was strengthened. In 2008, law 3714/2008 raised the maximum limit of deposits guarantee from €20,000 to €100,000. In the beginning of 2009, the Hellenic Deposit and Investment Guarantee Fund (TEKE) was established with law 3746/2009, replacing the Deposit Guarantee Fund (TEK) and modernising the regulation for compensating the depositors and the investors/customers of credit institutions which cannot repay the deposits or fulfil the obligations created by investment services. Initially, TEKE consisted of the Deposit Cover Scheme and the Investment Cover Scheme. In 2011, law 4021/2011 added to it the Resolution Scheme for the financing of resolution measures before the activation of the compensation process by the TEKE. Thus the continuity of the basic function of the credit institution is secured, until the compensation process, securing financial stability (Bank of Greece, 2014).

(3) In 2010 and after a series of bankruptcies of private insurance companies in 2009, the supervision of the private insurance market was transferred from the Hellenic Private Insurance Supervisory Committee to the Bank of Greece under law 3867/2010. The choice of the Bank of Greece –and a respective Directorate– was based mainly on the fact that because of its structural characteristics the Bank of Greece was considered the only institution which could reassure the market and guarantee the handling of past supervisory weaknesses, minimizing systemic concerns (Triantopoulos, 2014).

(4) In 2010, the Ministry of Finance created, under law 3867/2010, the Council of Systemic Stability, an inter-institutional actor in which the heads of the Ministry of Finance, the Bank of Greece and the Hellenic Capital Market Commission participate. The Council handles emergency and extreme systemic incidents. It is a high-level institution which focuses on the pre-emptive action against extreme situations and crises.

(5) Under law 3864/2010, the Hellenic Financial Stability Fund (HFSF) was established in 2010. It is a private legal entity with administrative and financial autonomy and it operates exclusively under the rules of the private economy. HFSF's objective is to contribute to the stability of the Greek banking system by providing capital support to credit institutions and to transitional credit institutions. In the framework of the EU/ECB/IMF Support Mechanism and the recapitalization of the banking system and under the amendments of law 4051/2012, HFSF is the basic vehicle for the restructuring of the credit institutions by participating (essentially representing the government) in the management of the credit institutions which received capital support and by monitoring and assessing how these credit institutions comply with their restructuring plans. The Fund's goal is to sell its share in the credit institutions under the restructuring to private investors.

(6) In cooperation with Bank of Greece, the Ministry of Finance has shaped, since 2011, under laws 4021/2011 and 4051/2012, the institutional framework for the resolution of the credit institutions, providing the capacity to handle a banking crisis, in order to safeguard systemic stability. In particular, the resolution process for a credit institution is financed by HFSF (which has replaced the Consolidation Scheme of TEKE due to the latter's insufficient assets) and the resolution measures are the result of the Bank of Greece's intervention after the evaluation of the alternatives, the assessment of the assets, the choice of the assets and liabilities, etc. As long as the bankruptcy of a credit institution is not an appropriate option, the proposed resolution measures could be either the transfer of the assets of the institution under resolution to an already existing credit institution or the transfer of the assets chosen by the Bank of Greece to a newly

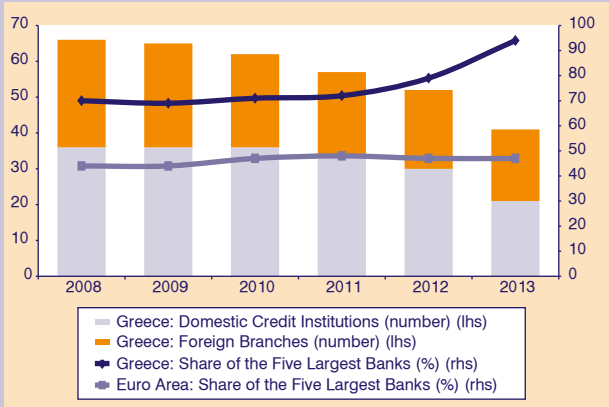
established credit institution. In the latter possibility, the HFSF becomes a shareholder of the newly established credit institution, in order to promote its consolidation and its sale in the next phase.

The interventions, therefore, create an institutional framework for the stability of the banking system aimed, at their core, at preventing the collapse of a single credit institution from becoming a wider crisis of the banking system with significant negative consequences and losses in both the real economy and the wider domestic investment and deposit trust. Thus, the supervisory framework was strengthened, the deposit guarantee scheme was expanded and modernized, a framework was established regarding the resolution of financial institutions, as well as a high-level body to monitor the systemic stability and an entity to support the resolution process were set.

As in the case of other institutional changes that interact with many other economic, financial, political and institutional conditions, within and outside of an economy, the institutional framework is particularly difficult to evaluate as a whole – especially in the early years of its implementation. The truth, however, is that the framework for banking stability was largely exploited, as within this framework the banking market –acting in an economy which was characterised by a deep and prolonged recession and exclusion from international markets– entered a phase of structural restructuring. It was, essentially, a process of high concentration, so that the remaining strong credit institutions would obtain satisfactory capital adequacy, improve their liquidity margins and enhance their efficiency through the achievement of synergies and economies of scale. The main objectives, as a result of the resolution options for unsustainable credit institutions, were the protection of depositors, the retaining of employment in credit institutions and the ensuring of systemic stability. Thus, the forms of resolution that were selected were either the establishment of a transitional credit institution (Proton, Hellenic Postbank) or the transfer of assets (or part of the assets) to another credit institution (T-Bank, Agricultural Bank of Greece, FBB, Probank, and the other cooperative banks).

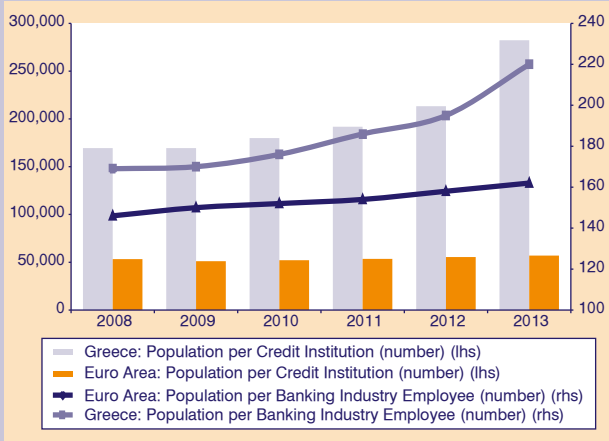
The process of resolution for credit institutions was accompanied by a series of takeovers and transfers, including those of branches of Cypriot banks, resulting, in 2013, in a radical change of the banking map compared to 2008 that included fewer and more powerful financial institutions. Specifically, the total number of credit institutions in Greece in 2013 was limited to 41 institutions from 66 institutions in 2008, of which 21 are domestic (from 36 in 2008) and 20 are branches of foreign credit institutions (30 in 2008). This reduction in the number of credit institutions translates into an unprecedented high concentration of assets in the banking system of a few banks, especially domestic credit institutions, following also the negative developments in the Cypriot banks (Chart 1). Thus, the ratio of the share of the five largest banks in the total banking system amounted to 97% in 2013 from 70% in 2008, while in the Euro Area the same ratio is kept just below 50%. In the case of Greece, the banking market has been limited to four credit institutions which significantly expanded their size. These institutions are, in particular, according to data of the Bank of Greece (2014), Piraeus Bank with a share of 26% (from 11% in 2008), the National Bank of Greece with a share of 24% (from 18% in 2008), EFG Eurobank with a share of 23% (from 20% in 2008) and Alpha Bank with a share of 19% (from 14% in 2008). The decrease in credit institutions led to a significant increase in the share of the popula-

CHART 1
Banking system structure, 2008-2013



Source: ECB (2014).

CHART 2
Banking system size in Greece and the Euro Area, 2008-2013



Source: ECB (2014).

tion per bank, amounting in 2013 to 282,252 people per institution, which is by far the highest in the Euro Area. Of course, the reduction in the number of credit institutions was not accompanied by an equivalent reduction in the number of employees, since the retaining of jobs in the banks under resolution was a priority of any plan. However, an increase in the number of citizens per bank employee is recorded, which is mainly due to retirements and large voluntary retirement plans, although it is worth noting that the ratio is higher than the Euro Area average (Chart 2).

3. Securing funding for the banking system

Securing the stability of the banking sector and the wider system made necessary the funding support of domestic banks through policies and instruments aimed at stimulating liquidity and strengthening their capital adequacy. During the period 2008-2014, the basic pillars of providing the necessary capital to the banking system were:

(a) The package for the support of the liquidity of the economy in order to face the impact of the global financial crisis was created in 2008 with law 3723/2008 and it included measures for the support of the liquidity and the capital adequacy of the credit institutions. The package's value reached €28 billion and it had initially a preemptive character – after all, it was one of the smallest in the EU (Hardouvelis, 2008). Later, and despite the initial criticism, it proved an important instrument for the support of the banking system (Pagoulatos and Triantopoulos, 2009). Thus, even though the initial aim was to strengthen the liquidity in order to ease the pressure on the credit rates (due to the international financial crisis) and to promote credit expansion of the credit institutions, during the escalation of the crisis of the Greek economy, the package became the first support instrument for the domestic banking system. The package is based on three pillars. The first one concerns the recapitalization of credit institutions by issuing preferred shares for the state of up to €5 billion for the direct strengthening of the banking system's capital adequacy and liquidity. The second pillar concerns the provision of a state guarantee of €15 billion for the support of bank lending to increase liquidity and to cover the financial needs of companies and households. After 2008, and in particular after 2010, the limit of the guarantees by the Greek state to facilitate the financing of the credit institutions multiplied, reaching €85 billion –after the amendments of law 3845/2010 (€15 billion), law 3872/2010 (€25 billion) and law 3965/2011 (€30 billion). Finally, the third pillar concerns the issuing of €8 billion worth of government bonds on behalf of credit institutions.

(b) The mechanism for providing emergency liquidity to the banking system (Emergency Liquidity Assistance - ELA) was activated by the Bank of Greece in 2011, under the guarantees of the Greek state. Through the specific mechanism of the Eurosystem, the national Central Banks provide emergency funding to credit institutions that face temporary liquidity problems. The financing is provided against collateral and after the approval of the Governing Board of the ECB. The emergency support is provided under the responsibility of the Bank of Greece, while the Greek state offers guarantees to the Bank of Greece for credit coverage in order to face temporary liquidity problems. The Greek state guarantees cap was determined –after consecutive raises with the MD 2/43219/0025 in 2011 (€15 billion), law 4031/2011 (€45 billion) and law 4056/2012 (€30 billion)– at €90 billion.

(c) The process of the wide recapitalization of the banking system, inside the framework of the EU/ECB/IMF Support Mechanism, was activated in 2012 along with the restructuring of the Greek public debt, in order to cover the shrinkage of the capital base of the domestic credit institutions due to the latters' participation in the restructuring of the Greek public debt, as their exposure to this was significant. Essentially, the loans of the EU/ECB/IMF Support Mechanism were channeled to the HFSF, which obtained equity capital of the credit institutions through their recapitalization. The recapitalization process was based on the calculation of the capital needs of the credit institutions after their participation in the restructuring of the Greek public debt and considering the risks that were connected to their assets. The calculation of the capital needs was conducted by the Bank of Greece after the stress tests that were run in cooperation with the company BlackRock Solutions, which carried out a thorough check of the banks' loan portfolios. The capital needs were covered mainly with public resources in order to secure the sustainability and the stability of the banking system.

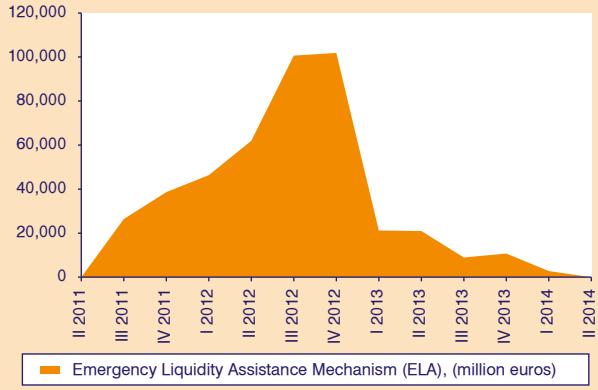
All three pillars of funding support of the banking system contributed decisively to its sustainability and to the prevention of a wide systemic destabilization. It also helped to complete the consolidation and the restructuring of the banking system, along with the institutional framework which was being created. The three pillars of the package of law 3723/2008 were fully exploited from the first minute. Thus, by focusing on the strengthening of their capital adequacy, the credit institutions joined the first pillar, offering preferred shares instead of capital to the government, and they used the greater share of the provided amount. In particular, by 2009, 3.76 billion euros of the provided 5 billion euros were exploited. This amount rose to 4.47 billion euros in 2012 (after the return of 675 million euros by the Agricultural Bank of Greece

in 2011 – Table 1). Five years after the issuance of the first preferred shares, two credit institutions repaid the total value of the preferred shares to the government. After these developments, the level of exploitation was reduced to 2.78 billion euros.

Along with the third pillar, which from its first steps was being used to a great extent by the smaller credit institutions (i.e. cooperative banks), the exploitation of the second pillar of the package was critical to the liquidity of the banking system, which was excluded from the international markets and was facing deterioration of the quality of its loans portfolio and deposit outflows. After the expansion of the guarantees limit to €85 billion, the use of the Greek government guarantees for the acceptance of credit institutions securities as collateral by the ECB (even at a great premium) has been the basic tool of securing liquidity for the banking system since 2010. That year, the total amount of guarantees reached €47.9 billion (Table 1).

The deepening of the recession, the continuous inability to access the markets and the restructuring of the public debt significantly raised the capital needs of the banking system in the following two years. By the end of 2011, the total amount of state guarantees under the second pillar reached €67.7 billion. In 2012 the guarantees reached €58.8 billion. To this amount we should add guarantees of €25.4 billion that had been issued and matured during 2012. The liquidity problem was so huge, that, in 2011, the emergency liquidity assistance mechanism of Bank of Greece was activated to support the domestic credit institutions, using the public guarantees to the Bank of Greece. When the funding needs passed the maximum limits of guarantees (€90 billion) from the emergency mechanism, the guarantees under the second pillar were also used. The emergency mechanism was used the most in 2012, when it reached approximately €100 billion (Chart 3).

CHART 3
Emergency Liquidity Assistance Mechanism for the banking system, 2011-2014



Source: Bank of Greece (2014).

The use of the package under law 3723/2008 and the ELA by the credit institutions contributed to the public revenues which were raised either by the yield of the preferred shares (first pillar of law 3723/2008) or by the charges connected with other financing instruments. However, the public revenues under the first pillar of law 3723/2008 did not reach the initial target, due to a legal issue (linked to the credit institutions' profitability) which was raised with a 10% return to the state. In 2012 the specific issue was solved with an amendment to law 4093/2012. According to this, €555.6 million (an amount which equaled to the return for the state during the previous years) were disposed from the credit institutions to the HFSF (Ministry of Finance, 2014). Thus, during the period 2009-2014 the public revenues by the use of the law 3723/2008 package (including the contribution to the HFSF and the ELA) totaled €4.07 billion (Chart 4).

The use of the funding instruments of the law 3723/2008 package and the ELA mechanism averted the collapse of the domestic banking system until the completion of its restructuring and recapitalization, which (excluding the cases of Proton Bank and T Bank) started in the first half of 2012. Then, the restoration of the funding flows by the EU/ECB/IMF Support Mechanism (which was the result of the continuation of the Economic Adjustment Programme) allowed the continuation and the completion of the recapitalization of the credit institutions after the restructuring of the public debt, ending the credit institutions' dependence on the above means of financing support. The gradual increase of the deposits after the second half of 2012 and the partial recovery of the banks' access to the money markets also contributed towards this direction. Thus, the credit institutions began to move away from the ELA. After that, the use of the instruments of the second and third pillars under law 3723/2008 also decreased (Table 1).

The recapitalization was a long process that occurred along and in connection with the restructuring of the credit institutions, the evaluations and the stress tests that took place at national and European levels. The total cost of the credit institutions' recapitalization for the period 2011-2013 reached 45.1 billion euros. Of this amount, 1.3 billion euros was derived from TEKE (the first organization that undertook the cost of the restructuring process), 40.7 billion euros were funds of HFSF and 3.1 billion euros were funds offered by the private sector to the three core banks which managed to meet the terms of the recapitalization process (concerning the coverage of 10% of the capital needed by the private sector – Table

TABLE 1 Support package of Law 3723/2008, 2009-2014

A. Portfolio of Credit Institutions' Preferred Shares under Law 3723/2008 (pillar a)

(in euros)

	2009	2010	2011	2012	2013	2014
National Bank of Greece	350,000,000	350,000,000	350,000,000	1,350,000,000	1,350,000,000	1,350,000,000
Attica Bank	100,200,000	100,200,000	100,200,000	100,200,000	100,200,000	100,200,000
Proton Bank	80,000,000	80,000,000	80,000,000	80,000,000	80,000,000	80,000,000[3]
Hellenic Postbank	224,960,000	224,960,000	224,960,000	224,960,000	224,960,000	224,960,000[3]
Eurobank	950,125,000	950,125,000	950,125,000	950,125,000	950,125,000	950,125,000
FBB	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000[3]
Panellinia Bank	28,300,000	28,300,000	28,300,000	28,300,000	28,300,000	28,300,000
Piraeus Bank[1]	370,000,000	370,000,000	370,000,000	750,000,000	750,000,000	
Alpha Bank[1]	940,000,000	940,000,000	940,000,000	940,000,000	940,000,000	
Agricultural Bank of Greece[2]	675,000,000	675,000,000				
Total	**3,768,585,000**	**3,768,585,000**	**3,093,585,000**	**4,473,585,000**	**4,473,585,000**	**2,783,585,000**

Notes: [1] In 2014, Piraeus Bank and Alpha Bank bought from the Greek government the preferred shares they had issued (face value: €1.69 billion).

[2] In 2011, Agricultural Bank of Greece bought from the Greek government the preferred shares it had issued (face value: €675 million).

[3] Hellenic Postbank, Proton Bank and FBB are in liquidation.

Sources: State budgets 2010, 2011, 2012, 2013, 2014 and 2015.

B. State Guarantees to the Credit Institutions under Law 3723/2008 (pillar b)

(€ billion)

	2009[6]	2010	2011	2012[6]	2013	2014[7]
New Guarantees - Total[4]	**3.00**	**46.9**	**19.7**	**27.8**	**41.8**	14.7
Total Guarantees in the end of the year[5]	**1.00**	**47.9**	**67.7**	**58.8**	**48.7**	36.1

Notes: [4] The total amount of state guarantees provided to the credit institutions on an annual basis, without taking into account the state guarantees that had been provided during the previous period.

[5] The total state guaranteed amount of all the credit institutions in the end of each year, without taking into account the amount of state guarantees that were issued and matured in the same year.

[6] According to the available data, 2009 and 2012 are the years during which state guarantees were issued and matured in the same economic year. In particular, in 2009 an amount of €2 billion in state guarantees was issued and matured before the end of the year and in 2012 an amount of €25.4 billion in state guarantees was issued and matured during the same economic year. Thus, in 2012 even though a large amount of state guarantees was provided, it translated into an increase in the total amount in the end of the year.

[7] The available data for 2014 refers to the end of November 2014, according to the General Government Bulletin.

Sources: The figures are the result of the author's calculations and are based on State Budget 2010 (2009), Ministry of Finance data submitted to the Hellenic Parliament (2013) and General Government Bulletin for November 2014 (2015).

C. Special Securities under Law 3723/2008 (pillar c)

(€ billion)

	2009	2010	2011	2012	2013	2014
Total Amount[8]	**4.6**	**8.0**	**8.0**	**2.8**	**2.4**	**7.9**

Notes: [8] The total amount of special government bonds for specific credit institutions on an annual basis.

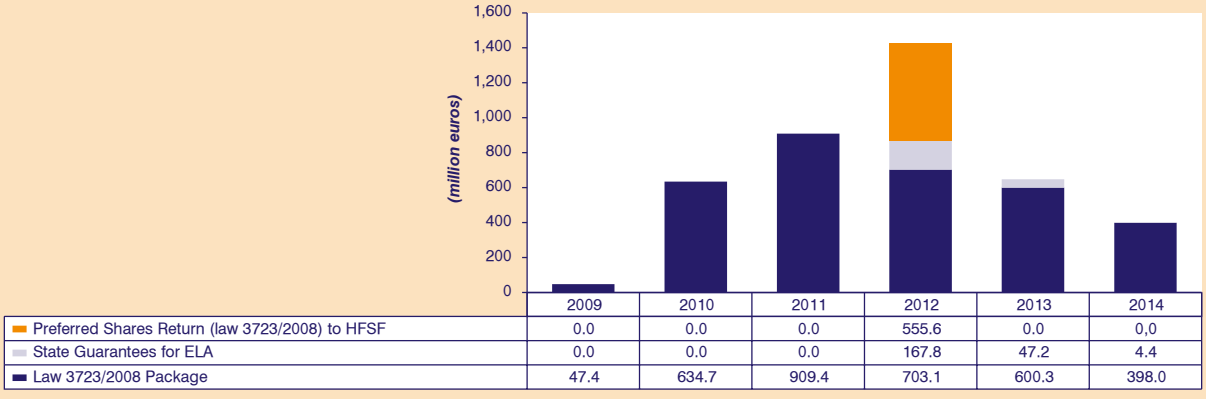
Sources: The figures are the result of the author's calculations and are based on State Budget 2010 (2009), Ministry of Finance data submitted to the Hellenic Parliament (2013) and relative data from the Ministry of Finance (2014).

TABLE 2 Banking system recapitalization, 2011-2013

	TEKE Funds	Private Sector Funds	HFSF Funds	Total Funds
		Core Credit Institutions		
National Bank of Greece	0	1,079,000,000	8,677,000,000	9,756,000,000
Piraeus Bank	0	1,444,000,000	5,891,000,000	7,335,000,000
Alpha Bank	0	550,000,000	4,021,000,000	4,571,000,000
Eurobank	0	0	5,839,000,000	5,839,000,000
Total Cost for the Core Credit Institutions	**0**	**3,073,000,000**	**24,428,000,000**	**27,501,000,000**
		Non-core Credit Institutions		
Proton Bank	862,000,000	0	1,169,621,860	2,031,621,860
T Bank	450,000,000	0	226,956,514	676,956,514
Hellenic Postbank	0	0	4,232,554,000	4,232,554,000
Cooperative Bank of Lesvos and Lemnos	0	0	55,516,733	55,516,733
Achaiki Cooperative Bank	0	0	209,473,992	209,473,992
Cooperative Bank of Lamia	0	0	55,493,756	55,493,756
Agricultural Bank of Greece	0	0	8,040,717,000	8,040,717,000
Cypriot Banks	0	0	524,000,000	524,000,000
FBB	0	0	551,970,455	551,970,455
Probank	0	0	795,733,502	795,733,502
Bank of Western Macedonia	0	0	Pending	Pending
Evia Cooperative Bank	0	0	Pending	Pending
Bank of Dodecanese	0	0	Pending	Pending
Total Cost for Non-core Credit Institutions	**1,312,000,000**	**0**	**16,288,981,753**	**17,600,981,753**
Total Cost for all Credit Institutions	**1,312,000,000**	**3,073,000,000**	**40,716,981,753**	**45,101,981,753**

Source: Bank of Greece (2014).

CHART 4
Public revenues from the banking funding support, 2009-2014



	2009	2010	2011	2012	2013	2014
Preferred Shares Return (law 3723/2008) to HFSF	0.0	0.0	0.0	555.6	0.0	0,0
State Guarantees for ELA	0.0	0.0	0.0	167.8	47.2	4.4
Law 3723/2008 Package	47.4	634.7	909.4	703.1	600.3	398.0

Source: State Budgets 2010, 2011, 2012, 2013, 2014 και 2015.

Note: The public revenues from the three pillars of the law 3723/2008 package are included in code 2993 of the State Budget with the title "Revenues from the funding of the financial crisis program" and the public revenues from the provision of state guarantees to the Bank of Greece for the ELA mechanism are included in code 3337 of the State Budget with the title "Revenues from fees on the state guarantees provision to the Bank of Greece to cover credit to banks based in Greece". The data on 2014 have been derived from the 2015 State Budget (the only available data) and consist of estimations that may slightly change during the review of the year's fiscal data. However, any small change will not alter the broad picture.

2). The HFSF was funded by the EU/ECB/IMF Support Mechanism with approximately 50 billion euros, from which a "buffer" of 11 billion euros was created, that could be used for the coverage of potential additional needs of the domestic banking system. However, after the results of the stress tests of 2014 and the ability of the systemic banks to cover the needs –according to the adverse scenarios– by other means (own and private means), the "buffer" remains intact and could be used at any time by the domestic banking system in the framework of the EU/ECB/IMF Support Mechanism.

4. Concluding remarks

The Greek banking system, running the first decades of being liberated from state intervention and constituting one of the main areas of feeding and expanding an obsolete development model, followed the broader global trend of financial euphoria, without, however, covering the distance of financial evolution that had been covered by the more developed banking systems. The euphoria of banking growth, combined with the favorable macroeconomic developments, as expected, did not create the conditions for the supervisory and regulatory framework to be prepared in addressing a major disturbance in the domestic banking system. The global financial crisis of 2007/2008 and the crisis of the Greek economy that followed created an imperative need for a substantial enrichment of the supervisory and regulatory framework, by the end of 2008, with institutions and procedures that would strengthen supervision, set a resolution framework concerning collapsing credit institutions and provide financial support to the banking system. As became clear during this institutional enrichment, its main objective was to enable the banking system to come out of a difficult restructuring phase –which was necessary in order to address the problems arising from the crisis– without affecting deposits, without resulting in job losses in the banking industry and, more importantly, without causing turbulence to the broader stability of the system.

The exploitation on behalf of the credit institutions of the new institutions and procedures, in a framework of close cooperation and synergy between the state and the Bank of Greece, contributed to achieving this target, under the EU/ECB/IMF Support Mechanism, bringing, however, significant consequences. Initially, the cost of the financial assistance that the state has to endure is high. On the one hand, the capital of the preferred shares of the first pillar of law 3723/2008 gradually returns, the guarantees of the Greek State for the second and third pillar of law 3723/2008 and the exceptional liquidity provision mechanism are not forfeited, and the public revenues from the funding support framework amounted to approximately 4 billion euros. However, on the other hand, the cost of recapitalization of the banking system –which the state took by borrowing from the EU/ECB/IMF Support Mechanism– remains particularly high, even if the revenues from the sale of the HFSF shares are excluded. Additionally, the conditions of competition in the domestic banking system have been significantly affected by the restructuring process, as the entire mediation process has now been accumulated in four major core credit institutions. At the same time, the restructuring and resolution process affected significantly the international position of domestic credit institutions, stopping, reducing or slowing down their activity in Southeastern Europe. Finally, although the first support package concerning the banking system was described as a package providing liquidity support in the economy, unfortunately, the domestic banking system –significantly affected by its interconnection with the outdated growth model– has not succeeded in recovering from the credit crunch of the recent years, significantly affecting domestic economic activity. The response to these consequences constitutes now a great challenge at both European and national levels, and, of course, a distinct field of analysis and research.

References

Bank of Greece (2014), *The Chronicle of the Great Crisis* (Athens: Centre for Culture, Research and Documentation of the Bank of Greece) (in Greek).

ECB (2013), *Procedures for the Emergency Liquidity Assistance* (Frankfurt: European Central Bank). Available in the link: http://www.ecb.europa.eu/pub/pdf/other/elaprocedures.el.pdf (in Greek).

ECB (2014), *Banking Structures Report* (Frankfurt: European Central Bank).

General Accounting Office (2015), *General Government Bulletin – November 2014* (Athens: Ministry of Finance) (in Greek).

Hardouvelis, G. (2008), "The International Financial Crisis and Greece", paper presented at the Economia Conference, Athens, 12/11/2008.

Koutsomanoli, A., Staikouras C., and C. Triantopoulos (2010), "Greek Bank's Expansion and Efficiency in Southeastern Europe", in Tzavalis, El. (ed.), *Studies on the Greek Financial System* (Athens: Athens University of Economics and Business Publishing) (in Greek).

Ministry of Finance (2009), *State Budget 2010* (Athens: Ministry of Finance).

Ministry of Finance (2010), *State Budget 2011* (Athens: Ministry of Finance).

Ministry of Finance (2011), *State Budget 2012* (Athens: Ministry of Finance).

Ministry of Finance (2012), *State Budget 2013* (Athens: Ministry of Finance).

Ministry of Finance (2013), *State Budget 2014* (Athens: Ministry of Finance).

Ministry of Finance (2014), *State Budget 2015* (Athens: Ministry of Finance).

Pagoulatos, G. (2003), *Greece's New Political Economy. State, Finance and Growth from Postwar to EMU* (Houndmills: Palgrave Macmillan).

Pagoulatos, G. (2014), "State-driven in Boom and in Bust: Structural Limitations of Financial Power in Greece", *Government and Opposition*, Vol. 49, No. 3, pp. 452-482.

Pagoulatos, G. and C. Triantopoulos (2009), "The Return of the Greek Patient: Greece and the 2008 Global Financial Crisis", *South European Society and Politics*, Vol. 14, No. 1, pp. 35-54.

Pagoulatos, G. and C. Triantopoulos (2014), "Growth Strategy and Welfare Reform in Greece", paper presented at the Sciences Po Workshop on "National Growth Strategies and Welfare State Reform" in Paris, 11-12/12/2014.

Psalidopoulos, M**.** (2014), *The History of the Bank of Greece, 1928-2008* (Athens: Centre for Culture, Research and Documentation of the Bank of Greece) (in Greek).

Triantopoulos, C. (2014), "Financial Supervision: Crisis and New Architecture Trends", *Greek Economy*, No 10, KEPE – October 2014 (in Greek).

Recent Studies and Reports published by KEPE

STUDIES

75. J. Cavounidis, I. Cholezas, *Educational and Labour Market Trajectories of Youth of Migrant Origin*. Athens, 2013 (in Greek).
74. S. Papaioannou, *Economic Growth in Greece: Trends and Future Prospects.* Athens, 2013 (in Greek).
73. E. A. Kaditi, *Analysis of the Greek Food Supply Chain.* Athens, 2012.
72. Th. Lianos and J. Cavounidis. *Migration Flows from and to Greece in the 20th Century.* Athens, 2012 (in Greek).
71. A. Koutroulis. *Finance and Economic Growth: The Case of Greece 1960-2005.* Athens, 2011.
70. T. Tsekeris. *Travel Consumption and Market Competition in Greece.* Athens, 2010.
69. I. Reziti. *The Price Transmission Mechanism in the Greek Agri-Food Sector.* Athens, 2010 (in Greek).
68. K. Athanassouli. *The Professional Transition of Graduates from Schools of Philosophy.* Athens, 2009 (in Greek).
67. Kl. Efstratoglou. *Assessment of the Professional Training of the Unemployed in Greece.* Athens, 2009 (in Greek).
66. P-I. K. Prodromídis. *The Spatial Distribution of Male and Female Employment and Unemployment in Greece.* Athens, 2008.
65. Y. Panagopoulos and Y. Peletides. *Basel II: Description and Consequences for the Banking System.* Athens, 2008 (in Greek).
64. M. G. Arghyrou. *The Effects of the Accession of Greece to the EMU: Initial Estimates.* Athens, 2006.
63. P-I. K. Prodromídis. *A Regional Analysis of Declared Incomes in Greece.* Athens, 2006.
62. S.K. Spathi. *Comparing Air and Sea Passenger Transportation in Domestic Lines. Econometric Estimation of Demand.* Athens, 2005 (in Greek).
61. C.N. Kanellopoulos, in cooperation with P. Papaconstantinou. *Economic Aspects of Adult Training.* Athens, 2005 (in Greek).
60. Th. Terrovitis. *Production and Use of Information and Communication Technologies in Greece: Impact on the Greek Economy.* Athens, 2005 (in Greek).
59. A. Lampropoulou. *The Greek Agriculture in the Context of Foreign Competition.* Athens, 2005 (in Greek).
58. M.St. Panopoulou. *Technological Change and Corporate Strategy in the Greek Banking Industry.* Athens, 2005.
57. S. Chandrinos in association with K. Altinoglou and A. Pepe. *Evolution of SMEs in Greece. Estimation and Comparability of Efficiency and Flexibility of SMEs and Large Manufacturing Enterprises.* Athens, 2005 (in Greek).

REPORTS

70. *The Economies of the Western Balkans: Transition, Growth and Prospects for EU Accession,* R. Panagiotou. Athens, 2012.
69. *The Equalisation of the Qualifying Age for Old Age Pensions for Females in Greece to the Regime in Force for Males*, by L. Athanassiou, F. Zervou, A. Kotsi. Athens, 2012 (in Greek).
68. *Air Transport and Airports in Greece: Current Developments, Economic Importance and Efficiency,* by Th. Tsekeris and K. Vogiatzoglou. Athens, 2011 (in Greek).
67. *Market Conditions and Competition in the Greek Economy,* by Study Group of KEPE, ed. K. Kanellopoulos. Athens 2011 (in Greek).

66. *Luxury Hotels in Greece: Dynamics and Development Potential,* by N. Vagionis, E. Kasimati, W. Kafouros. Athens, 2011 (in Greek).

65. *Labor Market: Developments and Policy Guidelines,* by K. Kanellopoulos, K. Athanassouli, K. Efstratoglou, G. Panagopoulos, P. Papakonstantinou, P.K. Prodromídis. Athens, 2010 (in Greek).

64. *Wages, Pensionable Time and Working Conditions in the Public and Private Sector,* by K. Kanellopoulos, F. Zervou. Athens, 2010 (in Greek).

63. *Transport and Economy: Contribution, Trends and Prospects in Greece with Emphasis on Surface Transport,* by T. Tsekeris and E. Tsouma. Athens, 2010 (in Greek).

62. *The Greek Commercial Fleet,* by S. Spathi, S. Karagiannis and N. Georgikopoulos. Athens, 2010 (in Greek).

61. *The Social Capital in Greece,* by E. Poupos. Athens, 2010 (in Greek).

60. *The Agricultural Sector in Greece,* by E. Kaditi and E. Nitsi. Athens, 2010 (in Greek).

59. *Size Profile and Labour Market Analysis of Immigration in Greece,* by K. Kanellopoulos, M. Gregou and A. Petralias. Athens, 2009.

58. *The Evolution and Viability of the Greek Pension System,* by F. Zervou. Athens, 2009 (in Greek).

57. *The Economic and Demographic Viability of the Greek Social Insurance System,* by L. Athanassiou, F. Zervou and A. Kotsi. Athens, 2009 (in Greek).

56. *Multilateral Trade Negotiations: Trade in Services,* by V. Notis. Athens, 2008 (in Greek).

55. *FYROM's transition: From Yugoslavia to the European Union?,* by R. Panagiotou, Athens, 2008.

54. *The Development Process and Long Term Trends in Economic Behaviour and Economic Conditions in Greece,* by L. Athanassiou, Athens, 2007 (in Greek).

53. *Tourist Development in Greece and the Mediterranean: A Comparative Analysis,* by N. Vagionis and W. Kafouros. Athens, 2007 (in Greek).

52. *Financing & Insurance of Export Credits,* by Cl. B. Efstratoglou. Athens, 2007 (in Greek).

51. *The Greek Energy Sector: Tendencies and Ascertainment,* by N. Manolas. Athens, 2007 (in Greek).

50. *Minimum Guaranteed Income in EE15 Countries and Possibilities in its Implementation to Greece,* by A. Balfoussias and K. Kotsis. Athens, 2007 (in Greek).

49. *Agricultural Trade between Greece and Selected Balkan Countries: Comparative Advantage and Competitiveness,* by P. Paraskevaides. Athens, 2006 (in Greek).

48. *Vocational Education in Greece: Developments, Problems and Prospects,* by C. A. Karmas. Athens, 2006 (in Greek).

47. *Restructuring and Privatization of the Greek Railways and Ports* by D.Th. Athanassakopoulos. Athens, 2006 (in Greek).

46. *Greek Agriculture on the Eve of the New Conditions and Policy Framework,* by C. Carabatsou-Pachaki in cooperation with P. Tonikidou. Athens, 2006 (in Greek).

45. *Europe and the International Economic Environment in 2005: Recent Developments and Outlook,* by St. Savva-Balfoussias, E. Athanassiou, St. Karagiannis, K. Tsouma. Athens, 2007.

44. *The Systemic Transformation of the Balkan States and the Developments of the Economic Relations with Greece,* by N. Vagionis, W. Kafouros and R. Panagiotou. Athens, 2005 (in Greek).

43. *Recent Developments in the Greek Housing Market,* by St. Himoniti-Terroviti. Athens, 2005 (in Greek).