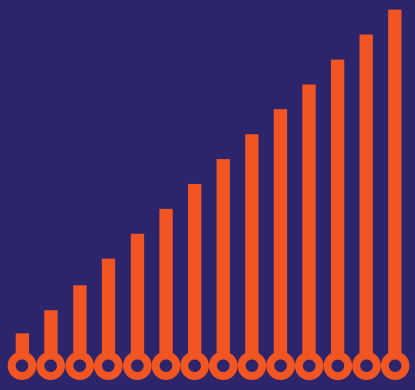
CENTRE OF PLANNING AND ECONOMIC RESEARCH

Issue 35, February 2018

GREEK ECONOMIC OUTLOOK



- **Macroeconomic analysis and projections**
- **Public finance**
- **Human resources and social policies**
- **Development policies and sectors**
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Editorial

On January 15, 2018, the Greek Parliament approved a comprehensive legislative Bill that adopted the necessary prerequisites for the closure of the third assessment of the Greek adjustment programme. The bill contained, *inter alia*, provisions for the continuation of electronic auctions of property (e-auctions), changes in the legislation regarding labour strikes, changes in the allocation of family allowances, implementation of a privatisation timetable (including Elliniko, Egnatia, Eleftherios Venizelos airport, et al.), elimination of VAT exemptions, as well as a commitment to submit (in May 2018) the new Medium-Term Programme for the period 2019-2022. The Medium-Term Programme will contain government expenditure to the limits set by the agreement with ESM, and will achieve high primary surpluses of more than 3.5% of GDP per year.

The Eurogroup meeting in Brussels on January 22 marked the completion of the third assessment and the subsequent approval of the disbursement of the installment to support the Greek economy. It is estimated that € 5.7 billion (of the allocated € 6.7 billion) will be disbursed within the month of February, and the remaining € 1 billion by April. However, the Commission linked the disbursement of the tranche to the continuation of the electronic auctions as well as the implementation of all the agreed prerequisites. The Eurogroup decision paved the way for the launch of the fourth assessment of the Greek programme, in which the burden will be on the actual implementation of the key reforms that have already been voted into law, thus completing the third adjustment programme.

In the international arena, the most important and immediate challenge concerns the relationship between Greece and the Former Yugoslav Republic of Macedonia (FYROM) and the prospect of resolving the long-term deadlock on the name issue. The Greek government's main concern remains the safeguarding of Greece's national interests and the removal of any provisions in the Constitution of FYROM that could be interepreted as territorial or expansionary claims against Greece. However, popular sentiment against any option that would include a reference to the name "Macedonia" –punctuated by strong rallies in Thessaloniki and Athens– has put considerable pressure on the government and has lead to a potential destabilisation in the negotiation process.

The 35th issue of KEPE's *Greek Economic Outlook* is presented in two parts. Part One examines recent developments and prospects for the main components of demand, the Consumer Price Index in Greece and the Eurozone as well as the international macroeconomic environment. The factor model forecasts for short-term prospects of GDP are also presented. Public finances are examined through an analysis of the State Budget execution as well as the evolution and structure of public debt. Recent developments in key variables of the Greek labour market are discussed, as well as the issue of the education of refugee children in Greece. As far as sectoral policies are concerned, the articles present analyses of tourism receipts in Greece, of household travel expenditure in Greece, as well as an examination of developments in the Greek capital market and the competitiveness of the Greek economy. The articles presented in Part Two provide a deeper and more specialised analysis of important contemporary topics. The first article analyses "The labour supply of women in Greece before and during the crisis", while the second article examines "The framework of financial supervision in Europe: Developments and prospects". Finally, the third article presents "Migration and refugee flows to Greece during the period 2015-2017: a descriptive analysis".

RITSA PANAGIOTOU
Editor

1. Macroeconomic analysis and projections

1.1. Recent developments and prospects in the main demand components

Ersi Athanassiou

The most recent seasonally adjusted data of the quarterly *National Accounts* (ELSTAT, provisional data, December 2017) reflect a continuing increase in the GDP of the Greek economy during the third quarter of 2017, with the relevant rate of change reaching 1.3% as compared to the corresponding quarter of 2016 (Table 1.1.1). In parallel, the data incorporate a significant upward revision in GDP figures for the second quarter of 2017, placing the corresponding rate of change at 1.6% (versus an initial estimate of 0.8%).

Taking into account the positive GDP growth rate recorded in the first quarter of 2017, the consolidation of an upward trend in GDP for three consecutive quarters represents a significant indication of an improvement in the overall conditions of the Greek economy. Nevertheless, at the level of individual macroeconomic aggregates, phenomena of instability are still observed, particularly with respect to the course of the main domestic demand components. More particularly, the third quarter of 2017 was characterised by a decrease in fixed capital investment and a pause in private consumption growth, combined with continuing restraint in public consumption in the framework of the Fiscal Adjustment Programme. Thus, domestic demand recorded, during the period in question, a decline of -1.9% as compared

TABLE 1.1.1 Main macroeconomic aggregates

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

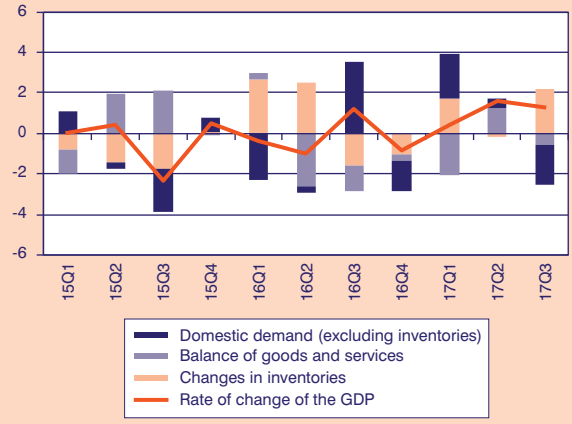
								9 month period Jan.-Sept.	
	2016Q1	2016Q2	2016Q3	2016Q4	2017Q1	2017Q2	2017Q3	2017	2016
Private consumption	-1.4	-2.1	3.7	0.2	0.9	1.0	0.0	0.6	0.0
Public consumption	-1.4	-0.4	0.8	-4.5	-3.5	-2.1	-2.2	-2.6	-0.3
Gross fixed capital formation	-9.6	12.9	13.5	-7.4	17.0	1.0	-8.5	2.6	5.0
Domestic demand*	-2.2	-0.3	3.5	-1.4	2.1	0.5	-1.9	1.3	-1.3
Exports of goods and services	-9.5	-10.2	9.4	4.6	5.2	9.8	7.8	7.6	-4.0
Exports of goods	3.1	4.0	8.3	-0.4	3.3	8.9	2.8	5.0	5.1
Exports of services	-21.4	-24.0	10.4	11.6	7.9	12.4	12.6	11.0	-13.5
Imports of goods and services	-9.5	-1.9	14.0	5.2	11.1	5.0	9.3	8.5	-0.1
Imports of goods	-3.0	5.7	10.4	4.0	11.6	3.0	9.2	7.8	4.1
Imports of services	-31.9	-29.7	35.4	9.8	11.5	15.5	6.9	11.1	-16.4
Balance of goods & services	-8.7	192.8	-292.2	11.1	73.3	-29.7	68.3	12.2	54.2
GDP	-0.4	-1.0	1.2	-0.9	0.4	1.6	1.3	1.1	-0.1

Source: National Accounts, ELSTAT (December 2017), own calculations.

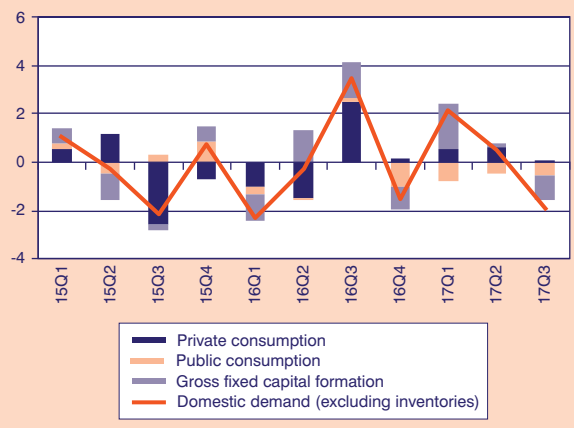
* Excluding the change in inventories.

FIGURE 1.1.1
Contributions to the rate of change of the real GDP

Domestic and net external demand

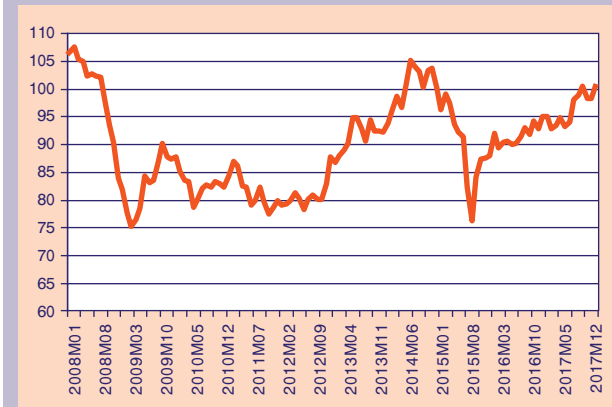


Individual components of domestic demand



Source: National Accounts, ELSTAT, own calculations.

FIGURE 1.1.2
Economic sentiment indicator



Source: Eurostat.

to the corresponding quarter of 2016, resulting in a negative contribution to the rate of change of the GDP amounting to -1.9 percentage points (Figure 1.1.1).

With respect to developments in the external sector during the third quarter of 2017, the improvement of domestic economic conditions, in combination with a number of favourable external factors, contributed towards significant export growth for a fifth consecutive quarter. In parallel, despite the observed decline in domestic demand, the overall positive expectations regarding the prospects of private consumption and fixed capital investment appear to have contributed towards maintaining an upward pressure on imports. On the whole, the negative contribution to the rate of change of the GDP from the increase in imports outweighed the corresponding positive contribution from the strengthening of exports, the result being a negative contribution of the external sector to the rate of change of the GDP in the third quarter of 2017 (-0.6 percentage points).

From the aforementioned evolution in the figures of domestic demand and the external sector, it is evident that developments in inventories played a crucial role in shaping positive GDP growth in the third quarter of 2017. As it seems, the contribution of the change in stocks to the rate of change of the GDP was positive during this period and quite substantial (2.2 percentage points) –a development most likely related to the weakening of domestic demand and the consequent lower absorption of produced and imported goods.

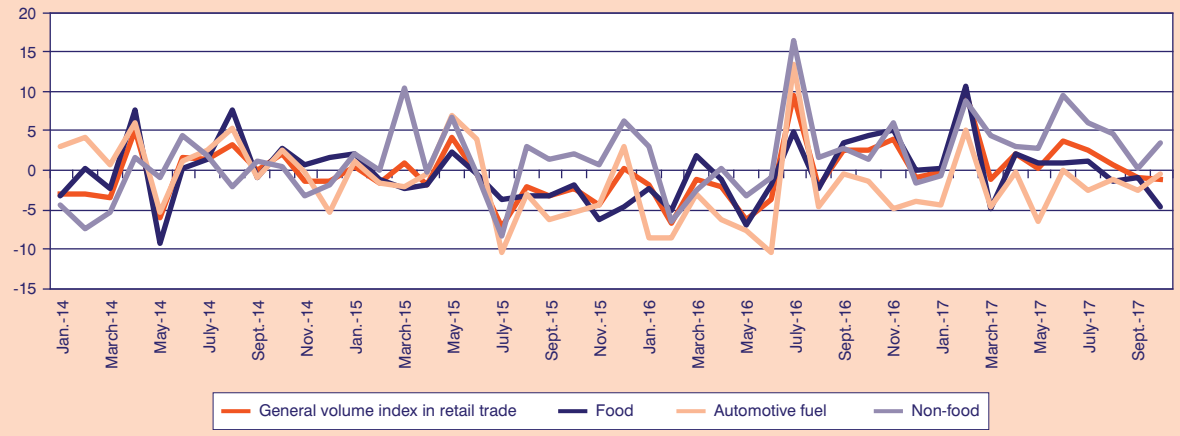
Focusing on the available indications with respect to the course of economic activity during the most recent period, the economic sentiment indicator recorded a significant improvement in the third quarter of 2017, thereafter exhibiting a decline in October, a marginal increase in November and a notable rise in December (Figure 1.1.2). The latter development, which is most likely related to the further decline in uncertainty in view of the completion of the third review of Greece's financial assistance programme, lends support to indications of the recovery and further improvement of economic conditions in the country.

Regarding the main factors shaping the recent developments in the GDP and its main components, 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

According to *National Accounts* data, the rising trend followed by private consumption in the first two quar-

FIGURE 1.1.3
Percentage changes in the general volume index and the main sector indices in retail trade



Source: ELSTAT, own calculations.

ters of 2017 seems to have paused in the third quarter of the year, with private consumption expenditure remaining stagnant as compared to the corresponding quarter of 2016. Additional indications on the recent course of private consumption are provided on the basis of the evolution of the monthly volume index in retail trade for the period July-October 2017.[1] More particularly, following the upward trend prevailing in the second quarter of the year, the general index recorded positive percentage changes in July (2.5%) and August (0.8%). With respect to developments in the three main retail sector categories, namely the *food* sector, the *automotive fuel* sector and the *non-food* sector, the trends recorded during the period July-October 2017 were purely positive in the case of the *non-food* sector and purely negative in the case of the *automotive fuel* sector. In the case of the index referring to the *food* sector, an increase in July was followed by decreases in the following months (Figure 1.1.3).

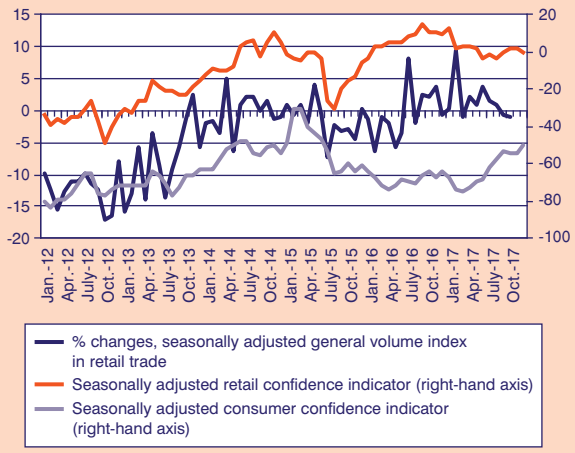
The above mixed trends in retail trade are also mirrored in the evolution of the indices in the individual retail store sub-categories. More particularly, in the period from July to October 2017 the indices referring to *pharmaceuticals-cosmetics, clothing-footwear, furniture-electrical equipment-household equipment* and *books-stationery-other books* registered positive percentage changes compared to the corresponding period of 2016 (amounting to 2.2%, 2.0%, 5.3% and 5.8%, respectively). On the contrary, a marginally negative rate of change was recorded over the same period in the case of the index for *supermarkets* (-0.1%), while decreases were also observed in the sub-categories referring to *department stores, automotive fuel* and *food-beverages-tobacco* (amounting to -0.6%, -1.6% and -3.1%, respectively). Notably, in July 2017 the relevant indices recorded positive rates of change in seven out of the eight individual sub-categories; while during the remainder of the period examined, a tendency towards milder increases or a shift to negative rates of change prevailed in most cases.

On the basis of the above data, it is evident that private consumption is under the influence of opposing forces, which may prevail one over the other depending on the conjuncture but also depending on the consumer good category in question. On the one hand, the further stabilization of the economic environment, the slow but consistent improvement of the main labour market figures and the related recovery in the compensation of employees (2.0% on average during the nine-month period from January to September 2017 as compared to the corresponding period of 2016, at current prices) gradually dissolve the apprehension of consumers and create more favourable conditions for the recovery of private consumption. On the other hand, the margins of households to consume continue to be negatively influenced by the persisting pressures on their disposable incomes, in the framework of the fiscal adjustment measures.

With respect to the prospects of private consumption, the trends with respect to the path of consumer spending in the course of 2017, but also the wider prospects for the recovery of the economy, converge to an as-

1. The data for October are provisional.

FIGURE 1.1.4
General volume index in retail trade and confidence indicators



Source: ELSTAT, EUROSTAT, own calculations.

sessment for positive developments in private consumption over the short term. This prospect is in line with the improving expectations of consumers with respect to the course of their consumption expenditure, as reflected in the significant increase of the consumer confidence indicator during the period from July to December 2017 (Figure 1.1.4). Nevertheless, it is noted that retailers remain more cautious concerning the prospects of consumption, with the retail confidence indicator exhibiting fluctuations over the same period. Therefore, a certain degree of uncertainty concerning the prospects of consumption still exists, although it is expected to subside further in the current year in conjunction with positive prospects related to the country's exit to the markets.

1.1.2. Investment

Following a significant recovery in the first quarter of 2017 and a marginal increase in the second quarter of the year, gross fixed capital formation decreased in the third quarter of 2017, with the relevant rate of change amounting to -8.5% as compared to the corresponding quarter of 2016 (Table 1.1.2). As a result of the latter development, the contribution of investment to the rate of change of the GDP fell to -1.1 percentage points in the third quarter of 2017, from 1.8 and 0.1 points in the previous two quarters, respectively.

More particularly, a foremost role in the decline of investment in the third quarter of 2017 was played by

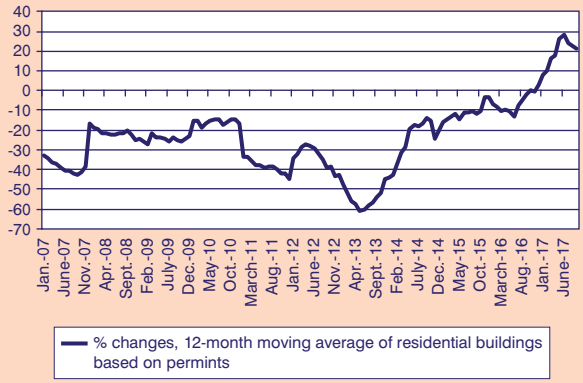
TABLE 1.1.2 Main investment aggregates

% rates of change compared to the corresponding period of the previous year (seasonally adjusted data, constant prices)

	Quarters							9 month period Jan.-Sept.	
	2016Q1	2016Q2	2016Q3	2016Q4	2017Q1	2017Q2	2017Q3	2017	2016
Cultivated assets	1.2	23.5	32.3	36.6	1.7	-2.3	-0.5	-0.5	19.4
Other machinery and equipment and weapon systems	-10.4	-14.2	7.3	-20.5	-1.0	2.9	-2.9	-0.4	-6.4
Transport equipment and weapon systems	-49.1	81.9	1.0	-26.2	203.9	10.2	5.2	63.4	-7.5
Information Communication Technology (ICT) equipment	-7.0	-22.0	-29.9	-24.7	-14.0	-10.3	-3.1	-9.3	-20.3
Dwellings	-16.1	-23.5	-3.1	-2.9	-10.8	-5.2	-7.5	-7.8	-15.2
Other construction	27.7	31.6	40.3	7.8	-3.1	-6.5	-20.9	-10.6	33.2
Other products	4.2	2.7	2.9	-0.7	0.4	-0.2	-0.7	-0.2	3.2
Gross fixed capital formation	-9.6	12.9	13.5	-7.4	17.0	1.0	-8.5	2.6	5.0

Source: National Accounts, ELSTAT (December 2017), own calculations.

FIGURE 1.1.5
Estimated residential building activity based on permits



Source: EUROSTAT.

developments in other constructions. In this particular category, the downward trend initiated in the first quarter of 2017 was strengthened considerably in the third quarter of the year (-20.9%), due to the completion of major construction projects (e.g. highways) which contributed decisively to investment figures during previous periods of reference. In parallel, negative developments were recorded during the third quarter of 2017 in the case of investment in dwellings, which continued their downward course (-7.5%).

With regard to investment other than constructions, developments in the individual categories in the third quarter of 2017 were, in most cases, moderately negative. More particularly, expenditure on machinery and equipment and ICT equipment registered during this period a mild decline (-2.9% and -3.1%, respectively), while a marginal decrease was also recorded in investment in other products (-0.7%). In contrast, an upward trend was observed over the same period in the case of investment in transport equipment, with the relevant rate of change being positive for the third quarter in a row (5.2%).

Additional information on developments in the construction sector as a whole is derived from the available statistical data on the course of the general production index in construction during the third quarter of 2017.[2] As it appears, the index exhibited a decline for a second consecutive quarter, with the relevant negative rate of change shooting to -33.6% as compared to the corresponding quarter of 2016. This development was primarily associated with the major decrease in the index of production of civil engineering (-42.2%), due to the aforementioned completion of major infrastructure works (highways, bridges, tunnels, etc.). Furthermore, it was also related to the considerable decline of the sub-index of production of building construction (-19.0%), which reflects developments in the construction of dwellings, industrial and commercial buildings and other buildings.

More particular information with regard to the recent developments in residential investment is derived, in principle, from the residential buildings indicator with respect to square meters of useful floor area, based on building permits. According to both the individual monthly observations of the residential buildings indicator and the estimated private building activity,[3] conditions appear to have improved over the most recent period of reference. More specifically, the monthly percentage changes of the residential buildings indicator remained positive in July, August and September of 2017 (6.8%, 6.9% and 9.7%, respectively, on a year-on-year basis), while, in parallel, positive rates of change were also recorded in the estimated private building activity (23.8% in July, 22.6% in August and 21.5% in September) (Figure 1.1.5). However, caution is recommended with respect to the interpretation of these developments as a sign of positive trends in residential building investment as, according to market sources, the increase in residential permits reflects, to a considerable extent, an increase in the issuing of new permits for the fencing of plots of land, an activity related to the process of posting of new forest maps.[4]

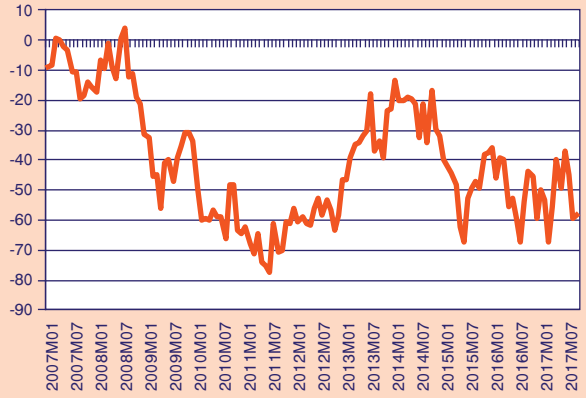
The observed fluctuations in investment expenditures from the second quarter of 2016 onwards point both to an inclination for a significant recovery in fixed capital investment and to a recurring instability in investment dynamics. In the case of the most recent period of reference, it is notable that this instability occurred despite the generally positive economic developments, a fact which underlines that the improvement of the economic climate represents a necessary but not sufficient condition for the recovery of investment expenditure. At a time, for example, that a series of major infrastructure projects are being completed, the evolution of investment expenditure on constructions depends crucially upon progress with respect to the initiation of

2. Note that the reference concerns the indicator adjusted for the number of working days, while data for the third quarter of 2017 are provisional.

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

4. See Rousanoglou, N. (2018), "The fencing of plots of land increased building activity", *Kathimerini*, 10 Jan. 2018 (in Greek).

FIGURE 1.1.6
Construction confidence indicator



Source: EUROSTAT.

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

Source: National Accounts, ELSTAT, own calculations.

new large projects. In parallel, even if the improvement of the country's economic climate boosts the incentives for investment, the implementation of new investment projects cannot progress to a satisfactory degree without adequate financing and liquidity in the market, conditions which in turn require the further stabilization of the domestic banking system.

On the basis of the above, it is evident that the short-term path of fixed capital formation in the country will depend upon the achievement of economic stability, the improvement of financing and liquidity and the implementation of major investment projects that are either in waiting or in progress. Overall, positive expectations in these areas point to favourable prospects for investment expenditure in the upcoming quarters. However, it is noted that market players appear to remain cautious with respect to the prospects of the construction sector, as indicated by the relevant confidence indicator which recorded a significant decline in September, October and November 2017 and a small improvement in December (Figure 1.1.6).

1.1.3. External balance of goods and services

The progressive stabilization of the Greek economy, coupled with the improved rates of growth of international trade and the increasing preference of tourists for holidays in Greece, had evident positive effects on the country's external sector during the third quarter of 2017.

More particularly, concerning exports, the third quarter of 2017 was characterized by major growth in the case of services (12.6%), and a milder increase in the case of goods (2.8%); the result being a positive contribution of 2.2 percentage points to the rate of change of the GDP (see Figure 1.1.7). The increase in goods exports was related to positive developments in foreign demand, while also being likely to reflect a further improvement in competitiveness, indications of which can be found in the recent path of the country's real effective exchange rate with respect to Euro area countries. The favourable developments in services exports were due to a significant increase in tourism receipts (by 12.3% as a whole in the third quarter of the year, according to Bank of Greece data), a substantial improvement of transportation receipts (by 15.7%, respectively) and a boost in receipts in the other services category (by 8%). In the case of transportation receipts, considerable positive effects seem to have been exerted both by the favourable developments in world trade and by the related higher levels of ocean shipping freights rates as compared to the corresponding period of the previous year.

With respect to imports, despite the decline in domestic demand in the third quarter of 2017, the overall positive expectations with respect to the path of the economy appear to have influenced positively the demand for imports of goods and services. Thus, in the field of services imports, the relevant rate of change as compared to the corresponding period of the previous year remained positive (6.9%); while in the field of goods exports, the relevant rate of change was also positive and quite substantial (9.2%). As a result of these developments, the contribution of imports to the rate of change of the GDP amounted to -2.8 percentage points in the third quarter of 2017.

Concerning future developments in the external sector, the indications thus far available with respect to

the country's exports performance as well as trends in word trade point to a prospect for the further strengthening of goods and services exports. On the other hand, imports are expected to keep increasing, due to the foreseen recovery of domestic demand and the expected higher oil prices. Under these conditions, a crucial role for the balance of the external sector and its contribution to the GDP will be played by the scale of export growth, as well as the extent to which an increase in internal demand will be covered by domestically produced goods. It is clear that in the current conjuncture, a decisive role for 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.

1.1.4. Conclusions and prospects

The above analysis indicates a consistent process of gradual recovery for the Greek economy, with some volatility as to the contribution of individual demand components to the rate of change of the GDP. An important positive characteristic of recent developments is the continuing significant growth in goods and services exports. A tendency towards recovery is also apparent in the indications thus far available with respect to private consumption and gross fixed capital formation, although the relevant data still exhibit a certain degree of volatility. Overall, the developments examined point to a prospect of continuing economic recovery in the upcoming quarters, which is consistent with the forecasts provided by the KEPE dynamic factor model (see Section 1.3).

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

Yannis Panagopoulos

The reported trend of the headline CPI, as indicated from the first column of Table 1.2.1 and from Diagram 1.2.1, have continued to move into the inflation area since January 2017. It has actually stabilized, after April 2017, between 0.7% and 1.1%. On the other hand, the core of the headline CPI, after May 2017, turned to positive changes and continues to move with a slightly positive momentum[1] (0.2%, November 2017). This evolution is encouraging for the positive future of the headline CPI.

A similar trend, like the one of the headline CPI, is recorded by the Greek harmonized CPI (HCPI). More specifically, this index has moved with positive changes, between 0.5% and 1.0%, from May 2017 onwards. Additionally, we observe that both CPIs (headline and harmonized) currently appear with similar percentage changes. However, the core of the harmonized CPI is moving with a slightly higher percentage change than the corresponding core of the headline CPI.

Additionally, according to the Hellenic Statistical Authority (ELSTAT), the aforementioned headline inflation rate (0.7%, y-o-y, in December 2017) can be mainly attributed to subsequent price increases in six (6) main sub-categories, namely:

(a) the "Alcoholic, drinks and tobacco" category (by 6.9%) basically due to price increases in tobacco;

(b) the "Transportation" category (by 4.9%) mainly due to increases in the price of gasoline and car lubricants, as well as airplane tickets. Part of this increase was offset by the decreases in the price of cars;

(c) the "Communication" category (by 1.3%) mainly due to increased fees of telephone services;

(d) the "Restaurants-Hotels-Cafés" category (by 1.2%) mainly due to increases in their prices;

(e) the "Food and non-alcoholic beverages" category (by 0.5%), due to price increases mainly in olive oil, coffee, fresh fruits and pork meat. Part of this increase was offset by decreases in the prices of fresh vegetables, potatoes, eggs, poultry and milk products;

(f) the "Education" category (by 0.2%) mainly due to increases in the fees for secondary schools.

Part of the aforementioned inflation was offset by the decrease in the prices mainly of six (6) sub-categories, namely:

TABLE 1.2.1 Inflation in Greece and in the Eurozone

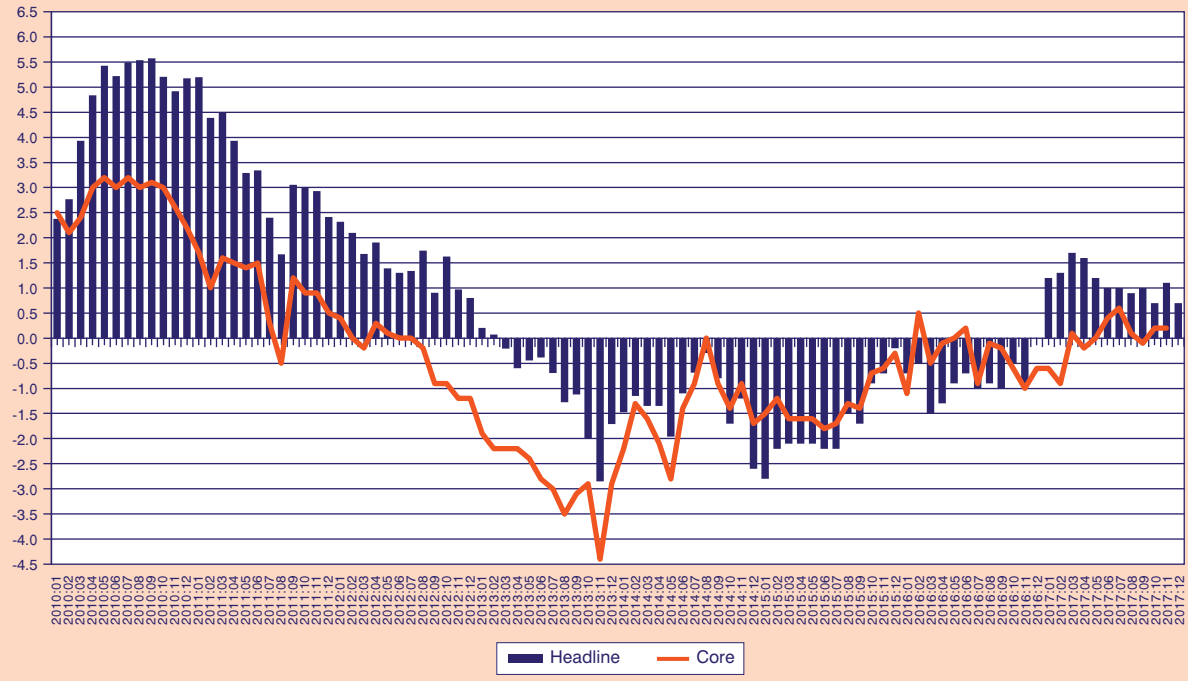
	Headline inflation (Greece)	Core inflation (Greece)	Harmonized inflation (Greece)	Core harmonized inflation (Greece)	Harmonized inflation (EU19)	Core harmonized inflation (EU19)
2017M6	1.0	0.4	0.9	0.7	1.3	1.2
2017M7	1.0	0.6	0.9	0.9	1.3	1.3
2017M8	0.9	0.1	0.6	0.4	1.5	1.3
2017M9	1.0	-0.1	1.0	0.7	1.5	1.3
2017M10	0.7	0.2	0.5	0.3	1.4	1.1
2017M11	1.1	0.2	1.1	0.8	1.5	1.1
2017M12	0.7	NA	1.0	NA	NA	NA

Source: ELSTAT, EUROSTAT.

Note: NA: Not available data.

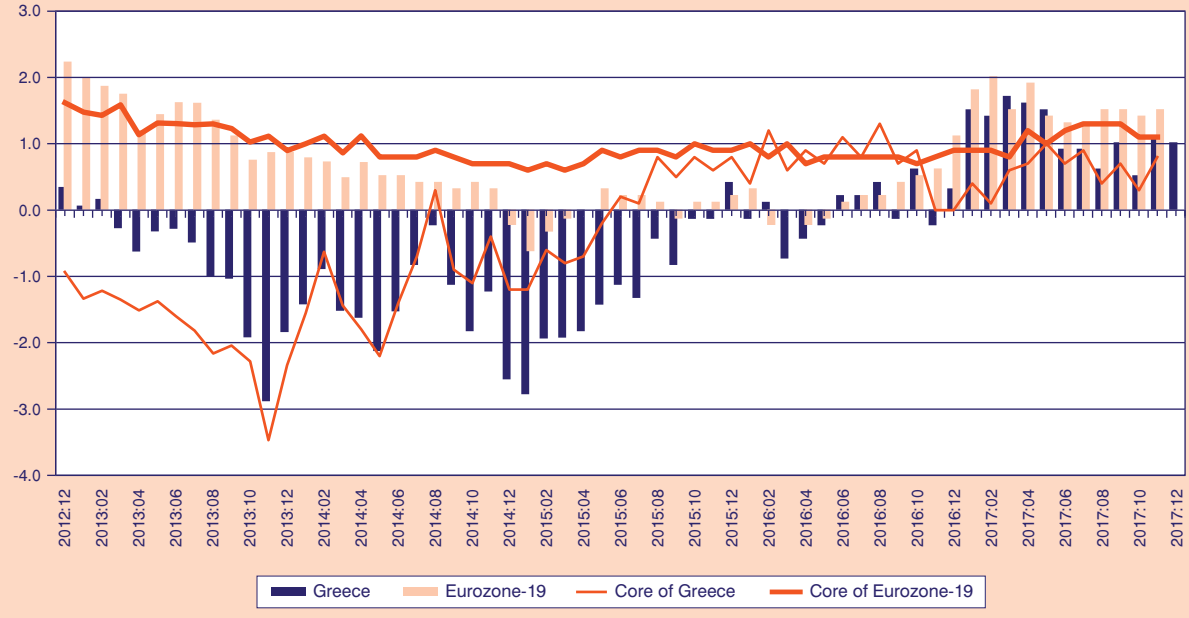
1. The only exception is September 2017 (-0.1%).

DIAGRAM 1.2.1
CPI, % change relative to the respective month of the previous years



Source: ELSTAT, EUROSTAT.

DIAGRAM 1.2.2
Harmonized indices of consumer prices, % change relative to the respective month of the previous years



Source: ELSTAT, EUROSTAT.

(a) the “Household equipments” category (by 2.2%) mainly due to decreases in household textile products, large household appliances (electrical or not) and household consumption items;

(b) the “Miscellaneous goods and services” category (by 2.2%) basically due to reductions of the prices of personal care products as well as of vehicle insurance;

(c) the “Clothing and Footwear” category (by 1.6%) due to price decreases of these products;

(d) the “Recreation and culture” category (by 1.6%) mainly due to decreases in the prices of optical and visual equipments of PCs as well as other durable recreation goods and services;

(e) the “Health” category (by 1.2%) especially due to price decreases in pharmaceutical products as well as in paramedical and dentistry services. Part of this decrease was offset by the price increases in hospitals and clinics;

(f) the “Housing” category (by 0.8%) due to increases in rents and electricity bills. Part of this decrease was offset by the increases in prices of residential heating.

Regarding the harmonized CPI of the euro area (HICP-EU19), we can report that in the last few (6-7) months, it has been moving with an upward trend, ranging from 1.3% to 1.5%. This inflationary rate is a small “distance” from the ECB target rate (almost 2.0%). During the same period, the core inflation of HCPI-EU19 (does not include unprocessed food and energy) has also continued to move with an upward trend, ranging from 1.1% to 1.3%.

On the other hand, from Diagram 1.2.2, we can observe that, after May 2017, the Greek HCPI has been moving with a percentage rate slightly below 1.0%. Additionally, its core appears with a similar percentage rate (see Diagram 1.2.2). In conclusion, and based on the evidence of the last few months, we infer that the rates of change of the Greek HCPI and its core are falling short of the corresponding Eurozone rates.

1.3. 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 last quarter of 2017 and the first two quarters of 2018.[1] 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 includes 126 variables, covering the main aspects of economic activity in the country on a quarterly basis, spanning the time period from January 2000 up to September 2017. 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 and the labor market) and nominal variables (such as the general and individual consumer price indices, monetary variables, bond yields, interest rates, exchange rates and housing price indices). In addition, the data sample includes a considerable number of variables reflecting expectations and assessments of economic agents (such as economic sentiment and business expectations indicators). It is noted that the seasonal adjustment of all time series is carried out by use of the Demetra+ software, which is freely available from Eurostat.[2]

According to the econometric estimates presented in Table 1.3.1, and having incorporated published (provisional) seasonally adjusted GDP data up to the third quarter of 2017 and the estimated positive rate of change of 2.5% for the last quarter of 2017, the mean annual rate of change of real GDP is predicted at 1.5% for the whole year 2017. This forecast represents a significant upward revision relative to the forecast of the preceding period of reference (1%) and seems to confirm that 2017 will mark the year of transition to a positive annual rate of change of the GDP. In addition, the estimated rates of change for the first two quarters of 2018 indicate a considerable improvement in economic conditions during the first half of the year, as compared to the corresponding time period of 2017, uncovering an increasing trend in the estimated positive percentage changes between the first and second quarter of 2018. More specifically, the forecast for the first half of 2018 lies at 1.7%, with the predictions for the rates of change of real GDP in the first and second quarters amounting to 1.6% and 1.9%, respectively.

The above-presented forecasts of the rate of change of real GDP reflect the key dimensions of the most recent short-term developments in the Greek economy and are compatible with the course of the incorporated economic data referring to the first nine months of 2017. In particular, taking into account the latest sta-

TABLE 1.3.1 Real GDP rate of change *(%, y-o-y)*

	2017	2018	
Quarters	**2017Q4**	**2018Q1**	**2018Q2**
Quarterly rate of change	2.45 [2.39 , 2.50]	1.60 [1.49 , 1.71]	1,86 [1.70 , 2.03]
Mean annual (2017) – and six-month (first half of 2018) rate of change	1.46* [1.45 , 1.48]	1.73 [1.59 , 1.87]	

Note: Values in brackets indicate the lower and upper boundaries of the 95% confidence interval of the forecasts.

* The figure incorporates official (provisional) seasonally adjusted data for the first three quarters of 2017.

1. The date of the forecast is 10 January 2018.

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

tistics for the third quarter of 2017, alongside the notable upward revision of the rate of change of the real GDP for the second quarter undertaken by ELSTAT, the estimates confirm the switch to economic recovery conditions in the country. Additionally, the current forecast, following the previous one, points to an enhanced growth process towards the end of 2017. The projected recovery of the Greek economy during 2017 is associated with the activation of the anticipated positive effects arising from the gradual establishment of a stable economic environment. Some of the crucial factors shaping such an environment concern the compliance with the agreed commitments, within the framework of the financial assistance programme in force, with the emphasis being on the rebalancing of major fiscal aggregates and the promotion of specific necessary structural reforms. Against this background, progress was made in creating certain conditions for the smooth financing of the Greek economy, thus contributing toward enhancing the domestic production capacity, in order to fight unemployment and ensure long-term viable economic growth. At the same time, the observation that growth rates remain moderate in the current juncture appears to be linked to both delays in the legislation and implementation of certain required economic measures and the overall financial burden weighing on households and enterprises.

The above findings and assessments are in line with the recent favourable course of a significant number of economic variables, as observed on the basis of the latest data, on a non-seasonally adjusted basis, for the third quarter of 2017. More specifically, indicative are the positive trends in: (a) goods and services' exports, (b) basic industry indicators, such as the general industrial production index and individual index categories (apart from the category of consumption goods), as well as the general turnover index in industry (overall and for both the internal and external markets, in the latter case with the exception of capital goods), (c) retail trade, according to the corresponding general volume index and the individual index categories (apart from the category of fuel and food-beverages-tobacco), (d) travel and transport receipts, (e) passenger cars and motorcycles, according to private passenger car licenses issued and the turnover index for motor trade, (f) wholesale trade, on the basis of the turnover index, (g) the Athens stock exchange, according to the General Index, (h) spreads, which declined significantly, and (i) certain competitiveness indicators.

Upward trends further characterized most of the indicators reflecting and incorporating business expectations on a sectoral level (excluding business expectations in retail trade), as well as the assessments for new and anticipated orders in industry and exports, and the overall economic sentiment indicator for Greece. Particular importance is additionally attached to the continuation of the gradual reduction in unemployment (on an aggregate level, for the long-term and especially for the newly unemployed) and the preservation of the increasing trend in employment (on an aggregate level, in the secondary and, in particular, the tertiary sector, except for the primary sector), despite the largely adverse conditions still characterizing the domestic labour market.

On the negative side,[3] during the third quarter of 2017, downward trends characterized the major macroeconomic components of consumption (private and public), as well as overall investment and its subcategories (with the exception of the category of transport equipment), but also individual indicators concerning construction, such as the production index in construction.

The projected path of real GDP, in particular for the first half of 2018, can be expected to evolve in a more or less favourable direction than indicated by the above-presented forecasts, depending on a wide range of critical and decisive factors. These relate, on the one hand, to the timely completion of the third review on the current financial assistance programme and the prospects for the country of being able to raise funding directly from financial markets in the summer of 2018. They are also inextricably linked to the creation of favourable conditions for investment to prosper in the country, but also to the enhancement of key sectors in the domestic economy, with the aim to strengthen growth dynamics in the short to medium term and ensure the creation of new jobs. On the other hand, these critical factors are associated with all the potentially adverse effects arising from the implementation of economic measures, incorporating significant additional financial burdens for households and enterprises and exerting further pressure on their tax-paying and financial capacity.

3. Here again, the ascertainments refer to the course of the variables on a non-seasonally adjusted basis.

1.4. The international environment: Recent developments and prospects of the global economic activity

Aristotelis Koutroulis

The global economy experienced a stronger-than-expected upturn in 2017. Interestingly, GDP growth strengthened simultaneously in the majority of advanced and developing economies. Assuming that the international economic environment will remain favourable, it is expected that the growth momentum of the global economy will be sustained throughout the current year.

1.4.1. Trends and developments in the global economy

Economic activity

According to recent estimates, the growth rate of the global GDP accelerated significantly in 2017, reaching an estimated 3.6 percent –0.4 percentage points above 2016 (see Table 1.4.1). This is essentially the highest annual growth rate of global economic activity since the outbreak of the global financial crisis, with GDP growth strengthening in more than half of national economies.

The strong upturn of the global recovery reflects the rebound of investment amid favorable financing conditions, rising profits and, more generally, amid an improved business environment that seems to prevail in most advanced and emerging economies.[1] The expansionary character of fiscal and monetary policy, the strengthening of international trade and the recovery of the manufacturing industry also provided significant support to global economic activity in 2017.

Economic expansion of the global economy is forecasted to pick up to 3.7% in 2018 (see Table 1.4.1). Positive deviations from this figure may arise if economic activity in major advanced and emerging economies accelerates further, reflecting either a stronger-than-expected rebound in investment in the US and the Eurozone or improved conditions in large commodity exporters. On the other hand, one cannot rule out the possibility of a slowdown in global economic activity as risks remain on the downside. Downside risks to the outlook include the deterioration of business financing conditions, unexpected changes in the monetary policy of advanced economies, a rise in the number of protective measures against international trade, and a possible escalation of geopolitical tensions around the globe (World Bank, 2018).

In the long run, the greatest threat to the global economy is the deceleration of the growth rate of global potential GDP. This reflects the low rates of capital accumulation, the weak increase of total factor productivity and the pattern of evolution of key demographic variables in most countries of the world over the past few years. As these trends are expected to prevail over the next decade, the growth rate of the global potential GDP is likely to fall by 0.2% over the long term.

Inflation and Unemployment

In 2017, the Consumer Price Index in advanced economies registered an increase of about one percentage point (see Table 1.4.2), partly reflecting increased demand and rising commodity prices. Nevertheless, international and domestic competition, technological progress and anemic wage increases seem to hold advanced economies' core inflation at low levels. In the same year, inflation has slowed down in most developing economies, with the fall in inflationary pressures becoming particularly noticeable in Brazil, Russia and India (see Table 1.4.2). At this juncture there are no indications for inflationary or deflationary pressures building up. This means that inflation rates in 2018 will remain close to 2017 rates (see Table 1.4.2).

According to the International Labor Organization (ILO), global unemployment stood at 5.6% in 2017 (see Table 1.4.3). In absolute terms, this figure amounts to 192.7 million unemployed persons. For the current year, it is projected that global unemployment will fall 0.1 percentage point (ILO, 2018). The persistence of unemployment at marginally lower rates relative to the ones that prevailed during the peak of the global economic crisis raises important questions about the ability of the global economy to create decent jobs and distribute more fairly the benefits of the current economic expansion. The increase in involuntary part-time work is another cause for concern (OECD, 2017).

Regarding wage rate developments, the growth rate of wages is projected to remain subdued. This chiefly reflects the relatively poor performance of labour productivity, the low inflation rates, the reduced bargain-

1. According to a recent World Bank report, 75% of the acceleration in the growth rate of global GDP is attributed to the rebound of investment (World Bank, 2018).

TABLE 1.4.1 Real Gross Domestic Product[1,2]

(annual percentage changes)

	2016					2017*					2018**				
	IMF	EC	UN	OECD	WB	IMF	EC	UN	OECD	WB	IMF	EC	UN	OECD	WB
World economy	3.2	3.2	3.1	3.1	3.2	3.6	3.5	3.6	3.6	3.7	3.9	3.7	3.7	3.7	3.7
Advanced economies	1.7	1.8	1.6	:	1.6	2.3	2.4	2.2	:	2.3	2.3	2.2	2	:	2.2
USA	1.5	1.5	1.5	1.5	1.5	2.3	2.2	2.2	2.2	2.3	2.7	2.3	2.1	2.5	2.5
Euro Area	1.8	1.8	1.8	1.8	1.8	2.4	2.2	2.1	2.4	2.4	2.2	2.1	2	2.1	2.1
Japan	0.9	1	1	1	0.9	1.8	1.6	1.7	1.5	1.7	1.2	1.2	1.2	1.2	1.3
United Kingdom	1.9	1.8	1.8	1.8	1.9	1.7	1.5	1.7	1.5	1.6	1.5	1.3	1.4	1.2	1.4
Developing economies	4.4	4.3	3.8	:	3.7	4.7	4.5	4.3	:	4.3	4.9	4.8	4.6	:	4.5
Brazil	-3.5	-3.6	-3.6	-3.6	-3.5	1.1	0.7	0.7	0.7	1	1.9	1.8	2	1.9	2
Russia	-0.2	-0.2	-0.2	-0.2	-0.2	1.8	1.7	1.8	1.9	1.7	1.7	1.6	1.9	1.9	1.7
India	7.1	7.9	7.1	7.1	7.1	6.7	6.6	6.7	6.7	6.7	7.4	7.5	7.2	7	7.3
China	6.7	6.7	6.7	6.7	6.7	6.8	6.8	6.8	6.8	6.8	6.6	6.5	6.5	6.6	6.4

Source: IMF, *World Economic Outlook*, *Update*, January 2018; OECD, *OECD Economic Outlook*, (Vol. 2017/2); European Commission, *European Economic Forecast,* Autumn 2017; United Nations, *World Economic Situation and Prospects 2018*; World Bank, *Global Economic Prospects,* January 2018.

* Estimations, ** Projections.

1. The observed differences between the available macroeconomic projections partly reflect the differences between the macro-econometric models and the data used by each international organization.

2. The sub-group of emerging economies is included in the group of developing economies.

TABLE 1.4.2 Inflation[1]
(annual percentage changes)

	2016				2017				2018*			
	IMF	EC	UN	OECD	IMF	EC	UN	OECD	IMF	EC	UN	OECD
Advanced economies	0.8	:	0.7	:	1.7	:	1.5	:	1.7	:	1.9	:
USA	1.3	1.3	1.3	1.3	2.1	2	1.7	2	2.1	2.1	2.1	2
Euro Area	0.2	0.2	0.2	0.2	1.5	1.5	1.4	1.5	1.4	1.4	1.6	1.5
Japan	-0.1	-0.1	-0.1	-0.1	0.4	0.4	0.3	0.4	0.5	0.8	1.4	1
United Kingdom	0.7	0.7	0.7	0.6	2.6	2.7	2.8	2.7	2.6	2.6	2.7	2.6
Developing economies	4.3	:	5.2	:	4.2	:	4.4	:	4.4	:	4.3	:
Brazil	8.7	:	8.7		3.7	:	3.4	3.6	4	:	3.7	3.9
Russia	7	:	7.1		4.2	:	3.9	3.7	3.9	:	4.4	3.8
India	4.5	:	4.9		3.8	:	3.5	3.2	4.9	:	4.5	4.6
China	2	:	2		1.8	:	1.5	1.5	2.4	:	2.5	4.8

Source: IMF, *World Economic Outlook*, *Update*, January 2018; OECD, *OECD Economic Outlook*, (Vol. 2017/2); European Commission, *European Economic Forecast,* Autumn 2017; United Nations, *World Economic Situation and Prospects 2018*.

* Projections

1. The sub-group of emerging economies is included in the group of developing economies.

TABLE 1.4.3 Annual unemployment rates

	Unemployment rate		Unemployed (million)	
	2017	2018*	2017	2018*
World economy	5.6	5.5	192.7	192.3
Advanced economies	5.7	5.5	34.1	32.8
Developing economies	5.3	5.3	15.6	16.1
Emerging economies	5.6	5.5	143	143.4

Source: International Labour Office, *World Employment Social Outlook, Trends 2018*.

* Projections.

ing power of workers and the existence of a large pool of long-term unemployed workers worldwide (UN, 2018 and OECD, 2017).

1.4.2. Economic developments across the globe

Advanced economies

In 2017 growth in advanced economies picked up to an estimated 2.3% (see Table 1.4.1), mainly due to increased capital expenditures and higher external demand. For the current year it is projected that the rate of economic expansion will fall marginally given the expected gradual normalization of monetary policy in major advanced economies.

The USA: In 2017 the GDP growth rate rose to 2.2% (from 1.5% in 2016) reflecting stronger private investment, rising profits and a dynamic increase in external demand due to the weakening of the dollar. For the current year, it is expected that households' and investors' increased confidence will help the economy to keep its momentum. Given that the federal government

has already announced a reduction in corporate and personal income tax rates, fiscal policy is expected to play a positive role as well. Regarding monetary policy, most analysts expect that the Federal Reserve will continue the gradual normalization of its policy.

The Eurozone: Helped by domestic and external demand, the recovery of the economy in 2017 proved markedly stronger than expected (ECB, 2017). With the economy growing faster and labour market conditions improving gradually, the unemployment rate fell to 9.1%.[2] During the same year, inflation moved closer to the 2% target, eliminating the risk of deflationary pressures (see Table 1.4.2). The economic expansion is projected to continue in 2018, as private consumption and investment, as well as exports to third countries, are expected to remain strong. Against this background, unemployment is projected to fall to 8.5%.

Japan: Growth has strengthened considerably in 2017, driven by increased exports and favourable monetary and credit conditions. The expansionary fiscal policy stance played a positive role as well. The prospects of the Japanese economy remain positive for 2018, though a small weakening of economic activity is forecast due to the gradual withdrawal of expansionary fiscal policy measures. Specifically, provided that exports remain strong, GDP growth should reach 1.2%.

The United Kingdom: In 2017, the UK economy showed signs of a slowdown with the rate of growth declining marginally by 0.1%-0.3%. At the same time, unemployment registered a record low, reaching 4.4%. The improvement of labour market conditions, however, is not expected to be permanent, as the uncertainty surrounding the conditions of Brexit might cause a further deceleration of economic growth. To reduce the extent to which uncertainty weighs on economic activity, British economic authorities are expected to adopt an expansionary fiscal and monetary policy stance.

Developing economies

In line with advanced economies, growth in emerging and developing economies strengthened in 2017 (see Table 1.4.1). This mainly reflected the recovery of major commodity exporters like Russia and Brazil which, in response to rising energy and commodity prices, returned to positive growth rates. Regarding commodity importers, the two key representatives of this group –China and India– are still the fastest growing emerging economies, significantly outperforming the rest of the world.

Despite the fact that growth rates picked up in most developing economies, the overall picture of their economic performance suggests that the developing world has lost some of the momentum it gained a few years ago. On the one hand, this loss of momentum delays the desired convergence of developing economies towards the advanced ones. On the other hand, it deteriorates the growth prospects of the world economy, as an increasing proportion of world GDP is generated in developing economies (OECD, 2017).

1.4.3. World trade and commodity prices

In 2017, international trade growth accelerated to 4.7% from 2.6% in 2016 (see Table 1.4.4). This acceleration was based on a synchronized increase in global economic activity, a strong recovery of the Eurozone, and a rise in global manufacturing output. Trade in semiconductors, mechanical and electrical/electronic equipment and other related products, due to increased investment, played a significant role as well. Provided that new trade restrictions in major economies are avoided, the favourable economic conjuncture suggests that international trade will maintain its momentum during the current year.

Turning to commodity prices, the rise in global economic activity in 2017 signaled the end of an era of low prices. In particular, the average oil price rose by 24%,

TABLE 1.4.4 World trade volume[1]
(annual percentage changes)

	World trade volume (goods and services)		
	2016	**2017***	**2018****
World economy	2.6	4.7	4.6
Advanced economies	2.6	4.1	4.3
Developing economies	2.3	5.9	5.1

Source: IMF, *World Economic Outlook, Update,* January 2018.

* Estimations, ** Projections.

1. The sub-group of emerging economies is included in the group of developing economies.

2. During the second quarter of 2017, the unemployment rate fell to 9%, which is the lowest rate since the end of 2008 (ECB, 2017).

picking up to $53 per barrel, while basic metals prices increased by 22%. For 2018, the average oil price is expected to continue rising and edge up to $58 per barrel.

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2. Public finance

2.1. Evolution of the State Budgets 2017-2018

Elisavet I. Nitsi

The 2017 State Budget execution, according to the most recent data of the General Accounting Office,[1] on a modified cash basis, shows a deficit of 4,267 million euros or 2.34% of the Gross Domestic Product (GPD),[2] against 2,810 million euros or 1.61% of GDP in 2016, as well as the targets for a deficit of 5,123 million euros or 2.87% of GDP set by the 2018 State Budget (Table 2.1.1). It should be noted that the initial target set for 2017, by the 2017 State Budget, was 3,793 million euros or 2.1% of GDP. Accordingly, the primary surplus reached 1,941 million euros or 1.09% of GDP, against 2,778 million or 1.59% in 2017 and a target of 877 million or 0.49% of GDP based on the 2018 State Budget (Table 2.1.1). Note that the original target by the 2017 State Budget was 3,793 million euros or 2.10%. These figures do not include the impact of the program for past years' arrears and pending retirement claims. If included, the primary outcome of the 2017 State Budget would show a deficit of 183 million euros or 0.10% of GDP, while the State Budget Balance would exhibit a deficit of 6,391 million euros or 3.58%.

On the other hand, the 2018 State Budget[3] predicts for 2018 a primary surplus of 4,257 million euros, which is a significant increase (of 2.32 billion euros) in comparison to 2017, but also higher than the forecast made in May 2017 by the Medium-Term Fiscal Strategy (MTFS) 2018-2021 by 737 million euros. These figures, if the impact of the program for past years' arrears and pending retirement claims are included, will reach in 2018 a State Budget primary surplus of 4,071 million euros or 2.20% of GDP and a State Budget deficit of 3,819 million euros or 1.75%, respectively.

In addition, net revenues of the 2017 State Budget are lower compared to the corresponding period of the previous year. These amounted to 51,423 million euros, down by 2.74 billion euros or 5.06%, while they lag behind the target set for revenues from both the 2018 State Budget, which amounted to 52,152 million euros, that is a loss of 729 million euros or 1.4%, and the MTFS 2018-2021 at 55,281 million euros, reduced by 3.86 billion euros or 6.98%. Moreover, these revenues are also lower than the 2017 State Budget, which projected revenues to reach 54,529 million euros, down by 3.11 billion euros or 5.7%. The reduced revenues are mainly due to the fall in the Public Investment Program's (PIP) revenues. For 2018, net revenues of the State Budget are projected to reach 54,244 million euros, up by 2.82 billion euros compared to 2017, but are revised from the MTFS 2018-2021, since they are down by 764 million euros or 1.39%.

More specifically, net Ordinary Budget revenues of 2017 amounted to 48,973 million euros, reduced by 1 billion euros compared to 2016, while they are higher by 258 million euros compared to the 2018 State Budget target, but lower by 904 million euros against the MTFS target of 596 million euros compared to the 2017 State Budget. Ordinary Budget revenues are lower than in 2016 despite the increase in revenue from the privatization of 1.5 billion euros and the significant increase in revenue returns that amounted to 5,577 million euros, increased by 2.31 billion euros or 70.9%. On the contrary, the interest payments, amounting to 6,208 million euros, increased by 626 million euros or 11.21% over the corresponding period of 2016, against targets of the 2018 State Budget by 208 million euros or 3.47%, the MTFS by 558 million euros or 9.88% and the 2017 State Budget by 658 million euros or 11.86%. For 2018, State Budget revenues are predicted to rise to 50,509 million euros, up 1.54 billion euros or 3.14% over 2017. This increase is expected to result from a reduction in the tax refund.

On the other hand, the 2017 State Budget shows a decrease in its expenditures, as they amounted to 55,690 million euros, decreased by 1.28 billion euros or 2.25% compared to 2016, while they are clearly less than the target set by both the MTFS, which was projected to

1. The State Budget Execution Bulletin, December 2017, Ministry of Finance, January 2018.

2. According to the GDP projections for 2018 from the 2018 State Budget.

3. 2018 Government Budget Report, Ministry of Finance, November 2017.

TABLE 2.1.1 State Budget 2017-2018, million euros on a modified cash basis

	2016	2017			2018		
	Outcome	Outcome	Budget 2018 Estimates	MTFS 2018-2021 Estimates	Budget 2017 Provisions	Budget 2018 Provisions	MTFS 2018-2021 Provisions
State Budget							
Net Revenue	54,161	51,423	52,152	55,281	54,529	54,244	55,008
Expenditures	56,970	55,690	57,265	56,594	56,286	55,188	56,104
Ordinary Budget							
Net Revenue	49,982	48,973	48,715	51,664	50,374	50,509	51,273
- Recurring revenue	52,336	52,330	52,055	52,055	51,001	52,429	52,938
Direct taxes	21,839	20,622	20,288	20,288	20,415	20,766	21,453
Indirect taxes	25,680	26,942	26,917	26,917	26,443	27,390	27,502
Earnings from EU	415	388	510	510	523	331	321
Total non–tax revenues	4,402	4,378	4,340	4,340	3,620	3,942	3,662
- Non–recurring revenue	429	350	694	694	273	304	283
- Revenues from privatizations	106	1,542	1,542	1,542	2,044	1,110	1,121
- Revenue refunds[3]	3,263	5,577	5,577	3,324	3,289	3,648	3,383
Expenditures	50,683	49,740	50,515	57,265	49,345	48,438	49,354
- Primary expenditures	45,095	43,532	44,514	44,194	43,454	43,238	43,454
Salaries & Pensions	18,065	12,143	12,217	12,366	12,540	12,660	*12,540*
Grants to social security funds, Medical care, Social protection	15,630	21,331	21,397	20,268	20,210	19,438	19,649
Operational and other expenditures	5,309	5,388	5,813	5,704	5,754	5,333	5,294
Attributable resources	3,248	3,049	3,108	3,119	3,119	3,262	3,395
Reserve	0	0	346	1,000	1,000	1,000	1,000
- Interest payments	5,582	6,208	6,000	5,650	5,550	5,200	5,900

Public Investment Program (PIP)							
Net Revenue	4,178	2,449	3,427	3,427	4,155	3,735	3,380
Expenditures	6,288	5,950	6,750	6,750	6,750	6,750	7,300
Cash base State Budget primary balance[1,2]	2,778	1,941	877	877	3,793	4,257	3,520
% GDP	1.59%	1.09%	0.49%	0.48%	2.10%	2.30%	1.87%
Cash base State Budget balance[2]	-2,810	-4,267	5,123	-5,123	-1,757	-943	-2,280
% GDP	-1.61%	-2.39%	2.87%	-2.83%	-0.97%	-0.51%	-1.21%
ESA State Budget primary balance[1,2]	-1,073	-183	1,356	2,580	2,431	4,071	5,124
% GDP	-0.62%	-0.10%	0.76%	1.42%	1.34%	2.20%	2.73%
ESA State Budget balance	-6,660	-6,391	-5,144	-3,970	-3,819	-3,229	-1,876
% GDP	-3.82%	-3.58%	-2.88%	-2.19%	-2.11%	-1.75%	-1.00%
GDP	174,199	178,579	180,817	178,579	181,204	184,691	187,745

Source: Government Budget Report 2017 and 2018, Ministry of Finance.
Medium-Term Fiscal Strategy 2018-2021, Ministry of Finance, May 2017.
General Accounting Office, State Budget Execution Monthly Bulletin December 2017, Ministry of Finance, January 2018.

Notes:

1. Deficit (-)/Surplus (+).
2. The figures include the impact of the program for past years' arrears and pending retirement claims.
3. Excluding refunds from the program for settling arrears.

rise to 55,281 million euros, down by 904 million euros or 1.6%, and the 2018 and 2017 Budgets, as they were reduced by 1.58 billion euros or 2.75% and 596 million euros or 1.06%, respectively. This decrease is owed to a significant reduction in salaries and pensions due to the pension reform and the cut in pensions in 2017 that offset the 36.5% increase in expenditures for insurance. For 2018, a relative stabilization in expenditure, with a small downward trend, is expected, as the wage and pension bills are expected to be stable and less funds for social security will be needed.

More specifically, 2017 State Budget expenditures amounted to 49,740 million euros, showing a decrease of 943 million euros or 1.86% versus 2016, while they decreased by 775 million euros or 1.53% against the targets set with the 2018 State Budget and 7.53 billion euros or 13.14% of the MTFS target. Compared to the 2017 State Budget, the Ordinary Budget expenditures increased by 395 million euros or 0.8% of GDP. The reduction in Ordinary Budget expenditures are due to the reduction of primary expenditures and the PIP. Primary expenditures amounted to 43,522 million euros, and fell by 1.56 billion euros or 3.47% of GDP in comparison to 2016 and 662 million euros or 1.5% against the MTFS target and 982 million euros or 2.21% versus the 2018 State Budget. On the contrary, interest payments, which amounted to 6,208 million euros, increased by 626 million euros or 11.21% of GDP versus 2016, as against the target set by the 2018 State Budget by 208 million euros or 3.47% and the MTFS by 558 million euros or 9.88% of GDP, and the 2017 State Budget by 658 million euros or 11.86% of GDP. For 2018, a further reduction in Ordinary Budget expenditures is expected; they will reach 48,438 million euros, down by 1.3 billion euros or 2.62% of GDP over 2017 and 913 million compared to the target set by the MTFS. This decrease is expected to occur from primary expenditures, by 294 million euros or 0.68% of GDP, and interest payments, by 1 billion euros or 16.24% of GDP.

From the above, it is clear that the 2017 Ordinary Budget, on a cash basis, is very close to the target set by the 2018 State Budget. However, the Public Investment Program is diverging, as in previous years, being used as a tool to balance/achieve the objectives agreed under the Financial Assistance Facility Agreement. However, both the initial targets set by the 2017 State Budget, as well as, albeit on a much smaller scale, the MTFS 2028-2021 show more significant deviations, which illustrates exactly the effort to adjust to targets agreed in each assessment of the economic adjustment program in 2017. Referring to the 2018 State Budget, the achievement of the primary surplus target of 3.5% of GDP, in terms of the Finance Assistance Facility Agreement, is not expected to be a problem according to the Ministry of Finance, based on estimates for GDP and the planned economic policy, as the provision for the surplus amounts to 7.716 million euros or 4.2% of GDP.

2.2. The evolution and structure of public debt

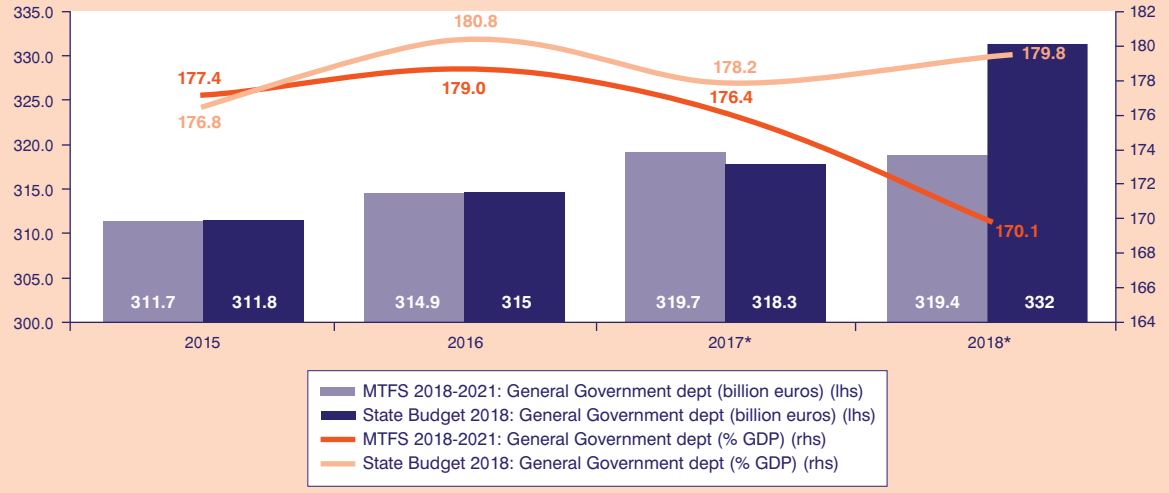
Christos Triantopoulos

The evolution of public debt in 2017 was affected by the performance of fiscal adjustment and cash management, while the public debt in 2018 is estimated to be heavily burdened by the planning regarding Greece's efforts to borrow money outside the safety net of the Support Mechanism. In particular, in 2017, according to the State Budget of 2018, the General Government debt is estimated at € 318.3 billion (or 178.2% of GDP). This estimation is lower than the 2018-2021 Medium-Term Financial Strategy (MTFS) projection, according to which the General Government debt would be set in 2017 at € 319.7 billion (or 176.4% of GDP) (Figure 2.2.1), but also higher than 2016, when it reached € 315 billion (or 180.8% of GDP). The increase in the General Government debt in 2017 compared to 2016 is attributed, along with the fiscal performance, to the increase in cash reserves through the European Stability Mechanism (ESM) and to the financing –also through the Support Mechanism– of the arrears clearance program. It is also worth noting that the index of public debt as a GDP ratio has deteriorated due to the (downward) revision of the economy's growth rate.

The difference in the estimates of the level of public debt between the MTFS 2018-2021 and the State Budget 2018 is higher for 2018. In particular, according to the State Budget of 2018, the General Government debt is projected to increase in 2018 to € 332 billion (or 179.8% of GDP) compared to the MTFS 2018-2021 estimate which stood at € 319.4 billion (or 170.1% of GDP). This is a significant increase in public debt in 2018 –about € 14 billion compared to 2017– which is due to (a) even greater borrowing from the ESM in order to create a cash buffer in an effort to attract funding outside the Support Mechanism, (b) financing –by the Support Mechanism– of the arrears clearance program, and (c) replacing the debt based on short-term loans, an important part of which is intergovernmental (see: repos), which will result in an increase of the (total) debt of the General Government.

In terms of the Central Government, when the intergovernmental debt is not taken into account (e.g. short-term borrowing through repos agreements with General Government entities), the debt in 2017, according to the State Budget, is estimated at € 332.8 billion, while according to the data of the General Government Monthly Bulletin, in November it reached € 330.4 billion. Regarding the structure of the Central Government debt, the differences observed in November 2017, compared to July 2017, are due to the increase of short-term loans through repos. In particular, the share of Central Government debt held in bonds stood in November 2017 at 15.2% of the debt (€ 48.8

FIGURE 2.2.1
General Government debt performance and estimates



Source: Medium-Term Financial Strategy 2018-2021 (May 2017) and State Budget 2018 (November 2017).

Note: * Estimate.

TABLE 2.2.1 Structure of Central Government debt

	2011		2013		2016		November 2017	
	Million euros	% debt	Million euros	% debt	Million euros	% debt	Million euros	% debt
A. Bonds	**259,774.18**	**70.6**	**76,296.25**	**23.7**	**56,718**	**17.4**	**50,182**	**15.2**
Bonds issued domestically	240,940.37	65.5	73,415.28	22.8	54,354	16.7	48,408	14.7
Bonds issued abroad*	18,833.81	5.1	2,880.97	0.9	2,364	0.7	1,774	0.5
B. T-Bills	**15,058.63**	**4.1**	**14,970.82**	**4.7**	**14,890**	**4.6**	**14,943**	**4.5**
C. Loans	**93,145.19**	**25.3**	**230,210.90**	**71.6**	**243,388**	**74.6**	**248,196**	**75.1**
Bank of Greece	5,683.99	1.5	4,734.61	1.5	3,321	1.0	2,851	0.9
Other domestic loans	836.71	0.2	115.50	0.0	188	0.1	247	0.1
Financial Support Mechanism loans	73,210.36	19.9	213,152.48	66.3	227,660	69.8	233,143	70.6
Other external loans **	13,414.13	3.6	12,208.31	3.8	12,219	3.7	11,955	3.6
D. Short-term loans * **	**0.00**	**0.0**	**0.00**	**0.0**	**11,363**	**3.5**	**17,107**	**5.2**
Total (A+B+C+D)	**367,978.00**	**100.0**	**321,477.97**	**100.0**	**326,359.00**	**100.0**	**330,428**	**100.0**

Source: Public Debt Bulletin (December 2011, December 2013, December 2016) and *General Government Bulletin* (November 2017).

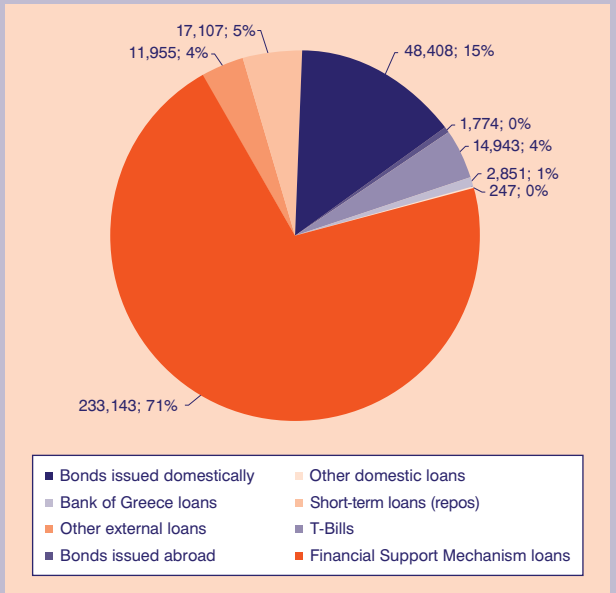
Note: * Including securitization issued abroad.
** Including special purpose and bilateral loans.
*** Including repos.

billion), while the share of debt based on loans of the Support Mechanism stood at 70.6% of the debt, after preventing disruption in financing flows from the Support Mechanism in the previous period (Table 2.2.1). In addition, Central Government short-term funding remains at the same level as in the previous months and, in particular, Treasury bills, remained constant at € 14.9 billion (Figure 2.2.2).

Short-term loans by General Government entities through repos continued their upward trend –after a fall in September– resulting in an increase of € 5.8 billion in November 2017 compared to 2016 and of € 7.1 billion compared to 2015. Thus, the Central Government's short-term loans through the sale of repos to General Government entities reached € 17.1 billion in November 2017, constituting now 5.2% of the Central Government debt. It is worth noting, however, that, according to the State Budget of 2018, it is estimated that these loans will be limited to € 15 billion and will be further reduced in 2018 –in the context of replacing short-term loans with long-term loans– standing at the end of the year at € 9 billion Euros (Figure 2.2.3).

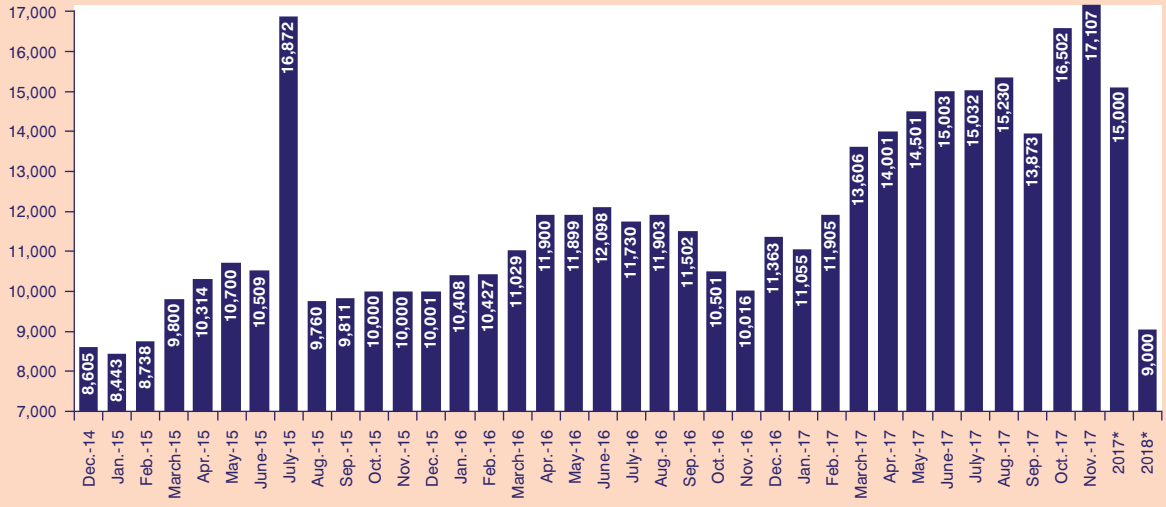
As noted in previous relevant analyses, alongside the structure of the Central Government debt, chang-

FIGURE 2.2.2
Central Government debt (November 2017), (million € ; % debt)



Source: Ministry of Finance, *General Government Bulletin* (November 2017).

FIGURE 2.2.3
Central Government short-term loans (repos)



Source: Ministry of Finance, *General Government Bulletin* (various months).

Note: The July 2015 performance is widely diverted as it includes the short-term "bridge" loan of € 7.16 billion from the European Financial Stability Facility that Greece received during the period between the second and third adjustment programs.

TABLE 2.2.2 Composition of Central Government debt

	December 2011	December 2012	December 2013	December 2016	September 2017
A. Rate					
Fixed rate[1]	62.0%	32.7%	28.5%	30.0%	35.3%
Floating rate[1.2]	38.0%	67.3%	71.5%	70.0%	64.7%
B. Trade					
Tradable	74.7%	34.3%	28.4%	21.9%	20.0%
Non-tradable	25.3%	65.7%	71.6%	78.1%	78.0%
C. Currency					
Euro	97.5%	96.7%	95.9%	97.0%	97.3%
Non-Euro area currencies	2.5%	3.3%	4.1%	3.0%	2.7%

Source: Public Debt Bulletin (December 2011, December 2012, December 2013, December 2016, September 2017).

Notes: 1. Fixed/floating participation is calculated including Interest Rate Swap transactions.
2. Index-linked bonds are classified as floating rate bonds.

es also occur in the Central Government's debt profile. Thus, in September 2017 –due to the increase in short-term loans– the share of non-tradable debt stood at 78.4% while its share at a floating interest rate stood at 64.7%, contrary to what was the case before 2012, as the debt composition has been strongly influenced –as noted before– by the country's financing through the Support Mechanism, which is based on non-tradable and floating rate loans (Table 2.2.2).

Lastly, with regard to the long-term sustainability of Greek public debt, 2017 was marked –alongside the new effort to return to market financing– by the implementation of short-term measures to strengthen the sustainability of public debt. These are measures concerning (a) the smoothing of European Financial Stability Facility (EFSF) funding so as to have the 32.5-year average spread over the entire range of the loan, (b) the exchange of EFSF floating rate bonds (which were available for the recapitalization of banks) with fixed-rate securities, and (c) swaps of (more tradable) bonds between Greece and private bondholders. The successful implementation by the Public Debt Management Agency of the abovementioned measures resulted in a review of the ESM's forecasts regarding the impact of short-term measures on the debt sustainability analysis. In particular, the impact that was estimated at 20% GDP in 2060 is now estimated by the ESM at 25% of GDP in 2060. In terms of gross financing needs, the impact has increased from 5 percentage points to 6 percentage points.

The long-term sustainability of public debt, as it has been pointed out in previous analyses, will, of course, be determined, along with the promotion of structural measures, by the preservation of fiscal stability (in the framework of the fiscal adjustment program), the formation of conditions and trends promoting economic growth and the gradual recovery of access to international markets.

3. Human resources and social policies

3.1. Recent developments in key labour market variables

Ioannis Cholezas

3.1.1. Introduction

In this issue the analysis focuses on the evolution of employed individuals. There is a discussion regarding the employed individual's core characteristics, such as gender, age, education, region of residence and industry of economic activity. Moreover, the quality of employment is addressed, which is approximated by working hours, i.e. full vs. part-time employment; the incidence of underemployment; limited duration work contracts; weekly working hours, i.e. capturing work in shifts, among other things; wages; productivity and unit labour cost. Next, a short description of developments in unemployment follows with respect to gender, age (focusing on youth), level of education completed and region of residence. Finally, the most recent developments in paid employment are also discussed, since it is still the most widespread type of employment contract, i.e. 66% of all employed individuals are still employees. In general, labour market conditions seem to have improved compared to the past, although there are still some signs of concern.

3.1.2. Employment

The quantitative features of employment

The most recent data from the Labour Force Survey (LFS) conducted by ELSTAT refer to the third quarter of 2017 (i.e. 2017c) and suggest that the number of the employed has increased by 32.3 thousand compared to the second quarter of the year and by 87 thousand persons compared to the respective quarter in 2016. Graph 3.1.1 summarizes the evolution of employed persons in general, by gender and by age. Thus, the number of employed men increased by 39.5 thousand, while the number of employed women decreased compared to the second quarter of 2017. These are standard changes due to the seasonal nature of economic activity. On a year-on-year basis, the number of both employed men and employed women increased, although approximately three quarters of the overall change is due to the increase in employed men. These changes led to the increase of the employment rate by 1.1 percentage point (pp) on a year-on-year (y-o-y) basis, which reached 41.7% in the third quarter of the year (all people above 15 years old).

The employment rate for women continues to fall short to that of men, by 16.7 pp, and it barely reached 34%. This means that about half of men and one-third of women over 15 years old are employed, at least legally, despite the increase in the employment rate recorded over the past few years. According to Eurostat's data drawn from labour force surveys across countries, similarly low employment rates for women are also reported in Italy (36%), Turkey (29.1%) and FYROM (33.4% in 2017b). As far as men are concerned, differences between Greece and the rest of the EU countries are less pronounced, although low employment rates are found in Italy (53.8%), Spain (54.7%), Croatia (52.5% in 2017b) and FYROM (52.3% in 2017b). The employment rate is exceptionally high in Ireland for both men and women (76.2% for women and 84.4% for men). Therefore, Greece falls short when compared to other European and neighbouring countries, which is no surprise based on previous experience. Note also that,

GRAPH 3.1.1
Quarterly and annual changes in the number of the employed

Source: Labour Force Survey, ELSTAT, KEPE processing.

during the crisis, Greece has fallen further behind, due to the reduction of the employment rate by about 7pp.

Youth aged 15-24 had a remarkably low employment rate in 2017c, which does not exceed 15%. As they grow though, it seems that their condition improves fast, since 58.1% of youth aged 25-29 are already working. Moreover, persons aged 30-44 work even more often, as their employment rate reaches 71.7%. The rapid increase in the employment rate is probably due to the end of studies for most persons over 24 years. Italy has an equally low employment rate for youth aged 15-24 (18.1%), as well as FYROM (17.6% in 2017b). Iceland (76.8%), the Netherlands (64%), Switzerland (63.5%) and Denmark (56.9%) lay at the other side of the spectrum characterized by high employment rates for youth. Great deviations in employment rates between age groups typically recorded in Greece[1] are probably the outcome of the fact that studies and work are difficult to combine, while at the same time the youth unemployment rate is very high, as is discussed next.

Employment did not increase uniformly with respect to the level of education, since labour demand, i.e. employers, determines hires when there is a labour supply slack. Compared to the previous quarter, and due to the seasonal fluctuation of economic activity, the number of employed Lyceum graduates (17.4 thousand or 53.9% of total change) recorded the biggest increase, followed by employed upper technical vocational education graduates (including TEI graduates, with 16.8 thousand or 52% of total change). On a year-on-year basis, although both groups just mentioned recorded the biggest increases, important deviations can be traced. For instance, the number of employed AEI graduates decreased compared to 2017b (-9.1 thousand), but increased compared to 2016c (by 33.4 thousand persons). Thus, during the past twelve months approximately four out of ten net new jobs[2] were occupied by AEI graduates. Similarly, the number of employed Master or/and PhD holders decreased on a quarterly basis (1.9%), but increased on an annual basis (3.7%). Therefore, there is a positive overall result. Compared to the third quarter of 2016, the number of employed primary education graduates and those who did not attend school at all are the only group that decreased.

Despite the fact that regional districts have limited or no tools to manage the local labour market, it is interesting to investigate differences amongst them with respect to the evolution of the number of the employed, which are probably due to differences in the production structure of each region. The number of the employed decreased in three regions in the third quarter of 2017 compared to the previous quarter, namely in Thessaly, West Greece and Attica. The number of the employed decreased only in Epirus, by approximately 3% on an annual basis. On the contrary, the increases in the number of the employed in Crete, Thessaly and Continental Greece ranged from 13% to 16%. The number of the employed increased by nearly 2% in Attica, which is the biggest region in terms of population. Interestingly, the employment rate deviated between a maximum of 52.7% in the South Aegean and a minimum of 36.2% in Epirus. The gap exhibits an increasing trend as it reached 16.5 pp in 2017c.[3]

The number of the employed decreased in 10 out of 21 industries compared to the previous quarter. Some 12.5 thousand jobs were destroyed in *Education*, but 12 thousand jobs were created in *Human health and social work activities* and another 23.5 thousand in *Accommodation and food service activities*. In relative terms *Real estate activities* recorded the biggest decrease, since nearly 30% of the jobs were destroyed. Seasonality in economic activity is responsible to a great extent for these changes and, thus, they can be considered short-term and easily reversible. Annual changes, on the other hand, reveal mostly long-term trends. No wonder then that on an annual basis the number of the employed decreased in 8 out of 21 industries. *Real estate activities* lost 43% of the jobs in a year, which is the worst performance. On the other hand, almost 18 thousand jobs were created in *Accommodation and food service activities*, 22 thousand in *Wholesale and retail trade, etc.*, another 14.5 thousand jobs were created in *Human health and social work activities* and approximately 13 thousand in *Other service activities*. Note that the first two are the biggest industries in Greece in terms of the number of employed. Some 4.2 thousand jobs were destroyed during the past year in *Agriculture, forestry and fishery*, the third biggest industry, while 6.3 thousand jobs were created in *Manufacturing*, the fourth biggest industry, which corresponds to a 1.8% increase in the number of the employed. Consequently, it seems that services are expanding and are increasing the number of the employed. The question that needs to be answered is whether this mostly one-sided increase is desirable

1. The reader should be reminded that the Labour Force Survey uses common methodology and definitions in all European countries.

2. The term “net new jobs” refers to the difference between jobs created and jobs destroyed, i.e. dismissals, quits and expirations of temporary contracts.

3. It should be noted that there is a significant seasonality in the deviation of the employment rate. Moreover, the deviation is largest in the third quarter of the year and smallest in the first quarter.

or perhaps measures should be implemented in order to reinforce employment growth in *Manufacturing* and support employment in *Agriculture, forestry and fishery*,[4] which is shrinking, but still remains an important industry in terms of employment.

The composition of the pool of the employed and changes over time

Investigating the composition of the pool of employed of different age cohorts allows one to consider comparative changes and determine which groups were mostly affected by the crisis. In the third quarter of 2017 the share of employed youth aged 15-24 is smaller than it was back in 2008, by approximately 2.2pp, despite policies targeting youth directly. On the other hand, the share of the employed aged 45-64 increased to 42.2% (from 35.3% in 2008), which is the only increase recorded. A more detailed examination of the changes that took place, using Eurostat's data and based on five-year age groups for persons aged 45-64, reveals that all groups increased their share, but groups 45-49 and 50-54 did more so (2.4pp and 2.5pp). Despite many retirements in the private sector, age groups 55-59 and 60-64 also increased their share in the pool of employed persons (1.7pp and 0.4pp). These share increases just described must be balanced by share decreases in younger age groups.

Changes in the composition of the employed with different educational qualifications are also interesting. The share of the employed with an upper technical vocational education certificate increased much faster than other educational groups of the employed. In the third quarter of 2017 they accounted for 20.6% of all employed, a share almost 4pp bigger than 2008. The shares of university graduates and post graduates recorded the second and third biggest changes, with a 2.6pp and 2.5pp increase, respectively. Relying on Eurostat's data again, it seems that the share of the employed with a tertiary education degree, which includes AEI, TEI graduates and Master and/or PhD holders, increased during the crisis by approximately 9pp, reaching 35.2% of all employed individuals. Nevertheless, it seems that the country is simply following the developments in the rest of the EU28 countries. Thus, it seems that the crisis did not block the accumulation of educational qualifications in Greece.

The distribution of employed individuals across regions is an index of the performance of each region in terms of employment. Nearly all regions have increased their share of employed individuals since 2008, which means that in almost all regions the number of the employed increased faster than the country's average. The only exception is Attica, i.e. the biggest region in terms of population. Within nine years Attica's share of employed individuals decreased by 2.2pp. Should one divide these nine years into two periods, namely 2008c-2013c and 2013c-2017c, where –roughly speaking– the number of the employed decreased in the first period and increased in the second period, then it can be observed that Attica is the only region which demonstrates a reduction in the share of the employed in both periods. This means that employment in Attica is not recovering as fast as in other regions and it would be interesting to explore the reasons for that.

The qualitative features of employment

In the third quarter of 2017, the increase in the number of the employed continued and that is definitely a positive sign. Nevertheless, the quality of jobs created should not be underestimated. The qualitative features of employment include, among others, full vs. part-time employment, at least when the latter is not by free choice but rather a necessity, temporary job contracts vs. open ended contracts, underemployment, hours of work, wages and productivity.

The first distinction addressed involves full vs. part-time jobs. It has been discussed extensively in past issues of the *Greek Economic Outlook* that part-time employment has been increasing during the crisis, but this quarter it actually declined, despite the fact that the number of the employed increased. This is true both in the short-run and on a year-on-year basis. It should be noted, though, that the annual decrease is the result of consecutive reductions recorded in the second and third quarters, following two upward moving quarters and, thus, it would be best not to jump to conclusions. Likewise, the reduction in the number of those declaring that they work part-time because they could not find a full-time job, by 6.9 thousand, and the reduction of their share in part-time employed, by 1.8pp, are also positive signs. Despite these reductions, part-time employment continues to be more common amongst women, e.g. in 2017c, 13.5% of employed women work part-time compared to 6.5% of employed men. On the contrary, men declare that they wish to work longer hours more often than wom-

4. The term "support" does not necessarily mean interventions to contain or reverse employment trends, unless such interventions are considered desirable. The term also involves interventions that aim at accommodating the transition of those who were laid off to new jobs, possibly through the implementation of education and training programmes.

en and that difference widened since last year. There is a similar picture regarding youth. One out of three individuals aged 15-19 works part-time. The same is true for one out of four aged 20-24, while 15.3% of those aged 25-29 also work part-time. Note that these facts changed only slightly over the past year.

At the same time, the number of the underemployed[5] also decreased, both compared to the previous quarter and compared to the same quarter last year. The annual decrease is mostly due to changes that took place in the second and, especially, the third quarter, which recorded a decrease of almost 20 thousand. This is the first time such a large decrease is recorded and it remains to be seen whether it could be repeated. The change is due to decreased underemployment primarily in the age group 30-44 and it is almost equally spread between men and women. The biggest shares of underemployment are amongst youth up to 29 years old: 20.4% amongst those aged 20-24, 13.5% amongst those aged 25-29 and 7.2% amongst those aged 15-19. Over the past year the share of the underemployed aged 15-19 decreased significantly, by 5.7pp, while the share of the underemployed aged 20-24 decreased by 4.2pp. Women, on the other hand, seem to be underemployed much more often compared to men. Interestingly, the share of unemployed women aged 15-19 has decreased considerably since 2016, which is something that should be looked into.

Job contracts of fixed duration are part of what is called "flexible work arrangements" and constitute a quality feature of employment, partly because they signal increased uncertainty for the employed involved. According to Eurostat's data, some 8.1% of the total employed over 15 years of age had a temporary job contract back in 2008c in Greece. The respective share in 2017c is 8.7%. At first sight it seems like a very small increase. Moreover, the number of temporary job contracts fell by 11% during the crisis. It gets more interesting though, when one considers different types of job contracts. In particular, job contracts that last longer than 13 months are less than half compared to 2008, while job contracts shorter than 12 months have increased by 11.3%. Just this past year alone, job contracts shorter than 12 months increased by 17.3%, while contracts longer than 13 months decreased by 13.3%. This means that job contracts are becoming shorter. At the same time, the total number of temporary job contracts went up by 11%. Another interesting feature is that women typically are more likely to work under temporary contracts than men and that is something that hasn't changed during the crisis (10.9% vs. 7.2% in 2017c). Likewise, there are three times more youth aged 15-24 working under temporary contracts compared to individuals over 25 (26.3% vs. 8% in 2017c). Equally interesting is the fact that the distribution of temporary contracts based on their duration does not differ between youth and individuals over 25.

Weekly hours of work increased during the crisis in Greece by almost an hour, amounting to 44.4 hours for full-time employed individuals, according to Eurostat. On the contrary, weekly hours of work for part-time employed individuals decreased slightly from 20.7 hours per week in 2008c to 20.4 hours in 2017c. Over the past year the reduction was small and ranged from 0.1 hours for part-time employment to 0.4 hours for full-time employment. These differences are very small and can hardly support arguments in favour of increasing hours of work for the remaining personnel due to layoffs that are often displayed in public discourse.[6] There are differences between men and women, but such differences existed even before the crisis and do not seem to have changed during it. Nevertheless, it is interesting to note that differences in hours of work exist between men and women employed full-time, e.g. 3.6 hours per week in 2017c, but they disappear when it comes to individuals employed part-time. That could be the outcome of various labour supply determinants and patterns adopted by each gender. What is important is that in the past year the increase in employment was accompanied by a marginal reduction in hours of work, for men and women alike. Finally, it is also likely that the crisis resulted in increasing the number of individuals with a second job, rather than increasing the hours worked in the main job, especially after constraining overtime pay by 20% with Law 3863/2010.

Hourly wages in Greece[7] remained constant in 2016 (most recent available data) compared to 2015 at € 11.3 per hour. This means that the downward movement reported in 2010 (€ 13.4 per hour) has stopped, at least according to Eurostat's data. Therefore, there was an overall reduction of 16% in period 2010-2016, which involves the entire economy. Thus, great differences between industries should cause no surprise. Moreover, this estimate does not take into account that to

5. The definition of "underemployed" refers to individuals who work part-time, but wish to work longer hours and are available to do so. Therefore, the underemployed are fewer than the part-time employed, but they are more than part-time workers who wish to work longer hours.

6. The reader should bear in mind that the employed person reports actual hours worked, since all the information comes from the Labour Force Survey. Therefore, there is no motive or fear to declare fewer than actual hours of work.

7. The actual term is *Compensation of employees per hour worked* and it is available from Eurostat's database.

someone who has lost his/her job, the wage turned to zero. Naturally, there are still countries with lower wages compared to Greece. East European countries, such as Lithuania, Hungary and Estonia are such examples. The wage index posted by ELSTAT, on the other hand, increased by 6.8pp in the third quarter of 2017 on a quarterly basis and decreased by 1.8pp on an annual basis. Transforming the index so that wages in 2010 equal 100, it turns out that in 2017c the index equals 83.4, which means that wages are back to 2012 and approximately 16 pp lower compared to 2010. The stability of wages in 2016 is expected, given the adverse situation of internal demand for goods and services and high unemployment rates prevailing, but the fact that the downward movement that preceded the recent stability of wages has stopped is certainly a positive sign.

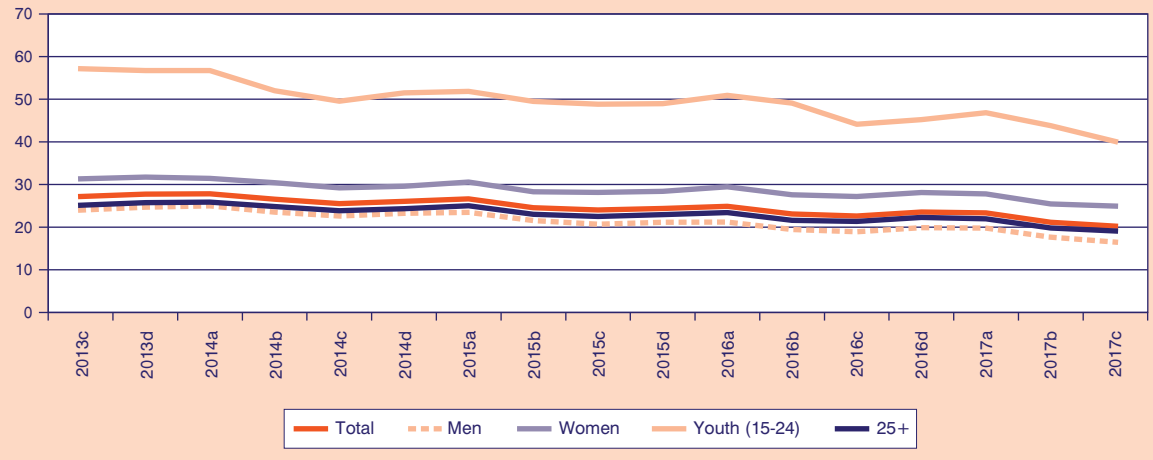
The most recent data regarding labour productivity[8] in Greece refer to the third quarter of 2017. They indicate that productivity in Greece in 2017c stood at 98.1 of the 2010 productivity, while a year ago it stood at 98.8. Italy is the only country which exhibits a bigger reduction in productivity compared to 2010 (2017c: 97.9), while the only other countries which exhibit a reduction in productivity, although to a smaller extent than Greece, are Belgium and Luxembourg. Note that compared to the period before 2008, the reduction in productivity is big, since the index fell by 12.3pp compared to the third quarter of 2008. There is no other country with such a reduction in productivity. On the contrary, in Latvia, Bulgaria, Ireland, Romania and Poland the index increased more than 20pp. The picture drawn does not change when productivity per hour is used instead of productivity per employed person.

As a result of the policies implemented in Greece during the crisis, unit labour cost based on persons decreased significantly.[9] The index decreased to 79.1, similar to what it was in 2013c, but more than 10pp lower compared to 2008c. Compared to the situation a year ago, unit labour cost marginally increased (0.7pp). There is a similar picture drawn if one uses unit labour cost based on hours worked,[10] while, just like the case for productivity, the performance of other European countries falls significantly short. What is interesting, though, is that unit labour cost seems to go up and down, but with a weak upward trend, despite the increase in employment reported since 2014. Moreover, unit labour cost proves to be seasonally sensitive, thus any comparisons and conclusions should rather rely on annual data.

3.1.3. Unemployment

Unemployment typically moves opposite to employment. It is no surprise then that the unemployment rate for individuals over 15 years of age decreased further in the third quarter of 2017 in accordance to the downward movement it has exhibited since 2014. Graph 3.1.2 depicts changes in the unemployment rate for all

GRAPH 3.1.2
The unemployment rate for various labour force groups



Source: Labour Force Survey, ELSTAT, KEPE processing.

8. The actual term is *Real labour productivity per person* and it is available from Eurostat's database.

9. The actual term used is *Nominal unit labour cost based on persons* and it is available from Eurostat's database.

10. The actual term used is *Nominal unit labour cost based on hours* and it is available from Eurostat's database.

persons above 15, per gender and age. In particular, the unemployment rate dropped compared to the second quarter of the year, by one percentage point, while its drop compared to the respective quarter in 2016 reached 2.4pp. Consequently, the unemployment rate in 2017c stood at 20.2%. The referred drops represent 46.5 thousand fewer unemployed compared to 2017b and 122.5 thousand fewer unemployed compared to 2016c. Therefore, the number of the unemployed in 2017c amounted to 970.1 thousand individuals. Compared to 2013c, when the unemployment rate reached its maximum, there were 350 thousand fewer unemployed in 2017c or, in other words, about one out of four unemployed individuals have found a job since then.

Women continue to face greater difficulties than men in finding a job (24.9% vs. 16.5%), while youth aged 15-24 have twice the probability of being unemployed compared to individuals over 25 years of age (40.1% vs. 19.1%). On an annual basis, the number of unemployed men decreased faster than the number of unemployed women (15.8% vs. 9.8%), while the number of unemployed over 25 decreased almost as much as the unemployed aged 15-24 (approximately 11%). Despite the positive picture drawn, the increased number of the long-term unemployed should cause alarm. Although the situation is better compared to what it was a year ago, in the third quarter of 2017 some 735 thousand persons were long-term unemployed, i.e. approximately three out of four unemployed. Given the problems caused by staying unemployed for a long time, it is necessary to reinforce policies which aim at supporting these people, even if they are short term, e.g. temporary jobs, in order to avoid worse and more painful consequences, such as social marginalisation.

It seems that education continues to act as a shield against unemployment; at least as far as older individuals are concerned, since –*ceteris paribus*– the unemployment rate drops with increasing education qualifications.[11] The unemployment rate in 2017c ranges from 22.3% for primary education graduates (or individuals who never completed primary education) to 12.1% for Master and/or PhD holders. Interestingly, the difference shrinks with increasing unemployment, but still it remains bigger than what it was before the crisis (10.2pp in 2017c vs. 4.4pp in 2008c). On an annual basis the number of unemployed gymnasium graduates shows the biggest increase (15.7%), followed by unemployed lyceum graduates (13.6%). On the other hand, the number of Master and/or PhD holders increased by 2.2 thousand or approximately 10%. Note that this is the only incidence. Looking back to 2013, when unemployment set a new record high, it turns out that the number of Master and/or PhD holders re-

TABLE 3.1.1 Unemployment rate by region for specific quarters and years

	2016c	2017b	2017c	2016c-2017c
East Macedonia & Thrace	22.3	19.4	18.5	-3.8
Central Macedonia	23.8	23.2	22.0	-1.8
West Macedonia	29.8	29.3	27.3	-2.6
Epirus	23.4	25.5	24.2	0.8
Thessaly	24.8	20.1	20.0	-4.8
Ionian Islands	12.1	15.5	12.4	0.3
West Greece	29.2	26.1	25.7	-3.5
Continental Greece	24.2	20.7	19.3	-4.9
Attica	22.8	21.5	21.4	-1.4
Peloponnese	17.6	15.9	15.9	-1.6
North Aegean	17.8	21.9	20.6	2.8
South Aegean	13.0	14.3	8.5	-4.4
Crete	19.2	15.6	13.2	-6.0

Source: Labour Force Survey, ELSTAT, KEPE processing.

11. A more detailed review of the data reveals that young tertiary education graduates who attended certain fields of study face significant problems in finding their first job, similar to graduates of lower levels of education.

corded the smallest decrease, hardly 5.4%, while gymnasium and primary education graduates decreased by more than 35%. This fact probably reflects the type of jobs the Greek economy has created since 2014 and it should be a point of concern for policy makers with respect to the growth prospects it entails and in combination with the brain drain phenomenon of the highly skilled labour force.

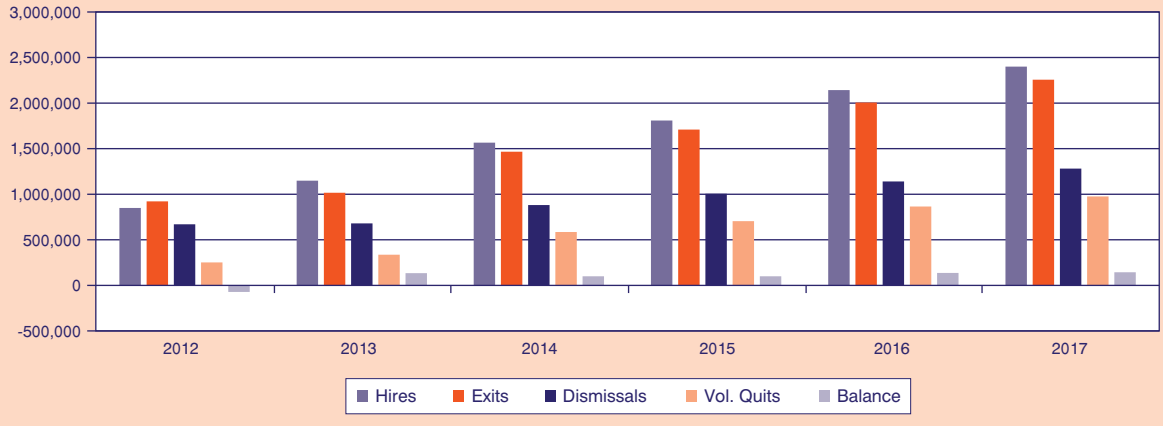
Furthermore, there is a sizeable fluctuation of unemployment rates across regions (see Table 3.1.1 above). For instance, in the third quarter of 2017 the unemployment rate ranged from 8.5% in the South Aegean to 27.3% in West Macedonia. In other words, the biggest unemployment rate is over three times bigger than the smallest one. This is reportedly the biggest difference over the past few years and it is mainly due to the very small minimum unemployment rate. An in-depth look reveals that since the second quarter of 2017, the unemployment rate in the South Aegean has decreased by 5.7pp. The second biggest decrease took place in the Ionian Islands, but it was considerably smaller (just 3.2pp). Although these two regions benefit strongly from seasonal tourist activity, such a big unemployment rate decrease undoubtedly causes concern. On an annual basis, the unemployment rate decrease is bigger in Crete (6pp), Continental Greece (4.9pp), Thessaly (4.8pp) and the South Aegean (4.4pp). West Macedonia & Thrace (3.8pp) and West Greece (3.5pp) follow suit. On the other hand, the unemployment rate increased in the Ionian Islands (0.3pp) and the North Aegean (2.8pp) compared to one year ago. The reader should bear in mind that the latter region includes islands which bore the largest share of the burden of the refugee crisis, such as Chios, Lesvos and Samos. Adverse consequences, in tourism for example, could partly explain the increase in the unemployment rate. Last but not least, the unemployment rate decreased by 1.4pp on an annual basis in Attica, the biggest region in terms of population. The decrease corresponds to approximately 32 thousand fewer unemployed, which represents almost 26% of the country-wide reduction of the unemployed.

3.1.4. Paid Employment (ERGANI)

Data from the Information System ERGANI point to the creation of 15,135 net new jobs in December. In December 2013 some 19.999 net new jobs of paid employment were created. That was the best performance since 2000. Compared to December 2016, an additional 4,183 net new jobs were created this December. This means that December 2017 achieved the second best performance since 2000. The labour market seems to have become more volatile, since both dismissals and hires increased compared to December last year, but note that voluntary quits decreased. This could be a sign that market conditions have improved over time and, thus, there are fewer people willing to quit their job in order to look for a new one or retire. On the other hand, the continuous reductions in pensions over the past years, and recently with Law 4472/2017, might discourage some people from retiring.

On an annual basis, year 2017 is characterised by 143,545 net new jobs, 7,285 more compared to 2016, which means that the process of creating new jobs is accelerating. Graph 3.1.3 shows that paid employment flows turned positive in 2012 and, following a small slump, they have continued to rise over the past

GRAPH 3.1.3
Paid employment flows, 2012-2017



Source: Monthly ERGANI Reports, KEPE processing.

TABLE 3.1.2 Conversion of existing job contracts to flexible job contracts

Conversion of full-time job contracts to contracts involving:	2014	2015[12]	2016	2017
Part-time employment (%)	55.7	39.2	63.6	65.8
Work-in-shifts (%)	27.1	19.4	25.8	23.6
Work-in-shifts without employee's consent (%)	17.2	41.4	10.6	10.6
Total	**45,789**	**78,917**	**51,262**	**53,481**

Source: Monthly ERGANI Reports, KEPE processing.

two years. What is interesting is that during the past years the flexibility of the labour market increased in terms of multiple hires and exits, i.e. dismissals and voluntary quits. Regardless, the final outcome does not show a similar volatility. For instance, it turns out that in 2017 dismissals almost doubled, voluntary quits tripled and hires almost doubled compared to 2013, but net flows, although positive, increased by approximately 7.5%. That could be interpreted as a success of labour market interventions over the past years, since they clearly intended to make the labour market more flexible. On the other hand, that does not seem to have benefited the outcome, since it did not raise employment accordingly. Maybe a different picture will form, when the economy starts to grow.

Another reason that might explain the increased flexibility of the labour market is the type of job contracts signed. When new contracts involve part-time or work-in-shift jobs, then it is more likely that individuals will look for full-time jobs. As already discussed in the previous section, a sizeable share of those who work part-time would rather work full-time. In this context, in December 2017 only four out of six new job contracts involved full-time jobs, which corresponds to 73,132 jobs. Another 71,893 hires involved part-time jobs and the remaining 26,859 new contracts involved work-in-shift jobs. The share of new full-time job contracts decreased slightly compared to December 2016 and it is almost the same with December 2015. On the contrary, there was a sizeable reduction in the number of work-in-shifts job contracts compared to both 2015 and 2016. On an annual basis, the share of new full-time job contracts remained almost constant, around 45% of all new contracts, while the share of new part-time job contracts increased (from 37.4% to 40.1% and, finally, to 40.9%). The reduction in the share of new work-in-shifts job contracts to 14%, from 18.1% in 2015, is another positive sign.

The downside in the expansion of paid employment is the conversion of full-time job contracts to flexible job contracts (please refer to Table 3.1.2). In December 2017 approximately 1,811 full-time contracts were converted to part-time contracts, 690 to work-in-shifts contracts and 324 to work-in-shifts contracts without the consent of the employee involved. Compared to December 2016, only the share of the first type of conversions increased, while in total, conversions have decreased since December 2013. Moreover, conversions to work-in-shifts contracts without the consent of the employee involved have decreased considerably as a share since December 2014, when they constituted 22.6% of all conversions, since in December 2017 they went down to 11.5%. There were 2,219 more conversions in 2017 compared to 2016, mostly due to much larger numbers in March and October this year. Note that typically there are more conversions in January, September and October, perhaps following the seasonal fluctuation of economic activity in some industries, with the exception of 2015, when 40% of all year-round conversions took place in July. Note, though, that there were more conversions in 2015 compared to 2014 anyway. As far as specific types are concerned, the share of full-time contracts converted to part-time contracts has been increasing since 2014, reaching 65.8% in 2017 (it started at 55.7% in 2014). On the other hand, the share of conversions of full-time to work-in-shifts contracts without the consent of the employee involved decreased from 17.2% in 2014 to 10.6% in 2017, which equals 2016 conversions.

12. The reader should be reminded that in the first semester of 2015 the country was nearly expelled from the Eurozone and in the following summer a multi-day bank holiday was imposed along with capital controls; as a result, political and economic uncertainty skyrocketed.

3.1.5. Conclusions

Over the past year the number of employed individuals increased further. Thus, the upward trend that started back in 2014 continues. Nevertheless, this increase in employment involves mixed signs. On the one hand, the number of part-time jobs decreased and so did the share of those who wish to work full-time but cannot find a full-time job. The share of the unemployed also decreased. On the other hand, the number of temporary job contracts increased and, at the same time, their duration decreased. Wages and weekly hours worked seemed to stabilise, while productivity dropped further. Last but not least, the unit labour cost has dropped considerably, but it shows signs of recovering over the past year. In any case the situation in the labour market requires close monitoring.

Moreover, the unemployment rate decreased to approximately 20% in the third quarter of 2017. The number of the unemployed reached 971.1 thousand individuals, i.e. approximately 350 thousand fewer individuals compared to the maximum number of the third quarter of 2013. Therefore, approximately one out of four unemployed persons has found a job since 2013. It is interesting to note that over the past year the unemployment rate increased significantly in the North Aegean islands (2.8pp), which include Chios, Lesvos and Samos. It is quite probable that this increase is partly due to the impact of the refugee crisis, which caused a reduction in tourist flows towards these islands.

With respect to paid employment, which is mostly responsible for the increase in employment and the decrease in the unemployment rate, there were positive developments in 2017 according to ERGANI. Some 143,545 new jobs of paid employment were created, more than all previous years since 2000. Moreover, despite the increase in the number of full-time job contracts converted to flexible types of job contracts compared to 2016, the number of conversions without the consent of the employee decreased. Last but not least, the increase in flexibility, which is reflected in the increased number of hires and exits vs. net new jobs created, could be interpreted as a success of the interventions of the past years, since increasing flexibility was one of the goals. On the other hand, this does not seem to have contributed to the improvement of the desired outcome, which is to increase employment. Perhaps there will be a different picture, when growth rates start to pick up.

3.2. The education of refugee children in Greece

Ioannis Cholezas

3.2.1. Introduction

Some 29,595 refugees and migrants entered Greece in 2017.[1] This was by far the smallest number in the past four years. Note that in 2016 some 173,614 refugees and migrants entered Greece.[2] The majority of refugees chose to enter the country by crossing the sea passage between Greece and Turkey in the Aegean Sea. Most of them consider Greece as an intermediate stop on their way to other European countries. Nevertheless, several find themselves trapped in Greece for a long time, certainly longer than expected, waiting for the evaluation of their asylum applications and a desired relocation to other European countries. It should also be noted that, in the context of the European relocation scheme, approximately 21,710 refugees have been relocated to other European countries until December 2017, mostly Germany (5,371), France (4,400), the Netherlands (1,748) and Sweden (1,656). No relocation has taken place so far to Austria.

A non-negligible share of those who still remain in Greece are families with children of pre-school or school age, who have abandoned areas at war in Syria and, less so, in Afghanistan and Iraq. The right to education is one of the fundamental human rights according to the EU Map of Fundamental Rights (Article 14) and the UN Map of Human Rights (Article 26) with no restrictions based on gender, colour, religion or other features. Therefore, it is absolutely necessary on moral, social and economic grounds for refugee children to receive education, regardless of whether they will eventually stay in Greece or not. For those who still doubt that necessity, it suffices to number the problems that could be caused by the influx of uneducated refugees into the host country, which could range from social exclusion and poverty, due to difficulties associated with a successful labour market integration experience and access to decent jobs, to a social breakdown, due to the expansion of social and economic inequalities.

3.2.2. Reception and Educational Programme for Refugee Children (DYEP)

The influx of refugees that were also highly geographically concentrated led to the decision to operate an additional educational programme for refugee children in parallel with the Reception Classes (TY)[3] operating in Greece over the past years in Educational Priority Zones (ZEP) in order to complement educational services to refugees and prepare them for their integration into the Greek education system. In this context it was decided in September 2016[4] to establish and operate Reception and Educational Programmes (DYEP) for refugee children up to 15 years of age who either stay in Refugee Accommodation Centres[5] (KFP) or other types of accommodation.[6] Note that DYEPs were originally targeted to the former refugee children, but as of this year, the types of benefi-

1. Figures referred to throughout the paragraph are available at the site of the International Migration Organisation (IMO): <https://greece.iom.int/sites/default/files/EU%20Relocation%20stats_updates%20as%20of%2028%20December%202017.pdf>.

2. Note that the terms "refugees" and "migrants" are not the same. A refugee is by definition a migrant, but a migrant is not necessarily a refugee. That is something that needs to be decided based on certain criteria. For reasons of ease, though, this article uses the term "refugees".

3. Reception Classes (RC) were established in the context of the Intercultural Education and aimed at providing a more effective and participation-enhancing active education experience to foreign and repatriate students. RCs exist in both primary and secondary education. There is a provision for type I RCs (up to one school year), type II RCs (up to two years after the completion of type I RC) and Support Classes (SC) after school hours. Students are distributed across types of RCs and SCs according to their needs and their knowledge of the Greek language. (see <https://edu.klimaka.gr/arxeio/nomothesia-fek/fek-1789-1999-idrysi-leitourgia-taxeis-ypodochis-frontistiriaka-tmimata-klimaka.pdf>). In the school year 2017-2018, the operation of RCs in 127 schools is planned. (see <http://www.alfavita.gr/sites/default/files/attachments/fek-ty-vthmia.pdf>).

4. DYEPs were established with the JMD 180647/ΓΔ4/2016 (see FEK 3502/B/31-10-2016), which is based on article 38 of Law 4415/2016.

5. Refugee Accommodation Centres operate in Attica, Central Greece, Macedonia and Epirus.

6. It is estimated that in July 2017 more than 29,000 refugees were staying in apartments, hotels and other accommodation facilities in Greece under the refugee accommodation programme of the UN High Commissioner for Refugees (UNHCR), which started in 2016. It is also estimated that more than half of these are children. The geographical distribution of refugees is available at: <http://donors.unhcr.gr/relocation/en/2017/06/16/accommodation-scheme-a-home-for-refugees-in-greece/>. On top of accommodation facilities, refugees who apply for asylum are given a cash card they can use to buy food, means of communication, health products, etc., in order to improve their living conditions and support local communities. According to the statistics, until November 2017 the number of the asylum applications has increased by approximately 17%, amounting to 54,731 applications. Of those, 4.6% involved unaccompanied children and 33.8% involved children up to 17 years of age, who, thus, need to be educated. (<http://asylo.gov.gr/wp-content/uploads/2017/12/Greek_Asylum_Service_Statistical_Data_GR.pdf>).

ciaries expanded. DYEPs aim at preparing refugee children to integrate into the typical education system, possibly in the context of reception classes in educational priority zones, through the intensive study of the Greek language. DYEPs operate either as branches of local school units (Kindergartens and, in special cases only, Primary and Lower Secondary schools), or within their premises. In the former case, DYEPs follow the ordinary school-time schedule. In the latter case, when they operate within school premises, teaching hours start after the typical school shift has ended and last for four hours, i.e. from 14.00 to 18.00 p.m. The daily schedule incorporates four teaching hours and it includes the following subjects: Greek language, English language, mathematics, physical education, ICT/computing and cosmetic education/civilization and other activities in Primary/Lower secondary education schools.[7]

By the end of 2017, approximately 7,000 refugee children, up to the age of 16, lived in Greece (islands excluded). Registrations in public schools numbered nearly 5,000 refugee children.[8] It is estimated that in the school year 2017-2018 more than 2,360 refugee children aged 6-16 years of age reside in KFPs, while another 2,493 children of the same age group live in urban centres and are registered to schools throughout the country. Moreover, there are already refugee children registered in almost 1,000 schools.[9] According to plans, in the school year 2017-2018 there will be DYEPs operating in 54 primary schools and 24 lower secondary schools (Gymnasiums) across the country, while 34 Kindergarten branches will operate within KFPs' premises.[10] The operational cost is estimated close to € 7 million.

The necessary funds for the operation of DYEPs come from the Asylum, Migration and Integration Fund (AMIF), while the International Organisation for Migration (IOM) pays for transport expenses from KFPs to schools for children and their escorts, as well as for the provision of school equipment (funds come from DG-ECHO, i.e. the European Civil Protection and Humanitarian Aid Operations). The teaching staff that will be either seconded or disposed to DYEPs (hiring substitute teachers is included) is funded by the State Budget, the Public Investment Programme or/and ESPA.[11] Note that in December 2017 approximately 197 full or part-time substitute teachers were hired and appointed to DYEPs,[12] while a few days later another 54 substitute teachers were hired.[13]

3.2.3. Challenges for the new educational structure

Choosing the specific process to offer educational services to refugee children, i.e. through DYEPs, raises a number of questions. The following are considered the most central of these.[14]

- Perhaps the most pressing issue involves the communication between teachers and refugee children. Especially when very young children are concerned, knowledge of the English language should not be taken for granted. This means communication problems and, therefore, difficulties in transferring knowledge.
- A considerable number of refugee children have not attended school for several years, since some home countries are at war and everyday routines, including education, were interrupted long ago. For instance, the civil war in Syria started in May 2011. Therefore, even more effort is needed to successfully integrate refugee children from war zones into the education system of the host country, especially considering the completely new environment they face.
- Some children, due to special circumstances in their home countries, although they are of school

7. The organisational structure, the operation, the coordination and the curriculum of the refugee education programme (DYEP) are all described in the JMD no. 139654/ΓΔ4/30-8-2017 (FEK 2985/B/30-8-2017).

8. See <https://left.gr/news/oi-eggrafes-ton-prosfygopoylon-sta-sholeia-synehizontai-kanonika>.

9. See <https://left.gr/news/yp-paideias-stohos-ayto-sholiko-etos-ola-ta-prosfygopoyla-na-pane-sto-sholeio>.

10. SEE MD in <http://www.alfavita.gr/sites/default/files/attachments/fek_2017_3974b.pdf>.

11. In the context of Priority Axes *6, 8* and *9* of the *Operational Programme "Development of Human Capital, Education and Life Long Learning 2014-2020", Partnership Agreement (ESPA) 2014-2020.*

12. Interested readers can have a look at: <https://www.esos.gr/arthra/54448/proslipseis-anapliroton-ekpaideytikon-gia-apasholisi-stis-dyep-domes-ypodohis-gia-tin>.

13. Interested readers can have a look at: <http://www.alfavita.gr/arthron/ekpaideysi/anakoinothikan-nees-proslipseis-anapliroton-stis-dyep-onomata>.

14. The reader can refer to the views of substitute teachers on those issues they consider most important for the operation of DYEPs, which are available at: <http://www.ipaideia.gr/paideia/organosi-kai-tin-leitourgia-ton-diep-oi-protaseis-ton-anapliroton-ekpaideutikon>.

age, have never attended school. This means that the integration of such children into the education system is a big challenge. That was also used as an argument in favour of DYEPs, instead of simply allowing refugee children to join the existing educational structure.

- There are no books and teaching material suitable for refugee children. Up to now, books and teaching material prepared for children of Muslim Greeks in Thrace are used. Nevertheless, this material is based on the notion that those children are Greeks and they have an adequate knowledge of the Greek way of life and of the Greek society, and, on top of that, they can more or less speak Greek. Obviously, refugee children do not meet these requirements.
- In many cases, there seem to be teaching vacancies or the number of the full-time teaching staff does not suffice. In certain cases, vacancies are so severe that some DYEPs have not operated at all.[15] Given that DYEPs involve only four teaching hours a day, hiring full-time teachers may be an unrealistic demand. On the other hand, the wage of part-time substitute teachers is too low to enable them to lead a decent life, especially when they are appointed to areas away from home.
- Despite the fact that statistics refer to a high participation rate of refugee children in the education process (75%),[16] there are refugees who refuse to allow their children to attend school, especially when they expect to leave Greece soon. Moreover, there could also be cultural reasons at play that hinder some children from attending school, particularly girls.
- The number of children who attend DYEPs is not stable and given according to school advisors and teachers. Some children quit school and others often miss class. In general, it seems that the school attachment is pretty loose, which might create additional problems when the time comes for these children to integrate into the formal education system. The structuring and operation of DYEPs after the model of the formal education system, to which refugee children find it hard to adapt, especially when psychological and emotional reasons are involved, might be a reason for loose school attachment. For example, the formal education system lacks personal ties, and refugee children have often lost their loved ones and need new persons to connect to (friends, teachers, etc.).
- Only three kindergartens in KFPs had classes in the previous school year and they started long after the beginning of the school year. According to the most recent available information (end December), this year classes started in a kindergarten in the KFP of Eleonas, while classes are expected to start in another two kindergartens in Samos and Lesvos.[17] Moreover, according to plans, the establishment of prefabricated school buildings must already be in place in 17 more KFPs in continental Greece.[18]
- Refugee children over 15 years of age are those more in danger of finding themselves on the fringe of society, since they will soon have to integrate into the labour market without any qualifications. Last October (31-10-2017) the Ministry of Education, Research and Religious Affairs issued a decision,[19] which states clearly that all refugee children over 15 are allowed to register in Reception Classes (type I) operating in both General and Vocational Lyceums (along with repatriates, immigrants, Roma and other vulnerable groups) within ZEPs.[20] The minimum number of students per class is set to 7 and the maximum number to 17. Classes will last for a year (+1 if it is deemed necessary) and, besides Greek language classes, include mathematics, physical education, music, ICT and one foreign language or some other subject. There is one minor detail in all this –there is no provision for assessing the educational outcome before children

15. Lavrio is such an example. The relevant article is available at: <http://www.syllogosksotiriou.gr/τεράστια-προβλήματα-στη-λειτουργία-τ/>.

16. This number was mentioned during an interview with an IMO official. Nevertheless, articles published in the press and the testimony of a school advisor, all seem to draw a less optimistic picture.

17. Interested readers can have a look at: <http://www.kathimerini.gr/940269/article/epikairothta/ellada/nhpiagwgeio-gia-ta-paidia-sto-kentro-filo3enias-elaiwna>.

18. Areas where kindergartens will operate can be found at: <http://www.avgi.gr/article/10836/8606468/xekinese-e-leitourgia-tou-neou-nepiagogeiou-sto-kentro-philoxenias-elaiona>.

19. The encyclical can be found at: <http://www.alfavita.gr/sites/default/files/attachments/78od4653ps-lit.pdf>.

20. The definition of ZEP is given in a recent decision (no.169735/ΓΔ4 in FEK 3727/B/23-10-2017) as follows "*all Regional Directorates of Primary and Secondary Education, where schools of Secondary Education (Gymnasiums, General and Vocational Lyceums) can operate Reception Classes ZEP (RC ZEP)*". Thus, every area which operates a reception class is categorised as ZEP and, consequently, every geographical definition is abolished.

are integrated into the formal education system. This is something that involves younger children also, but with respect to children over 15 who are expected to enter the labour market after graduation, it becomes more pressing.

- There is a widely expressed view that DYEPs block the integration of refugee children into local communities by keeping them isolated from the general population.[21]
- Islands which bear the greatest burden of the refugee crisis are excluded from the establishment of DYEPs because they accommodate refugees only temporary, so the argument goes. Note that there are hotspots in the islands, which are structures for the reception and register of refugees. Such an argument, though, seems to neglect the fact that many refugees reside in these accommodation centres for a long time. Allowing children to abstain from the education process even for a certain period of time should not be accepted, especially when one considers that school can offer them a way out, even for a few hours, from the harsh reality they face.
- Local communities are often misinformed about the refugee crisis. Some are afraid that refugee children carry diseases, while in practice they are vaccinated before they are sent to school.
- DYEPs are by definition temporary. As the number of refugees arriving to Greece declines, those who have attended DYEPs will have to integrate into the formal education system. Therefore, the challenge will be to find the best way to achieve that.
- According to the established procedure, School Advisors are responsible for the scientific and pedagogical guidance of teachers in DYEPs.[22] This means, though, that School Advisors have to be trained first. So far, there is no provision regarding either who will train the latter or how the process will be realised.

3.2.4. Ideas for interventions

The reaction of the Greek state to the influx of refugee children was to establish and operate a parallel education programme named DYEP, in order to smooth the integration of refugee children into the formal education system. Irrespective of whether that was the best way to go –instead of, for example, utilising reception classes in zones of educational priority or utilising intercultural schools– one should critically examine the current structure and trace the points that could be improved. A non-exhaustive list of such points could be the following:

- Refugee parents should be persuaded to allow their children to participate in education, whichever form it takes. Sociologists and psychologists could prove useful, perhaps through the operation of NGOs.
- DYEPs should expand further, in order to include hotpots on the islands. It is possible, for many different reasons, for asylum candidates to stay on the islands much longer than expected. In that case it would be necessary to encourage children to participate in the education process. Perhaps, the operation of DYEPs within hotspots proves difficult, due to the crowding of refugees and special living conditions, e.g. uproar. Therefore, it might be best to integrate refugee children into DYEPs operating within nearby schools.
- Efforts to integrate young children below five years old should be reinforced, especially those attending DYEPs within KFPs. Nowadays, results could improve significantly, since in many KFPs there were no DYEPs established, for many reasons. There seems to be a better start this year, as already discussed in the previous section, since only in December 2017 some 250 substitute teachers were hired for DYEPs.
- It would be useful to speed up the integration of refugee children into the local student population. The model to reception classes, despite its problems, could be a good practice that can be implemented relatively quickly. Moreover, Intercultural Schools[23] can provide a credible alternative. Especially if one considers the experience they have accumulated by managing repatriates and migrants in previous years. In this context, it is estimated that in the school year 2017-2018 approximately 1,500 refugee children living in KFPs or other accommodation facilities[24] will be allowed to enroll in all-day schools

21. A related view in association with various problems DYEPs face can be found at: <http://www.avgi.gr/article/10839/8422017/diachorismos-ypodoche-e-entaxe-oi-antiphatikes-opseis-ton-politikon-gia-ten-ekpaideuse-prosphygon>.

22. Interested readers can have a look at the related JMD 180647/ΓΔ4/2016 in FEK 3502/B/31-10-2016.

23. A list of Intercultural Schools can be found at: <https://edu.klimaka.gr/leitoyrgia-sxoleivn/diapolitismika/548-katalogos-sxoleia-diapolitismikis-ekpaideyshs.html>.

24. Interested readers can have a look at the relevant article in *KATHIMERINI*, which is available at: <http://www.kathimerini.gr/907953/article/epikairothta/ellada/eggrafh-sta-olohmera-xwris-dikaiologhtika>.

without having to meet the requirements set by PD 79/2017.[25]

- A wide publicity campaign regarding refugee health issues could be useful, in order to prevent reactions by local communities fueled by ignorance and facilitate the integration of children to local school units. [26]
- With respect to refugees whose asylum applications or their relocation have already been approved and are waiting for their transfer to another country or there are many possibilities to succeed, the Greek state could organize and operate DYEPs in French, German or any language other than Greek. That way, Greece could prepare these refugees for their integration into the destination country. That would have two effects: a) refugees would reach the destination country better prepared and it would take less time to integrate them and b) many jobs could open up in Greece at a time when they are needed most, as is obvious from the high unemployment rates.
- There would probably be important benefits from increasing information about the whole process through the collection and processing of data regarding refugee children and their participation in the education process. The assessment of DYEPs' educational outcomes could be an element which could prove useful in making necessary interventions to benefit the children. For the time being, there is no free public access to data regarding the number of refugee children (only estimates), the number of teachers involved, the exact amount of resources spent, etc.
- It is perhaps useful to set up special procedures to address unaccompanied refugee children. Theoretically, refugee children participate in the education programmes,[27] but given their specific circumstances it would be best to receive a holistic treatment, perhaps combining accommodation, psychological support and education.
- It is obvious that educational structures cannot function without teaching personnel. Vacancies have been widespread in the Greek formal education system for many years. Nevertheless, that does not mean that efforts to address them should not be strengthened.
- It is necessary to safeguard teachers' working conditions. There are complaints that refer to longer than usual working hours to compensate for vacancies and various shortcomings, which lead to the physical exhaustion of teachers.
- The educational process, even if short and preparatory, should involve special books and teaching materials which address the needs of refugee children. To a certain extent, modern technology could compensate for the lack of printed material and possibly attract the attention of young children. Furthermore, education practices worldwide seem to move towards the introduction of ICT in everyday school life.
- Finally, it would be worthwhile to consider the possibility of hiring teachers who speak the language of refugee children –at least the most commonly used language. Note that the MD for DYEPs provides for a certain premium awarded to teachers who have additional qualifications, e.g. who speak specific foreign languages. Nevertheless, it is clear that the availability of teachers with specific qualifications is limited.

Sources

International Migration Organisation (IOM) in Greece: <https://greece.iom.int/>.

Site for the UN Refugee Accommodation Programme (UN Refugee Agency) in Greece: <http://donors.unhcr.gr/relocation/en/2017/06/16/accommodation-scheme-a-home-for-refugees-in-greece/>.

Asylum Service of the Ministry of Migration Policy: <http://asylo.gov.gr/>.

FEK 1789/B/28-9-1999 for the establishment of Reception Classes and Support Classes: <https://edu.klimaka.gr/leitoyrgia-sxoleivn/diapolitismika/2052-idrysh-leitourgia-taxeis-ypodoxhs-diapolitismika.html>.

FEK 3502/B/31-10-2016 for the establishment of DYEP: <http://www.iep.edu.gr/images/IEP/EPISTIMONIKI_YPIRESIA/Epist_

25. It should be borne in mind that Greek citizens should fulfil specific economic criteria also, in order to have the right to register their children to all-day schools. The prerequisites are listed in a decision by the Ministry of Education, Research and Religious Affairs, protocol no. 71858/Δ1, which is posted at: <https://www.esos.gr/sites/default/files/articles-legacy/_energeies_dimotik.pdf>.

26. The number is reported in a relevant article in *KATHIMERINI*, which is available at: <http://www.kathimerini.gr/895959/article/epikairothta/ellada/kalws-hl8ate-me-mpalonia-kai-glyka>.

27. So far there have been some actions on a voluntary basis on islands where centres for the first reception and registration of refugees (hotspots) are established. See <http://gr.euronews.com/2017/11/20/gekko-kids-ena-sxoleio-gia-ta-asynodeyta-prosfygopoyla-stin-lesvo> and <http://www.politischios.gr/hios-poli/ta-asynodeyta-prosfygopoyla-xekinisan-sholeio-kai-sti-hio>.

Monades/A_Kyklos/Diapolitismiki/2016/2016-10-31_KYA_dyep.pdf>.

FEK 2985/B/30-8-2017 for the organization, operation, coordination and curriculum for DYEP: <https://www.esos.gr/sites/default/files/articles-legacy/prosfyges_0.pdf>.

FEK 3727/B/23-10-2017 for the regulation of ZEP and Reception Classes in ZEP in Secondary Education schools: <https://www.e-nomothesia.gr/kat-ekpaideuse/upourgike-apophase-169735-gd4-2017.html>.

FEK 3974/B/13-11-2017 which lists the schools allowed to organise DYEPs in school year 2017-2018: <http://www.alfavita.gr/sites/default/files/attachments/fek_2017_3974b.pdf>.

FEK 4374/B/13-12-2017 referring to necessary requirements Secondary Education schools need to fulfil in order to be categorised in Zones of Educational Priority (ZEP), in which Reception Classes of type I are allowed to operate: <http://www.alfavita.gr/sites/default/files/attachments/fek-ty-vthmia.pdf>.

AlfaVita information network for education: <http://www.alfavita.gr>.

Daily electronic newspaper for Education: <https://www.esos.gr>.

Newspaper *KATHIMERINI*: <http://www.kathimerini.gr>.

Newspaper *AVGI*: <http://www.avgi.gr>.

East Attica Teacher's Association «Costas Sotiriou»: <http://www.syllogosksotiriou.gr>.

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4. Development policies and sectors

4.1. Analysis of Tourism Receipts in Greece

Nikolaos Vagionis

Economic activity in tourism is important for Greece. It contributes significantly to the formation of domestic value added (GDP) and also retains a significant share of domestic employment. It has proved resilient to the crisis and has seen positive performance in recent years, contributing to the completion of the cycle of economic hardship in our country. These are largely known and have been analyzed in a number of publications. This article presents and analyses turnover in the sector of tourism and, then, of the relevant international travel receipts, over time and by country, and draws specific conclusions.

4.1.1. Breakdown of tourism turnover

For this approach, our analysis uses the Turnover Index in the Accommodation and Catering economic sector.[1] By analyzing[2] the modeling by year and quarter, and also with the help of Charts 4.1.1 and 4.1.2, it can be observed that:

As shown in Table 4.1.1, with the new base of 100 for 2010, the average annual Turnover Index recorded the highest historical receipts in the tourism sector in 2008, reaching 119.8. Since then, a phase of lower turnover has begun and the average year mark fell to 108.9 in 2009, to 100 in 2010, to 92.6 in 2011, and the downward trend continued with the index value at 76.7 in 2012 when the lowest average annual value of the Turnover Index was recorded, with a total decrease of 36% since 2008.

The downward trend continued until the first quarter of 2013. Starting with 2013 (see Chart 4.1.2 and Table 4.1.1), a continuous increase is recorded. The percentage change of the average annual Index from 2012 to 2013, when the Index rose to 80.3, was +4.5%. This trend continued in 2014, with the annual Index rising to 89.8, with an annual increase of +11.8% compared to 2013, and reaching 92.6 for 2015, with an annual increase of +3.1% compared to 2014. Year 2016 saw a small increase in the average annual turnover, at 92.7, while Q3 in 2017 reached 195.1, surpassing –after 9 years– the 2008 record of 184.3.

This predicts an annual Turnover Index figure for 2017 that will approach the 100 mark of 2010, but will, of course, remain below the 119.8 of 2008, for reasons we will analyse next, and despite the significant increase in arrivals.

TABLE 4.1.1 Turnover Index in Accommodation and Catering
Average annual and quarters, Base 2010=100

	Average annual	Q1	Q2	Q3	Q4
2005*	**105.2**				
2006*	**109.0**	67.4	111.4	168.1	89.3
2007*	**116.1**	74.1	117.4	174.3	98.3
2008*	**119.8**	77.7	120.6	184.3	96.6
2009*	**108.9**	62.1	115.0	180.0	78.4
2010	**100.0**	64.0	103.3	166.6	66.1
2011	**92.6**	50.8	101.0	164.7	54.0
2012	**76.7**	38.6	80.0	145.7	42.3
2013	**80.3**	32.1	84.2	147.5	57.6
2014	**89.8**	46.5	89.8	158.8	64.1
2015	**92.6**	48.1	97.6	166.4	58.3
2016	**92.7**	42.5	96.6	171.3	60.6
2017	**n/a**	43.2	103.4	195.1	-

Source: Hellenic Statistical Authority.

Note: * Author's calculations.

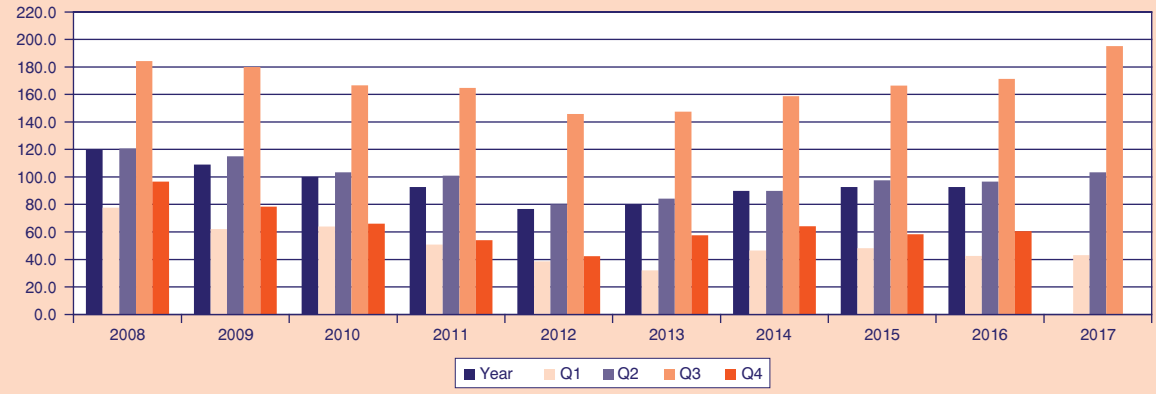
1. Greek Statistical Authority: *Turnover Index in the Accommodation and Catering economic sector, Third Quarter 2017*. Piraeus, December 2017.

2. The Index, according to NACE rev.2, has been described in detail in: *Greek Economic Outlook* V. 20, ' *4.1 Recent developments in the tourism sector, in Greece"* and is presented in all subsequent analyses.

CHART 4.1.1

Greece: Turnover Index in Accommodation and Catering 2008-2017

Average annual and quarters, Base 2010=100

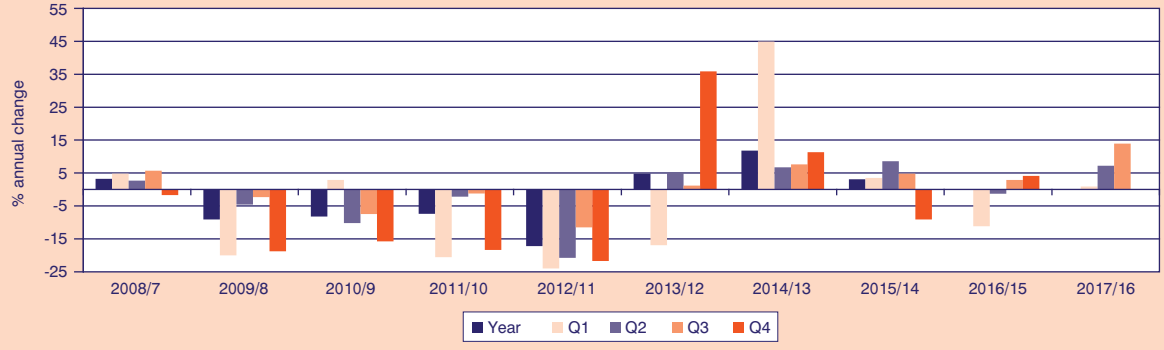


Source: Greek Statistical Authority: *Turnover Index in the Accommodation and Catering economic sector, Third Quarter 2017*. Piraeus, December 2017.

CHART 4.1.2

Greece: Turnover Index in Accommodation and Catering 2008-2017

Annual % change of the annual and quarterly indices



Source: Greek Statistical Authority: *Turnover Index in the Accommodation and Catering economic sector, Third Quarter 2017*. Piraeus, December 2017.

It is important to note that the Q4 and Q1 "off-peak" quarters of each year showed the largest decline in the period under review (see Table 4.1.1 and Charts 4.1.1 and 4.1.2) and are still significantly far from the levels of the pre-crisis period. On the one hand, this fact is due to, and highlights, the high seasonality of the tourist phenomenon in the country and the continuing low attractiveness on the international market of our urban destinations as alternatives to the sun-sea model (or 'sss'), intensifying the seasonality and the associated problems. However, it is also due to the decline in domestic non-summer tourism where the turnover index for Q1 of 2017 is only 43.2 versus 64.0 in 2010, 77.7 in 2008 and 67.4 in 2006, for example. The same applies to Q4 at 60.6 in 2016, compared with 66.1 in 2010, 96.6 in 2008 and 89.3 in 2006.

It should be noted, however, that the increase in Q2 and Q3 earnings in 2017 does not help to alleviate the problem of seasonality. Only incoming tourism in small or large cities, as alternatives to 'sss'[3] forms, like conference, athletic, medical, cultural, religious tourism, can effectively contribute to this qualitative restructuring of tourism flows, as domestic tourism has not yet recovered to adequately support the increase in arrivals during "off-peak" periods.

3. Sea, Sun, Sex.

4.1.2. Analysis of international tourist receipts, over time and by country of origin

Beyond the turnover index, if we now proceed to systematically analyse recent travel receipts,[4] we can have a good indication of the revenues due to travel expenditure in the country and the corresponding trends from a variety of selected countries of origin.

As shown in Table 4.1.2 but also more graphically in Chart 4.1.3, the receipts from international tourist traffic originating from selected geographic regions and countries can be summarised as follows:

Analysis of total international tourism receipts, over time

As it is known, after the receipts of € 11.6 billion in 2008, there has been a drop in the country's international tourism receipts. This decline was significant in 2009 and continued in 2010 when the lowest value was recorded at € 9.6 billion. The years 2011 (€ 10.5 billion) and 2012 (€ 10.0 billion) were years of stabilization, and from 2013 there was an increase in revenues to € 12.1 billion, which continued in 2014 to € 13.4 billion and in 2015 to € 14.1 billion. There was a retreat to € 13.2 billion for 2016, partly due to the worsening of the refugee problem, while for 2017 the receipts amounted to € 14.2 billion up to October, and the forecast is that 2017 will close near € 14.9 billion, higher than any previous period.

The result of recent years reflects, partly, tourism development, infrastructure, local and international marketing and the potential improvement of the tourist product mix within the country. It is also due, and to the extent that it has been achieved, to a more effective recording of tourism receipts, a factor of particular importance for the economic development of the country. Finally, it is due, in part, to economic growth in foreign markets (origins of incoming tourism), to the country's favourable political conjuncture within

TABLE 4.1.2 Greece: International tourism receipts: Total and selected regions and countries
Years 2008-2017 (In million Euros)

	Total	Eurozone	Non-Eurozone EU	UK	Russia	USA	Switzerland	Australia	Canada
2008	11,636	5,584	1,137	1,869	401	726	283	160	187
2009	10,400	5,055	1,033	1,625	301	568	304	180	144
2010	9,611	4,534	926	1,244	496	599	265	147	134
2011	10,505	4,962	926	1,205	743	533	349	165	172
2012	10,025	4,317	825	1,420	944	426	297	156	132
2013	12,152	4,862	964	1,355	1,339	569	333	177	259
2014	13,393	5,451	239	1,553	1,157	655	338	239	164
2015	14,126	6,009	1,375	2,020	421	943	375	237	223
2016	13,207	5,580	1,573	1,944	436	728	336	182	141
2017	*14,900*								
Total 2008-2016	**105,055**	**46,354**	**8,998.1**	**14,234.1**	**6,237.2**	**5,747.7**	**2,879.4**	**1,643.4**	**1,556.2**
Region's Percentage		**44.1%**	**8.6%**	**13.5%**	**5.9%**	**5.5%**	**2.7%**	**1.6%**	**1.5%**

Source: Bank of Greece: Bulletin of Conjunctural Indicators, v.176: Sep-Oct 2017, Dec.2017.

Note: Since 2010 the "Total" also includes the receipts from cruises.

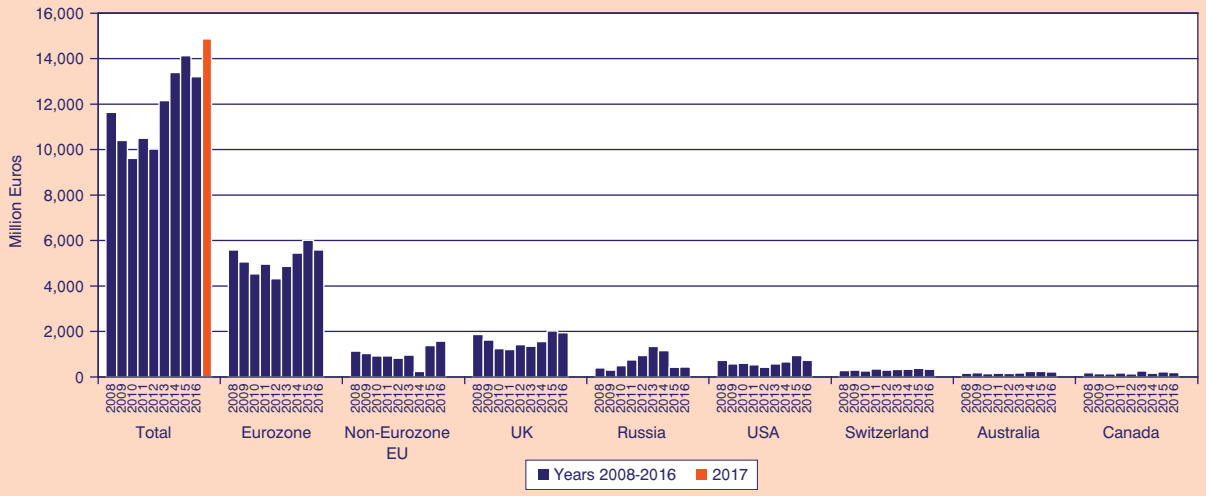
*The figure for 2017 is provisional.

4. Bank of Greece: Bulletin of Conjunctural Indicators, v.176: Sep-Oct 2017, Dec.2017.

CHART 4.1.3

Greece: International tourism receipts: Total and selected regions and countries

Years 2008-2017 (in million Euros)



Source: Bank of Greece: Bulletin of Conjunctural Indicators, v.176: Sep-Oct 2017, Dec.2017.

the turbulent landscape of the southeastern Mediterranean, and, of course, to the continuing international growth in global tourism.

Analysis of international tourist receipts, by region

Eurozone

Analysing the origin of the receipts for the nine years from 2008 to 2016 (see Table 4.1.2 and Chart 4.1.3), we note that, against the total of € 105 billion, the receipts from the Eurozone amounted to € 46.3 billion. In the 9-year period, 44.1% of Greece's international travel receipts come from the Eurozone countries.

On an annual basis, collections amounted to € 5.58 billion in 2008, declining steadily to € 4.32 billion in 2012, and rising again to € 5.58 billion in 2016. Thus, there is no significant upward trend from the figures so far.

Finally, the percentage of participation of the Eurozone countries in the total tourist receipts of Greece is systematically decreasing. In 2008 it was 48%, that is € 5.58/11.64 billion, and reached 42% in 2016 i.e. (€ 5.58/13.2 billion), which is an important trend.

EU countries outside the Eurozone

Tourist receipts from visitors from the EU countries outside the Eurozone amounted to € 9.0 billion over the same nine-year period, or 8.6% of total receipts. Their course is encouraging, as from € 1.14 billion in 2008, and after a significant fall, they recovered to € 1.38 billion in 2015 and to € 1.57 billion in 2016. The UK is not included in this group of countries, not only because of the decision to separate from the EU, but also because of the UK's special importance for Greek tourism.

United Kingdom

The UK is a traditional country of origin for tourism in Greece. From 2008-2016, € 14.2 billion have been spent in our country by British tourists, accounting for 13.5% of total receipts. The UK tourist receipts recorded € 1.87 billion in 2008, which after falling, recovered to € 2.02 in 2015 and remained at € 1.94 in 2016. However, there is a clear stagnation in our country's favorable market approach. Greece's contribution to international tourist receipts from the UK was € 1.869/11.636 billion in 2008, or 16.1%, and gradually declined to 14.7% i.e. (€ 1.944/13.207 billion) in 2016.

Russia

Receipts from tourist traffic coming from Russia amounted to € 6.24 billion from 2008-2016, which corresponds to 5.9% of total tourist receipts. However, there is considerable variation. More specifically, in 2008, receipts amounted to € 0.4 billion, while in the following years they increased steadily, reaching € 0.74 billion in 2011 and € 1.34 billion in 2013. However, there was a significant decline, for a variety of political and economic reasons, not related to the tourist offer from

the part of Greece. But clearly much more can be done for us to take advantage of this market which –as it has shown– has great potential. Thus, in 2015 the receipts were € 0.42 billion and in 2016 € 0.44 billion, while a slight increase is expected for 2017.

USA

The United States traditionally has been feeding Greece with quality tourism, and many of the tourists belong to the Greek-American community. The travel receipts from the US that were recorded for the nine years were € 5.75 billion, which accounts for 5.5% of total tourist receipts and is relatively stable. In 2008, they amounted to € 0.73 billion, but in the following years there was a slight decrease to € 0.53 billion in 2011 and to € 0.57 billion in 2013. Then there was a recovery, so in 2015 the receipts were € 0.94 billion and in 2016 the receipts remained at € 0.73 billion, while in 2017 a slight increase is also expected.

Switzerland

Switzerland is a small but significant and stable country of origin of tourism for Greece, outside of the EU. In the nine years, € 2.9 billion have been spent by Swiss tourists in our country, which represents 2.7% of total receipts. Tourist revenues from Switzerland were recorded at € 0.28 billion in 2008, rose to € 0.37 billion in 2015 and stabilized at € 0.34 billion in 2016. The Swiss have high disposable income, orientation to quality and ecological respect. It is obvious that the Greek tourist product should try to respond even better to the highly dynamic market of Switzerland.

Australia - Canada

These countries are basically countries with significant and active Greek communities.

Tourist receipts from Australia amounted to 1.6% of the total for the nine year period. Annual tourist receipts show only a slight increase. From € 160 million in 2008 to € 165 million in 2011, to € 237 million in 2015, down to € 182 million in 2016, while in 2017 a little higher is expected. Greece's attractiveness as a tourist destination in distant Australia seems to be mainly based on the Greek diaspora of the continent, while there is clearly a wider potential.

From Canada, tourist receipts account for about 1.5% of the total. Annual tourist receipts for the last nine years fluctuate without any upward trend. From € 187 million in 2008 to € 172 million in 2011, to € 223 million in 2015 and again to € 141 million in 2016. In 2017 it will likely be slightly higher. Unfortunately, there are no signs of increasing Greece's attractiveness as a tourist destination in this important country, thus more efficacious efforts on the issue seem necessary.

4.1.3. Conclusions

Tourism revenue up to 2012 declined steadily compared to 2008. Year 2013 was the turning point and since then there has been a recovery, which continued in 2014 and 2015. In 2016 revenues stabilized a little lower with appreciable problems in Russia and in incoming refugee flows. In 2017 there was a significant increase, which is the result of a relative regulation in refugee issues, a relative improvement in infrastructure, a relative improvement in the recording of revenue, with increased use of plastic money, and favorable political circumstances in the wider geographic area. Finally, a slight recovery of domestic tourism seems to be noted after years, which will become apparent for the first time in the figures of Q4, 2017. These positive elements do not mean that efforts in the international marketing of tourism should not be intensified, as should the endeavors to enrich the tourist product, in order to increase the per capita and the daily tourist spending, in an enriched network of services and goods.

4.2. Household travel expenditure in Greece

Theodore Tsekeris

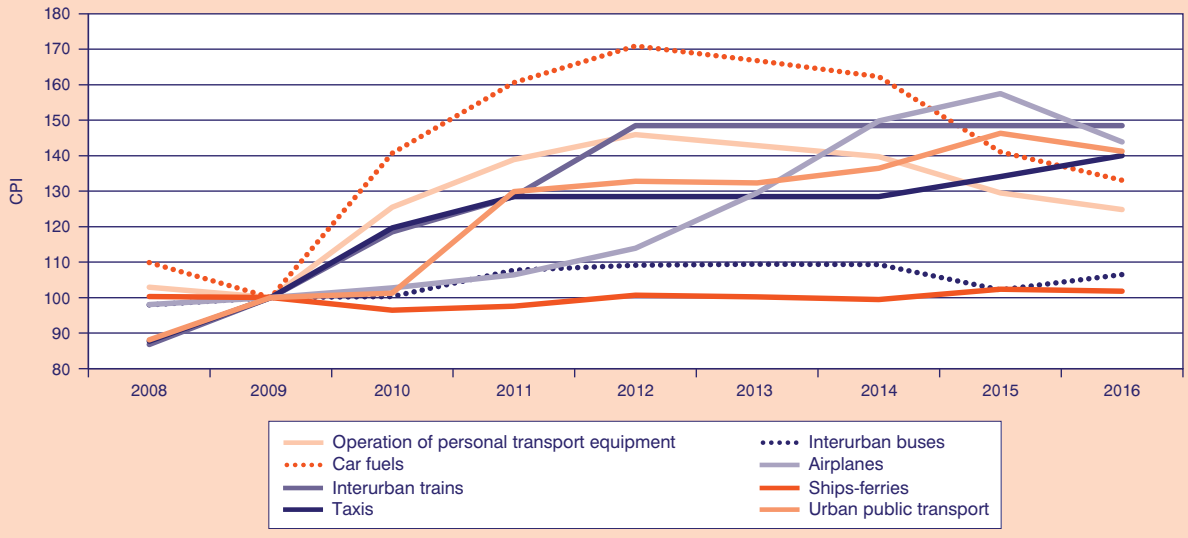
The household expenditure for travel constitutes a significant component of policy decision-making in the transport sector, including the pricing of transport services offered by different modes (road, rail, air and maritime), the monitoring and regulation of competing transport services, the management of travel demand and the supply of new or enhanced services and infrastructure in the specific sector (Tsekeris, 2010). In particular, the analysis of the household expenditure for travel can be used to support the design and evaluation of suitable policy tools for reducing social and regional inequalities in transport and accessibility. This article presents and discusses the evolution of the household expenditure for travel in Greece, using the dataset of the Household Budget Surveys (HBS) conducted annually by the Hellenic Statistical Authority (ELSTAT). The findings of the analysis, spanning the period 2008-2016, lead to useful insights concerning the impact that the persistent economic crisis had on household travel decisions. Finally, the current analysis at the regional (NUTS-II) level allows reaching valuable conclusions about interregional inequalities in transport and accessibility conditions.

4.2.1. Intertemporal evolution of household travel expenditure

Figure 4.2.1 shows the overall increase of the Consumer Price Index (CPI) in all the main categories of transport modes/services during the period 2008-2016. Specifically, car fuels, which constitute the principal subcategory of the expenditure category 'operation of personal transport equipment', performed the largest increase of the relevant CPI in 2012, compared to the CPI of all the other travel expenditure categories. However, after 2012, the car fuel CPI gradually declined and in 2016 reached a level lower than that of 2010. As a consequence, the CPI for the operation of personal transport equipment in 2016 fell back to the level of 2010. During 2008-2016, the interurban railway services, and the urban public transport (including urban bus, trolleybus, [sub]urban train, metro and tram) and taxi services had the largest CPI increase among all travel-related services (by 71% and 60%, respectively). The CPI for coastwise travel (by ship, ferry boat, etc.) presented the smallest increase (by only 1.6%).

Table 4.2.1 demonstrates the reduction of household expenditure in all transport modes/services between 2008 and 2016. Despite the decrease in spending for personal vehicle transport fuels (by -33%), the expenditure for road tolls presents a remarkable increase and contribution to the total personal vehicle travel expenses in 2016, due to the development of the national net-

FIGURE 4.2.1
Evolution of the CPI for main expenditure categories of personal transport and travel-related services, 2008-2016 (base year 2009=100)



Source: ELSTAT and own processing.

TABLE 4.2.1 Amount (in euro at 2009 constant values) and shares (%) of average monthly household expenditure for total travel and per transport mode/service, 2008 and 2016

Household expenditure category	2008	2016
Use and maintenance of personal transport equipment	150.51	94.67
Of which: Fuels	88.44	59.12
Tolls	1.46	14.26
Expenses for use (fuels & tolls) of personal vehicles	89.90	73.37
% expenses for use as share of total expenses for personal vehicles	*59.73%*	*77.50%*
Interurban travel by train	0.37	0.23
Interurban travel by bus	1.86	1.30
Travel by taxi	8.29	2.49
Travel by airplane (domestic flights)	1.71	1.26
Travel by ship, ferry boat, etc.	4.46	2.31
Travel by urban public transport modes	11.48	7.32
Total expenditure for travel	178.68	109.57
Total expenditure for transport	276.28	158.01
Total monthly household expenditure (purchases)	2,143.30	1,330.18
% expenses for travel as share of total transport expenses	*64.67%*	*69.35%*
% expenses for travel as share of total household expenditure	*8.34%*	*8.24%*
% expenses for transport as share of total household expenditure	*12.89%*	*11.88%*

Source: ELSTAT, HBS, own processing.

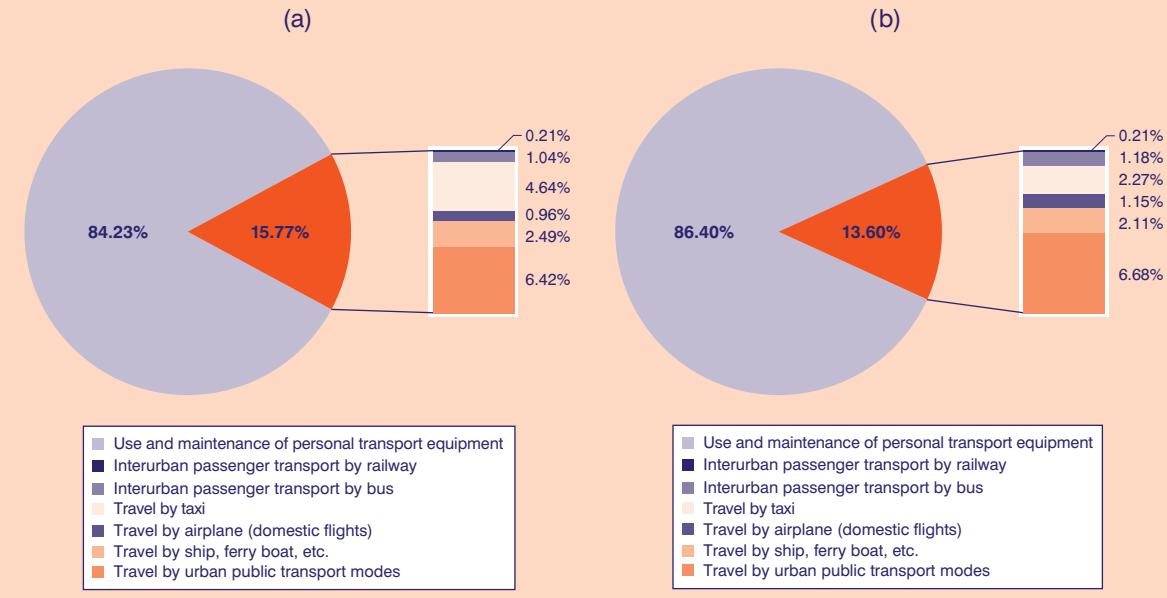
work of toll highways. Hence, the share of expenses for personal vehicle use to the total expenditure for personal transport equipment (which includes vehicle maintenance-repair, lubricants, circulation taxes, insurance and other services) rose from 60% in 2008 to 78% in 2016. Regarding the passenger transport services, the largest decrease in household expenditure appears in travel by taxi (-70%) and by ship/ferry (-48%).

The reduction of household travel expenditure can be attributed, to a large extent, to the impact of the economic crisis during the study period, which concerns the decrease in the number of trips, trip frequency and/or the total distance traveled, particularly by private car. In addition, the reduction of travel expenses could be partially explained by such factors as the operation of new highways or highway segments, the upgrading of existing road infrastructure, and the creation or enforcement of agglomeration economies due to the enhancement of accessibility, which relates to the reduction of trip distances or the required number of trips.

Despite the decrease in the total travel expenditure, its share to the total transport expenditure increased from 64.7% in 2008 to 69.4% in 2016 due to the significant reduction of (average monthly) spending for the purchase of private vehicles (from 92 euro in 2008 to 45 euro in 2016). The share of the household travel expenditure to the total household expenditure (in terms of total purchases) essentially remained the same (8.3%) because of the significant drop of the real disposable income (-38%, i.e., from 2,143 euro in 2008 to 1,330 euro in 2016). Correspondingly, the share of the household transport expenditure to the total household expenditure showed a small reduction (from 12.9% in 2008 to 11.9% in 2016).

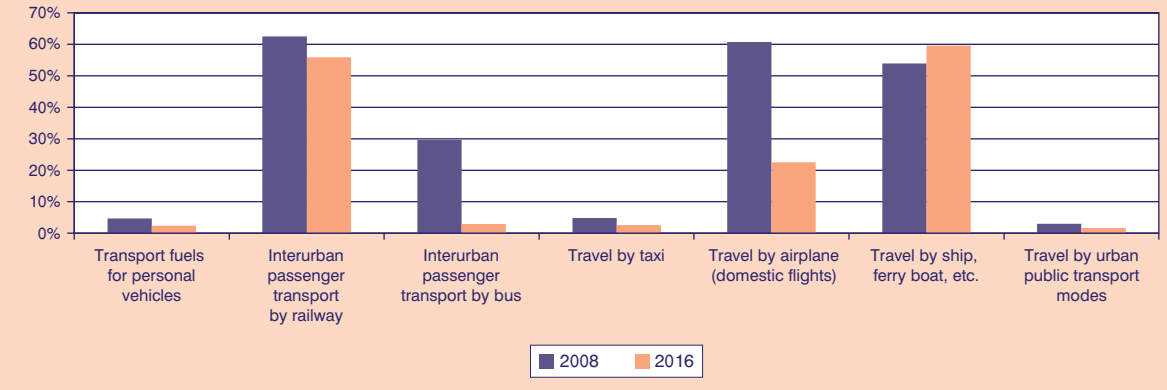
It is noted that the consumption expenditure shares of travel (and transport) to the total expenditure constitute useful indices which depict the affordability of households to travel (and their mobility/accessibility) or, inversely, the risk of travel-related (and transport) poverty, in relation to the consumption of relevant goods and services, such as transport fuels and public transport fares. Based on the international literature (e.g., Litman,

FIGURE 4.2.2
Shares (%) of average monthly household expenditure for main transport modes/services, with respect to the total household travel expenditure: (a) in 2008 and (b) in 2016



Source: ELSTAT, HBS, own processing.

FIGURE 4.2.3
Average shares (%) of household expenditure for main transport modes/services during vacation periods with respect to the corresponding total (yearly) household travel expenditure: (a) in 2008 and (b) in 2016



Source: ELSTAT, HBS, own processing.

2015; Berry *et al.*, 2016; Jeekel and Martens, 2017; Mattioli *et al.*, 2017), the values of these expenditure shares in Greece do not suggest the existence of poverty risk for travel and, more generally, for transport at the national level (i.e., they remain smaller than 10% for travel expenditure and 20% for transport expenditure).

Figure 4.2.2 illustrates that the expenditure share of use and maintenance of personal transport equipment to the total travel expenditure increased by a small amount, from 84.2% in 2008 to 86.4% in 2016. A corresponding decrease is found for the total expenditure share of urban and interurban travel services, accompanied by a considerable reallocation of the shares between public transport modes. These changes can be attributed, to some extent, by underlying mechanisms of inter-modal substitution/competition (Tse-

keris, 2010). Specifically, in the market of urban travel services, there is a large reduction (-51%) of the expenditure share of travel by taxi, against a small increase (4%) of the expenditure share of travel by urban public transport. In the market of interurban travel services, there is a rise of the expenditure shares of travel by air transport (domestic flights) (20%) and by interurban buses (KTEL) (14%), against a reduction of the expenditure share of travel by ship/ferry (-16%). The expenditure share of travel by interurban railway remained the same, at very low levels.

Figure 4.2.3 above shows that the transport modes which concentrate considerable expenditure shares during vacation periods, with respect to the total travel expenditure (during and outside vacation periods) for those modes, are ships (60% in 2016 against 54% in 2008), interurban trains (56% in 2016 against 63% in 2008) and airplanes (domestic flights) (23% in 2016 against 61% in 2008). The other transport modes concentrate quite low expenditure shares (below 5%) during vacation periods, compared to the whole year.

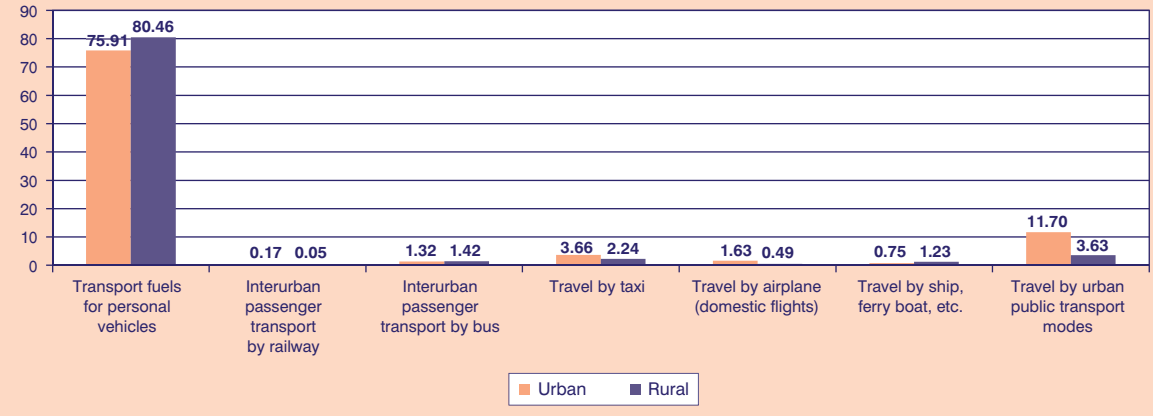
4.2.2. Spatial analysis of household travel expenditure

The effect of population density on household travel expenditure is found to be heterogeneous across the various transport modes (Figure 4.2.4). On the one side, the consumption expenditure for travel by airplane, railway and urban public transport is particularly increased (by almost 70%) in the urban areas, compared to the rural areas. These findings verify the significant positive impact of urbanization economies on the use of fixed-route transport modes, urban buses and taxis, as well as of the availability of transport infrastructure on the expenditure for travel-related services. On the other side, the consumption expenditure for travel by ship is particularly increased (by 64%) in the rural areas, compared to the urban areas. The lower population density (in rural areas) also reinforces –but to a much smaller degree– the household expenditure for road travel by interurban bus and personal vehicle.

The household location (at the regional level) has also a significant impact on the total travel expenditure as well as on the allocation of spending for different transport modes. Specifically, the average monthly household expenditure for travel (namely, transport fuels of private vehicles and urban and interurban passenger transport services) ranges widely in the 13 regions of the country, from 68 euro in Sterea Ellada to 137 euro in Dytiki Ellada (Figure 4.2.5). There are also increased household travel expenses in the island regions of Notio Aigaio (127 euro), Voreio Aigaio (108 euro), Ionia Nisia (102 euro) and Kriti (102 euro), as well as in the region of Attiki (105 euro) (where the capital city of Athens is located).

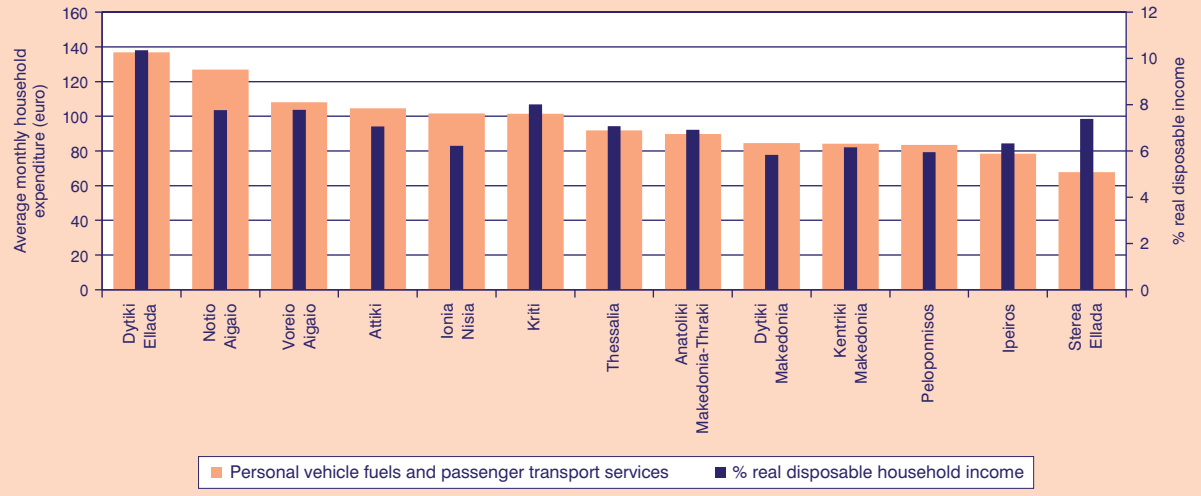
Correspondingly, the travel expenditure shares to the total real disposable income range widely in the 13 regions (Figure 4.2.5), from 5.8% in Dytiki Makedonia to 10.4% in Dytiki Ellada (exceeding the conventional 10% threshold of the risk of travel-related poverty). The island regions of Kriti, Notio Aigaio and Voreio Aigaio also present increased values of travel expenditure shares (8%, 7.8% and 7.8%, respectively). It is stressed that, while the region of Sterea Ellada presents the lowest level of travel expenditure, the corresponding

FIGURE 4.2.4
Monthly average amount (in euro) of household expenditure for main transport modes/services in urban and rural areas in 2016



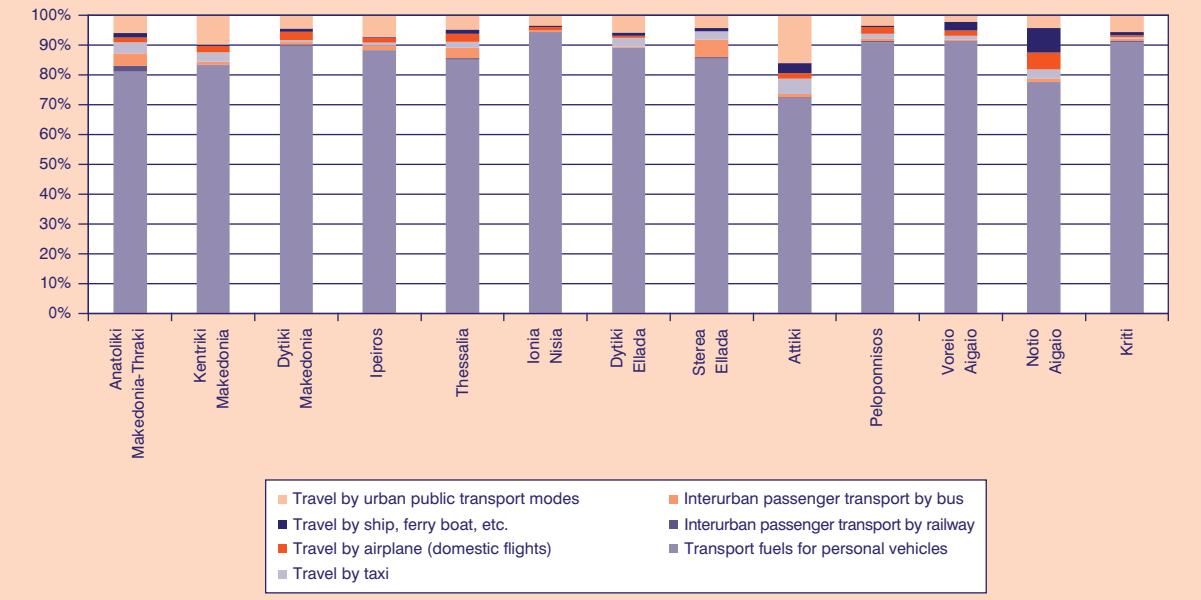
Source: ELSTAT, HBS, own processing.

FIGURE 4.2.5
Average amount (in euro) of household travel expenditure and relevant shares (%) with respect to the total real disposable income in the 13 regions of Greece in 2016



Source: ELSTAT, HBS, own processing.

FIGURE 4.2.6
Shares (%) of average household travel expenditure for main transport modes/services in the 13 regions of Greece in 2016



Source: ELSTAT, HBS, own processing.

share to the total expenditure is relatively increased (7.4%), due to the lowest real disposable household income (918 euro) of the given region compared to the other regions of the country.

More insights into the formulation of possible policy proposals can be obtained from the interregional analysis of the household expenditure for different transport modes (Figure 4.2.6). Specifically, in the island regions, the increased travel expenditure can be attributed to the relatively high consumption of transport fuels for private vehicles (particularly, in Ionia Nisia, Voreio Aigaio, and Kriti, with shares exceeding 90%) and –to

a smaller degree– of interurban passenger transport services, especially by ship in the regions of Notio Aigaio and Voreio Aigaio (with shares equal to 8% and 3%, respectively) and by airplane in Notio Aigaio (with a share of 6%), compared to most of the regions in mainland Greece.

These findings demonstrate the increased need for taking policy actions (subsidization or other) in favor of local public transport services and to enhance interregional accessibility in the island regions. Such actions may concern the measure of the harmonization of the cost of traveling by ship with that of traveling by bus or train for a given origin-destination market and the same level of service quality, known as the principle of "transport equivalent", and the preservation of a maximum threshold of average household expenditure share for interregional passenger transport services.

Moreover, the very high level of spending for private vehicle transport fuels in Dytiki Ellada stresses the need for further policy initiatives which can promote the local public transport services in the given region. The household expenditure shares of interurban bus services are found to be increased in some regions (Sterea Ellada and Thessalia) located along the development axis of mainland Greece (between Attiki and Thessaloniki) as well as in Anatoliki Makedonia and Thraki. The household expenditure shares of interurban railway services are at very low levels, which do not exceed 0.5% in all regions of the country, except for Anatoliki Makedonia and Thraki (2%).

4.2.3. Conclusions

The findings of this article showed that, during the period of the economic crisis (2008-2016) in Greece, the travel spending behavior did not significantly change with regard to the use of private vehicles, as the corresponding household expenditure shares remained at high levels (about 85%) compared to the expenditure shares of the other transport modes/services. However, the household expenditure shares of passenger transport services rose for travel by urban public transport, interurban bus and airplane (domestic flights), in contrast with travel by taxi and ship/ferry, whose expenditure shares declined over the study period. The expenditure share of travel by interurban railway remained the same, at very low levels (0.2%).

The analysis of household travel expenditure among transport modes, over periods of the year and across regions demonstrates the need for integrated planning and implementation of policy measures at the level of the national transport system. These measures must have an explicit seasonal and spatial dimension, so as to reinforce the share of public transport modes in the urban and rural areas, improve the efficiency of the management of travel demand by private vehicle, and enhance the socially and territorially cohesive operation of the overall system. Such measures may involve the internalization of the external cost of transport by private vehicle, the promotion of flexible demand-responsive road passenger transport services in rural (and suburban) areas, the adoption of energy-efficient vehicle and fuel technologies, and the application of sharing-economy practices, including car-sharing and car-pooling. Based on current international developments, the calculation and monitoring of suitable indices of poverty risk for travel/transport could offer useful policy insights, taking into further consideration more detailed aspects of household characteristics, such as the income category and the possession of private cars.

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4.3. Developments in the Greek capital market

Fotini Economou

4.3.1. Introduction

The capital market is an important source of funding for companies, set to support and promote business activity. Apparently, the Greek capital market has endured even at a time of increased uncertainty for the Greek economy, considering that the participation of international investors in the Athens Stock Exchange (ATHEX) has remained above 60% (without the participation of the Hellenic Financial Stability Fund - HFSF) since December 2015.

In fact, the positive performance of 2017 creates optimism for the future after a difficult period for the Greek capital market which had to operate in a challenging economic environment. This article attempts a brief overview of developments in the Greek capital market for the year 2017, focusing on the stock market, the bond market and the institutional management sector.

4.3.2. Developments in the stock market

The year 2017 was undoubtedly positive for the Greek stock market with high returns that followed the upward trend of international stock markets. According to ATHEX data, the Athex Composite Share Price Index recorded a significant increase of +24.66% in 2017, going upward after the negative returns of 2014 and 2015 (-28.94% and -23.58%, respectively) and the low performance of 2016 (+1.95%). The highest price of 2017 was recorded on 17/7 (859.78 points), along with the upgrading of the creditworthiness of the Greek economy by Moody's (Caa2, June 2017) and Fitch (B- August 2017), and the upgrade of the economic outlook from stable to positive from Standard & Poor's (July 2017). The Athex Composite Share Price Index reached the level of the first months of 2015 with a three-year (2015-2017) cumulative return of -2.88% and a five-year (2013-2017) cumulative return of -11.62%. It is worth noting that in 2017 the standard deviation of the daily returns of the Athex Composite Share Price Index was 1.07%, from 2.0% in 2016.

As shown in Table 4.3.1, the majority of the ATHEX stock indices moved upwards, with the ATHEX Mid & SmallCap Price Index featuring the highest return (+106.59%). All sectoral indices also exhibited positive returns, with the exception of the FTSE/Athex Retail index, which displayed a slightly negative return (-0.99%). The best performing sectors were health, industrial products and services, oil and gas, basic resources and technology, with returns exceeding +40%. It should be noted that the banking sector experienced significant fluctuations and managed to recover in December, as by mid-November 2017 it had lost up to -26.70% since the beginning of the year.

According to ATHEX (2018a) data, in 2017 there was a significant increase in the total capitalization of the ATHEX by +10.8%, from € 39.29 billion on 30/12/2016 to € 43.54 billion on 29/12/2017. Without the participation of the HFSF in total capitalization, the increase was +11.0%, from € 37.53 billion on 30/12/2016 to € 41.66 billion on 29/12/2017. The participation of international investors in the total market capitalization increased by +3.4%, from 61.4% on 30/12/2016 to 63.5% on 29/12/2017. Without the participation of the HFSF, the increase was +3.3%, from 64.3% on 30/12/2016 to 66.4% on 29/12/2017. Over the same period, the total value of transactions declined slightly by -1.9%, from € 15.06 billion in 2016 to € 14.76 billion, with the average daily value of transactions at € 58.81 million, from € 60.46 million in 2016 (-2.7%).

Regarding the derivatives market, according to ATHEX data (2018b), there were 37,189 active investors' accounts in December 2017, from 38,321 in December 2016, of which 2,194 (5.9% of the total active investors' accounts) traded, from 1,985 (5.18% of the total active investors' accounts) in December 2016. The total number of open interest increased by +24.21%, to 407,518, from 328,082 at the end of 2016, and the participation of international investors in the total open interest of the Derivatives market was 2.90%, from 3.00% at the end of 2016. The total traded volume increased by +5.31%, from 2,017,229 contracts in December 2016 to 2,124,308 contracts in December 2017.

Next, we look at the evolution of the KEPE GRIV implied volatility index, which reflects the uncertainty of the derivatives market participants for the expected short-term direction of the Greek market and is calculated on the basis of the FTSE/ATHEX Large Cap options' prices. Figure 4.3.1 reports the monthly index prices from 2015 to 2017.

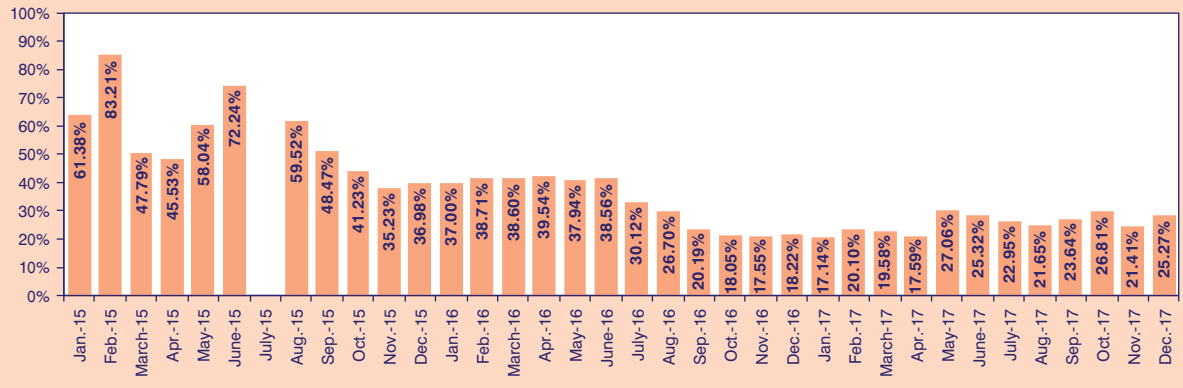
The KEPE GRIV index reached 25.27% at the end of December 2017, remaining below its historical average (34.75%), with significant variability in the daily observations. The average daily value of the index for the year 2017 fell to 22.97% from 31.66% in 2016, 53.24% in 2015 and 35.08% in 2014. This develop-

TABLE 4.3.1 Prices and returns for selected indices of the ATHEX

	29/12/2017	30/12/2016	Year min	Year max	Year change (%)
ATHEX Mid & SmallCap Price Index	3,462.23	1,675.92	1,675.92	3,515.8	106.59%
FTSE/Athex Mid Cap Index	1,198.22	753.69	753.69	1,230.19	58.98%
Athex Composite Share Price Index	802.37	643.64	602.43	859.78	24.66%
FTSE/Athex Large Cap	2,083.22	1,740.86	1,610.77	2,232.65	19.67%
Athex All Share Index	190.26	159.10	148.93	199.18	19.58%
ATHEX Alternative Market Price Index	2,408.25	2,162.82	2,162.82	2,468.97	11.35%
FTSE/Athex Health Care	258.02	146.72	136.14	310.46	75.86%
FTSE/Athex Industrial Goods & Services	2,246.15	1,454.94	1,432.54	2,385.78	54.38%
FTSE/Athex Oil & Gas	4,529.60	2,998.46	2,926.97	5,024.83	51.06%
FTSE/Athex Basic Resources	4,032.43	2,705.51	2,665.91	4,131.98	49.05%
FTSE/Athex Technology	910.40	638.85	607.65	944.06	42.51%
FTSE/Athex Food & Beverage	10,153.19	7,708.25	7,597.15	11,102.57	31.72%
FTSE/Athex Utilities	1,992.30	1,516.75	1,380.52	2,554.99	31.35%
FTSE/ATHEX Real Estate	3,408.70	2,642.99	2,518.43	3,545.33	28.97%
FTSE/Athex Telecommunications	3,165.46	2,458.04	2,292.89	3,201.24	28.78%
FTSE/Athex Construction & Materials	2,818.18	2,254.97	2,130.43	3,016.71	24.98%
FTSE/Athex Travel & Leisure	1,829.76	1,466.51	1,424.34	1,870.86	24.77%
FTSE/Athex Chemicals	11,472.39	10,110.17	9,135.70	12,505.75	13.47%
FTSE/Athex Financial Services	1,125.44	1,056.65	888.97	1,294.25	6.51%
FTSE/Athex Personal & Household Goods	8,000.46	7,650.08	6,663.96	8,561.96	4.58%
FTSE/Athex Banks	876.19	837.94	604.79	1,146.11	4.56%
FTSE/Athex Retail	2,782.06	2,809.78	2,110.99	3,212.65	-0.99%

Source: Daily official list of trading activity of the ATHEX (29/12/2017 and 30/12/2016).

FIGURE 4.3.1
KEPE GRIV index, monthly observations 2015-2017



Source: Centre of Planning and Economic Research, January 2018.

Note: There is no data for the period 29/6/2015-31/7/2015 due to the suspension of trading of all derivatives on the ATHEX Derivatives Market following the bank holiday.

ment is positive and reflects the gradual restoration of investors' confidence in the Greek market and, hence, in the Greek economy. It should be noted that due to the asymmetric negative relationship of the KEPE GRIV index with the underlying stock market index (see Economou and Siriopoulos, 2015), a positive change in the stock market leads to a reduction of uncertainty, which, however, is generally lower compared to the increase in uncertainty resulting from an equivalent negative change in the market. In fact, this means that the impact of fear is more intense than that of optimism and it takes more time for the index to return to its low levels compared to the time it took to increase.

4.3.3. Developments in the bond market

The performance of Greek government bonds in 2017 was also positive. In fact, according to Bloomberg (2017), Greek government bonds offered the highest profits internationally. This was the result of the de-escalation of the Greek bond yield curve. In particular, according to Bank of Greece data, bond yields declined gradually during 2017 (Table 4.3.2). It is noteworthy that at all maturities, yields were lower at the end of 2017 compared to the end of 2016, with the largest decline observed in the ten-year bond yield (4.44% in December 2017 versus 6.94% in December 2016). Moreover, at the end of 2017, the ten-year bond yield fell below 5% for the first time since November 2009. Additionally, a five-year bond was successfully issued with a yield of (based on pricing on 25/7/2017) 4.625% and a coupon of 4.375%. At the same time, the cost of borrowing through Greek Government Treasury bills decreased to 1.95% for 6-month and 1.60% for 3-month T-bills in December 2017. In addition, according to Bank of Greece data, the total nominal value of transactions in the Electronic Secondary Securities Market (HDAT) on the Greek government securities in 2017 reached € 555 million, from € 519 million in 2016 (+6.9%).

According to ATHEX data (2018a), in 2017, there was increased interest in corporate bonds of the Organized and Alternative Market, mainly due to the new listings of fixed income securities. Trading activity recorded a significant increase compared to 2016, with the total value of bonds transferred due to settlement at € 138.41 million from € 6.68 million (20.7 times higher), and the

TABLE 4.3.2 Government benchmark bond prices and yields for maturities of 5, 10, 15, 20 and 30 years

	Price					Yield (%)				
Maturity (Years)	**5**	**10**	**15**	**20**	**30**	**5**	**10**	**15**	**20**	**30**
January 2017	-	77.68	68.50	63.13	62.15	-	7.04	7.50	7.60	7.27
February 2017	-	73.97	64.43	59.82	59.22	-	7.52	8.00	8.00	7.65
March 2017	-	76.23	66.75	62.68	62.28	-	7.17	7.68	7.62	7.28
April 2017	-	79.27	70.87	67.09	66.81	-	6.70	7.12	7.07	6.78
May 2017	-	84.87	76.00	71.82	71.32	-	5.86	6.47	6.54	6.31
June 2017	-	85.66	76.61	72.01	71.39	-	5.76	6.41	6.53	6.32
July 2017	-	88.77	77.98	72.45	71.71	-	5.33	6.26	6.49	6.30
August 2017	98.97	87.40	76.30	70.78	69.84	4.61	5.55	6.49	6.70	6.50
September 2017	99.42	87.48	77.13	71.60	70.73	4.51	5.56	6.40	6.62	6.42
October 2017	99.14	87.45	78.08	72.93	71.97	4.58	5.59	6.31	6.49	6.31
November 2017	100.89	90.06	81.84	77.92	77.47	4.16	5.22	5.87	5.97	5.80
December 2017	99.26	94.75	89.80	87.75	87.69	3.75	4.44	4.89	5.02	5.08

Source: Bank of Greece.

Note: Monthly average observation. The bond prices given are the clean prices per € 100 nominal, while the respective yields are expressed in percentages.

total number of bonds transferred at 14,929,668 items from 4,316,105 items (3.5 times higher). The average daily value of transactions amounted to € 551,425.81 and the average daily number of bonds transferred due to settlement amounted to 59,481 items.

It should be noted that the Greek Organized Market of corporate bonds completed the first year of its operation in 2017, and the four issues of five-year corporate bonds of 2017 (OPAP, Sunlight, Mytileneos and Terna Energiaki) received a positive response from investors, raising € 610 million in total.

In addition, the Hellenic Corporate Bond Price Index, which is based on the net price of each bond, reached 99.90 points, recording a return of +2.22% in 2017; the Hellenic Corporate Bond Index, which is based on the net price, accrued interest and the value of the payments of each bond reached 116.89 points, recording a return of +6.84% in 2017.

4.3.4. Institutional management

According to the data supplied by the Hellenic Fund and Asset Management Association, the total Collective Investment Schemes' (UCITs) assets increased by +3.67% in 2017, from € 6,421.3 million to € 6,656.9 million. Of these assets, 27.89% are bond UCITs, 20.44% are balanced, 17.67% money market, 16% equity, 14.31% Funds of Funds, 3.37% specialist and the remaining 0.33% are index funds. These funds are managed by 15 Mutual Fund Management Companies, while almost 88% of the total assets is managed by five Mutual Fund Management Companies.

The year 2017 was good for UCITs returns. The best performing categories with the highest average annual returns[1] were Greek bond funds (+22.89%), Greek equity funds (+20.44%), equity index funds (+20.41%) and balanced funds (+16.85%). It should also be noted that during the same period total net outflows decreased by -54.7%, from € 1,048 million in 2016 to € 474.8 million in 2017. In 2017, the largest net outflows were recorded for short-term money market funds (€ 479.98 million), while the global bond funds and money market funds had inflows of € 164.07 million and € 99.74 million, respectively. Other categories with smaller inflows were balanced funds (€ 69.29 million), Greek bond funds (€ 31.49 million), specialist funds absolute return (€ 8.17 million) and global equity funds (€ 0.95 million). The other categories recorded net outflows.

Finally, according to the Hellenic Fund and Asset Management Association (2018), the total amount of funds under management in the institutional management sector increased by +9.49%, at € 14.78 billion, on 31/12/2017. Of these funds, 45% belonged to UCITs, 37% to the Asset Management sector, 17.7% to Real Estate Investment Companies (REICs), 0.2% to Alternative Investment Funds (AIFs) and 0.1% to Portfolio Investment Companies (PICs).

4.3.5. Conclusions

The year 2017 was positive for the Greek capital market, after a prolonged period of economic crisis and intense market uncertainty. The gradual restoration of investors' confidence is reflected, inter alia, in the decline of the Greek government bond yields and in the lower levels of the KEPE GRIV "fear index" compared to previous years. However, high price volatility necessitates a constant review of market trends.

More specifically, in 2017 most of the stock indices in the ATHEX recorded positive returns, while the KEPE GRIV implied volatility index remained below its historical average. At the same time, the capitalization of the Greek stock market increased significantly with the participation of international investors staying high. In the bond market, Greek government bond yields de-escalated, high investor profits were recorded and interest in corporate bonds increased, thus creating positive prospects for government and business financing. It should be noted that the corporate bond market is an important source of financing (alongside bank lending) and also an attractive alternative to low returns on time deposits. Finally, 2017 saw positive signs from the institutional management sector. The UCITs assets under management increased and positive returns were recorded in most categories.

The Greek capital market is inextricably linked to the course of the country's economy and to the prospects of the domestic banking system. Restoring confidence in the Greek market helps attract capital from domestic and international investors, as well as raise funds from the capital market, both of which are needed to fuel economic growth.

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4.4. Competitiveness of the Greek economy

Athanasios Chymis

Despite the fact that the Greek economy shows some signs of recovery, the latest reports on global competitiveness indices are not promising. According to the last edition of the Global Competitiveness Index (GCI) produced by the World Economic Forum (WEF), namely, the GCI 2017-18, Greece lost one more place in the world ranking and it is now 87th among 137 countries. Last year (2016) it was 86th among 138 countries and the year before 81st among 140 countries, which was the best ranking since 2010.

Note that the report published each year refers to data measured the year before. So, the Global Competitiveness Report 2017-18, published on September 2017, essentially refers to 2016. The same applies to all years of Table 4.4.1. As one can see from the Table, the pillar that has considerable improvement is 'macroeconomic environment' (3rd pillar) mostly due to the improved government budget balance. However, it is the high levels of government debt that do not allow 'macroeconomic environment' to rank even higher than 117th. The fact that the first pillar, 'Institutions,' lost six places is not a positive development. 'Institutions' includes sub-indices such as 'efficiency of government spending,' 'burden of government regulation,' 'efficiency of legal framework in settling disputes,' 'efficiency of legal framework in challenging regulations,' and 'transparency of government policy making.' The ranking of each one of the above is 132nd, 130th, 133rd, 114th, and 122nd, respectively, among 137 countries (see Table 4.4.2). 'Property rights,' another important index of the pillar 'Institutions,' went down nine ranks to 98th place. 'Institutions' is very important for economic development and it is crucial for Greece to quickly improve such indices.

It is also not encouraging that Greece ranks 106th regarding the sub-index 'quality of the educational system' which is part of the fifth pillar 'higher education and training.' The eighth pillar 'financial market development' remains very uncompetitive. This is a result of the crisis which drove most financial institutions (mostly banks) to the verge of bankruptcy. It is worth noting that the sub-index 'soundness of banks' ranks 134th, the same as the previous year, 2015.

The GCI contains more than 114 sub-indices distributed in 12 pillars. The first pillar, 'Institutions' has the most (21 sub-indices) and the tenth pillar, 'Market size',

TABLE 4.4.1 Evolution of Greek rankings with respect to the Global Competitiveness Index

	2008	2012	2013	2014	2015	2016	2017
Total number of countries	134	144	148	144	140	138	137
Global Competitiveness Index: Greece	**67**	**96**	**91**	**81**	**81**	**86**	**87**
A) *Basic requirements*	*51*	*98*	*88*	*76*	*74*	*80*	*70*
1. Institutions	58	111	103	85	81	81	87
2. Infrastructure	45	43	38	36	34	37	38
3. Macroeconomic environment	106	144	147	135	132	131	117
4. Health and primary education	40	41	35	41	41	46	48
B) *Efficiency enhancers*	*57*	*69*	*67*	*65*	*62*	*67*	*77*
5. Higher education and training	38	43	41	44	43	45	44
6. Goods market efficiency	64	108	108	85	89	89	93
7. Labor market efficiency	116	133	127	118	116	114	110
8. Financial market development	67	132	138	130	131	136	133
9. Technological readiness	59	43	39	39	36	42	50
10. Market size	33	46	47	49	52	56	58
C) *Innovation and sophistication factors*	*68*	*85*	*81*	*74*	*77*	*70*	*71*
11. Business sophistication	66	85	83	74	74	69	73
12. Innovation	63	87	87	79	77	72	75

Source: Global Competitiveness Index (WEF, several years' reports).

TABLE 4.4.2 Indicative GCI sub-indices that require immediate improvement

No	Sub-index	GCI 2017-18 rank*	GCI 2007-08 rank*
1.01	Property rights	98	51
1.03	Diversion of public funds	79	64
1.06	Judicial independence	71	62
1.08	Efficiency of government spending	132	75
1.09	Burden of government regulation	130	116
1.10	Efficiency of legal framework in settling disputes	133	71
1.11	Efficiency of legal framework in challenging regulations	114	
1.12	Transparency of government policymaking	122	99
5.03	Quality of the education system	106	82
6.04	Effect of taxation on incentives to invest	137	-
6.05	Total tax rate	111	82
6.12	Business impact of rules on FDI	115	107
7.01	Cooperation in labor-employer relations	97	115
7.02	Flexibility of wage determination	108	126
7.05	Effect of taxation on incentives to work	136	-
7.06	Pay and productivity	98	103
7.07	Reliance on professional management	81	92
7.08	Country capacity to retain talent	121	63
7.09	Country capacity to attract talent	133	
8.04	Ease of access to loans	135	58
8.06	Soundness of banks	134	45
9.03	FDI and technology transfer	112	98
12.01	Capacity for innovation	85	89
12.04	University-industry collaboration in R&D	129	90
12.05	Government procurement of advanced technology products	131	103

Source: Global Competitiveness Index (WEF, 2007, 2017 reports).

* Total number of countries: 137 in 2017 and 134 in 2007.

has the least (four). Among all 114, we chose some indicative ones that have two characteristics in common: a) they are very important for an economy to grow and b) Greece ranks very low in all of them. These are illustrated in Table 4.4.2. Greece has to take immediate measures and proceed to the necessary reforms in order to improve these indices as quickly as possible. The Table also demonstrates the rankings of these sub-indices of the 2007-08 Report. It is obvious that Greece did not perform much better during the years before the crisis. This is one major reason for the depth and severity of the crisis.

It becomes clear that if Greece is to overcome the crisis and enter a path of rigorous growth, it has to go through a series of reforms that will positively affect most of the above sub-indices. Otherwise, Greece risks having sluggish and unsustainable growth, the type of growth that took place during the decades before the crisis and, ultimately, led to the crisis.

Table 4.4.3 compares Greece with the four other countries (Cyprus, Ireland, Portugal and Spain) who also had an economic crisis and received financial support like Greece. The comparison is based on the Doing Business Index of the World Bank and covers a period of ten years. Similarly to the GCI, the data used for the preparation of the index are of the previous year. Specifically, the last Doing Business (titled 'Doing Business 2018'), published on October 2017, measures the ease of doing business in 2016. The Index is calculated for 190 economies and contains ten categories, each of which has 3-8

TABLE 4.4.3 Comparable ranking of Greece based on the Doing Business Index for the period 2008-2018

Countries/year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
No of Countries	178	181	183	183	183	185	189	189	189	190	190
Greece	100	96	100	109	100	78	72	61	60	61	67
Cyprus	-	-	40	37	40	36	39	64	47	45	53
Portugal	37	48	48	31	30	30	31	25	23	25	29
Spain	38	49	62	49	44	44	52	33	33	32	28
Ireland	8	7	7	9	10	15	15	13	17	18	17

Source: Doing Business (2007-2017 reports), World Bank.

TABLE 4.4.4 Comparable ranking of Greece based on the World Competitiveness Yearbook for the period 2012-2017

Countries/year	2012	2013	2014	2015	2016	2017
Greece	58	54	57	50	56	57
Portugal	41	46	43	36	39	39
Cyprus*	-	-	-	-	-	37
Spain	39	45	39	37	34	34
Ireland	20	17	15	16	7	6

Source: World Competitiveness Yearbook (2012-2017) IMD.

* Cyprus was first included in 2017.

sub-indices. Greece is mostly weak with respect to 'registering property' (145th) as well as 'enforcing contracts' (131st). One of the worst Greece's performances is with respect to the time to resolve a commercial dispute (judicial process), which is 1,580 days (almost 4 years and 4 months), whereas the OECD average is less than 600 days and the average for the best performers in the European Union is less than 400 days.

Finally, Table 4.4.4 also compares Greece with the same four countries based on the World Competitiveness Yearbook published by the IMD, which includes 63 countries. It is obvious that Greece lags behind all four countries who also had a severe economic crisis. Greece lags behind (in most cases) all 27 EU member-states. It is not a surprise why Greece had such a deeper and longer crisis relatively to its other four counterparts.

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The labour supply of women in Greece before and during the crisis

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1. Introduction

Female labour force participation is important primarily for women themselves, but also for the country in general on social and economic grounds. From an individual's point of view, women reap benefits from participating in the labour market actively and getting a job as a result. Being employed means that a woman can be financially independent and, thus, free. At the same time, the more women working, the more democratic families become and the more freedom people have to make their own choices (Lyberaki, 2017). Improving the access of women to the labour market means more gender equality by providing women with the same opportunities as men and, thus, it is also a moral issue and a matter of justice.

From the society's point of view, the fact that half of the population consists of women should not be disregarded. In Greece, in particular, based on the 2011 Population Survey, 51% are women. Therefore, it is difficult to imagine a country growing in a sustainable way, by OECD, UN and EU[1] standards, when half of its population is excluded from the process. At the same time, women get the same, and sometimes more, education as men. Note that 55% of women over 15 years of age in Greece are economically inactive. One out of ten of those had a tertiary education degree in 2016. Having economically inactive women corresponds to a waste of resources, since, on the one hand, the human capital they embody depreciates rapidly over time when it is not utilised and, on the other hand, the investment in education made by themselves, their families and the state is lost.[2] Moreover, female labour force participation is proven to increase economic growth (OECD, 2012).

An equally important parameter is that increasing female labour force participation is expected to decrease economic inequalities and poverty, since it will lead to increased household income. Note that the risk of poverty in 2015 was 14.1% for employed individuals and 25.4% for economically inactive individuals (pensioners excluded).[3] Given that income from work is usually the primary source of income for a household, which is why unemployment is the single most important factor of poverty (47.1% risk), encouraging women to participate in the labour market could potentially contain both economic inequality and poverty. Moreover, taking into account the demographic trends in Greece, which point towards a continuously ageing population, it becomes obvious that getting women into the labour market is crucial, in order to compensate for reductions in the labour force due to retirement. According to a recent report by diaNEOsis published last September (Kotzamanis et al., 2016), in 2050 the population in Greece is expected to decrease considerably. The decrease is estimated to range somewhat between 800 thousand and 2.5 million individuals. In particular, the size of the potentially economically active population is expected to be between 4.8 million and 5.5 million individuals in 2050, which is a big reduction compared to the estimated 7 million people in 2015. Last but not least, compensating for workers retiring, if it is actually accomplished, is expected to have a positive impact on social security funds through the retention of the ratio of pensioners to employed individuals and, thus, limit the need for painful, although necessary, reforms.

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1. Interested readers should check Europe 2020 strategy available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:2020:FIN:EN:PDF>.

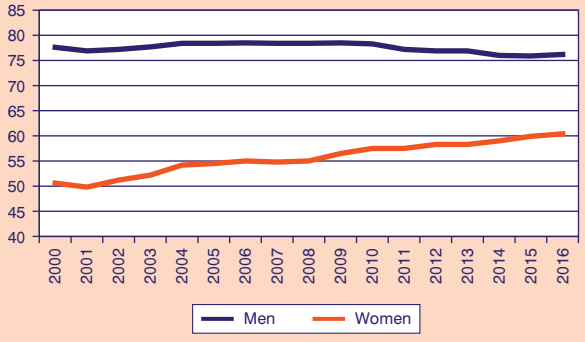
2. Bear in mind that according to the Human Capital Theory (Becker, 1964), education is a type of investment, which has a direct and an indirect cost for the individual (e.g. time and effort) and his/her family (e.g. finance studies, foregone earnings), but also for the society in general. On the other hand, as an investment it yields a return in the form of income from employment, both for the individual and for the society (e.g. through taxes).

3. Figures come from ELSTAT's bulletin on poverty, which is available at: <http://www.statistics.gr/el/statistics/-/publication/SFA10/2016>.

Despite the potentially positive impact of increased female labour force participation from both an individual and a social point of view, women in Greece participate in the labour market typically and over time much less often than men. Official data paint a picture similar to that in other Balkan and South European countries, such as Montenegro, Croatia and Italy, and very different than that of other, mainly North European countries, such as the Netherlands, Sweden and Denmark. According to Eurostat, the female participation rate in Greece[4] in 2016 reached 60%, when the average EU-28 participation rate was over 67%. In the northern European countries mentioned above, the female participation rate reaches and in some cases exceeds 80%. Moreover, there is a wide difference between the participation rate of men and women, which was 16 percentage points (pp) in 2016. There are only a few countries with similar gender differences, such as Italy, Romania and Malta, which seem to be caused primarily by the unusually low female participation rate.[5] Nonetheless, the female participation rate has been continuously increasing over the past years, contrary to men, whose participation rate until the beginning of the crisis was almost constant, but has been decreasing since then. Unsurprisingly, while Greece exhibited the 15th fastest increase in the female participation rate in period 2000-2008, in period 2009-2016 it exhibited the 8th fastest increase amongst EU-28 countries. This means that during the crisis more women entered the labour market looking for a job than those who exited it. As a result, the difference from the EU-28 average female participation rate went from 8.6pp in 2008 to 6.9pp in 2016. Graph 1 depicts recent developments and it illustrates the increase in the female participation rate since 2008, especially compared to the participation rate of males, leading to the narrowing of the gender gap.

The participation rate corresponds to the decision of the individual to participate or not in the labour market, i.e. whether to actively look for a job or not. In this context it is interesting to go through the answers women give when they are asked about the reasons they do not participate. Table 1 presents the most common answers. The first and most important answer given is personal and family reasons. These actually refer to the household related tasks of females, e.g. nurturing of young children, caring for older individuals, etc. What is interesting is that in the first period approximately 17% of women give these reasons for not participating, while in the second period, i.e. during the crisis, these reasons seem to be less important, since only 13% of women cite them. This could be the result of increased pressure on women to participate due to the adverse economic conditions and the con-

GRAPH 1
Participation rate for males and females (15-64 years of age, %)



Source: Eurostat.

TABLE 1 Reasons why women do not participate in the labour force (ages 15-64, %)

	2004-2007	2010-2016
Family and personal reasons	17.4	13.4
In education or training	13.1	13.9
Sick or unable to work	1.6	2.1
Thinks she will not find a job / Does not know how to look for a job	0.3	0.8
Other reasons	12.4	12.7
Did not give a reason	0.7	0.9

Source: Labour Force Survey, ELSTAT.

4. The participation rate equals the ratio of the number of employed and unemployed persons to the total population at a given age span.

5. The conclusion comes from calculating correlation coefficients for all EU-28 country members between differences in male and female participation rates aged 15-64 years old and a) the participation rates for the general population, b) male participation rates and c) female participation rates. It turns out that the latter correlation coefficient is by far the biggest, which means that differences are driven by female participation rates.

sequent reduction in household income. The second most common reason women cite is education. That is no surprise given that being a student in Greece is usually a single task, i.e. students do not work, not even part-time. The third most common answer involves various reasons, while the fourth most common answer involves a disease or some type of disability that rules work out. Limited employment chances for people with disabilities in Greece could be responsible for these cases. A more detailed description of the causes that keep women out of the labour force could undoubtedly allow for the implementation of policies to accommodate their economic activation.

The participation of women in the labour force is a decision that depends on a series of factors which drive labour supply. Some of those factors are macroeconomic and some are microeconomic. When explaining differences between countries is the main concern, then one intuitively chooses to focus on differences in the institutional framework of countries, which mostly concern macroeconomic variables. But when differences within countries need to be investigated, then the institutional framework is common and an important source of variance no longer exists. Naturally, there are exceptions to the rule. For instance, consider the case when important reforms have taken place. Greece is a good example, due to the institutional changes that have been implemented since 2008. The aim of this study is to attempt to determine the, mainly microeconomic, factors which affect a woman's decision to participate in the labour force, as well as the changes that occurred in the impact of these factors during the crisis.

2. Data and methodology

The database used is drawn from the Labour Force Survey (LFS) conducted by ELSTAT on a quarterly basis and addresses the entire country. It involves individual data with the household as a reference unit, but it also includes a lot of personal information for individuals over 15 years of age. In order to investigate changes in the impact of the factors which are believed to determine the decision of women to participate in the labour force or not, the date was divided into two samples. The first one includes observations from period 2004-2007 and it is referred to as the "pre-crisis sample". The second sample includes observations from period 2010-2016 and it is referred to as the "during the crisis sample". Both samples include women aged 15-64, whether they participate in the labour force or not. Women who participate are those who are either employed, irrespective of the specifics of the job contract (e.g. full or part-time job, etc.), or unemployed, i.e. they are not employed but they are actively looking for a job. The definition for unemployment used is the official one suggested by the International Labour Organisation (ILO).

Table 2 summarises some key descriptive statistics of the sample per period and group of women defined by whether or not they participate in the labour force. Active women (i.e. those who participate) are younger, although the average age increased for both groups during the crisis. This could reflect the ageing of the population, although the time span is pretty narrow. There are relatively more young women aged 15-29 in the first period, although their share is bigger amongst inactive women, probably due to the fact that they still study. The educational attainment increased considerably during the crisis, while there is a bigger share of tertiary education graduates amongst active women. Most women are married, although marriage seems most common amongst active women. The share of women of foreign origin increased in both groups during the crisis, but their share is bigger amongst active women. As expected, there are more women who still study amongst inactive women, although their share increased for both groups, but more for the group of the inactive.

Females participated in the labour force more massively during the crisis. The participation rate increased by approximately six percentage points. This increase is probably the outcome of more women entering the labour force in order to support family income which declined during the crisis due to increased unemployment rates, wage and pension cuts, and tax increases. There are considerable differences in the female labour force participation rate across regions, although it increased in all regions during the crisis. The biggest increases are reported in the South Aegean, the Ionian Islands and West Greece and the smallest in East Macedonia & Thrace. It is interesting that the range declined by 1.2 percentage points in the second period, which means that regions became more homogeneous with respect to this feature. On the contrary, the variability of the labour force participation rate between areas of residence, defined by the degree of urbanity, decreased during the crisis.

The participation of women (or any person in general) in the labour force is a decision with a binary outcome: to participate or not to participate. Thus, a probit model is used to estimate the probability of participation which assumes that the identity function is a standard normal cumulative distribution function.[6] This means that the probability of a woman participating in the la-

6. See Wooldridge (2002), ch. 15.

TABLE 2 Selected descriptive statistics

	2004-2007		2010-2016	
Personal attributes	**Inactive**	**Active**	**Inactive**	**Active**
Age	40.0	38.3	42.8	41.5
Young 15-24 years old (%)	33.3	25.2	33.5	20.0
TEI graduates (%)	1.3	6.8	2.6	10.1
AEI graduates (%)	4.5	19.3	7.3	22.5
Master and/or PhD (%)	0.1	1.6	0.4	3.4
Married (%)	62.1	62.4	60.5	63.3
Foreigner (%)	5.8	6.6	7.6	8.5
Students (%)	23.9	2.1	28.0	2.6
Children younger than 11 years of age	16.8	25.0	14.6	25.4
Persons over 70 years of age (=1%)	7.8	6.6	8.3	6.9
Persons over 70 years of age (=2%)	0.7	1.1	1.0	1.3
Household size	3.2	3.2	3.2	3.3
Number of employed over 15 years of age	1.0	1.0	0.8	0.8
Participation rate by region	**2004-2007**	**2010-2016**		
Total	54.6	60.9		
East Macedonia & Thrace	57.1	59.3		
Central Macedonia	53.0	58.8		
West Macedonia	51.8	58.1		
Epirus	53.1	60.1		
Thessaly	54.5	60.8		
Ionian Islands	55.1	62.8		
West Greece	49.4	57.0		
Continental Greece	52.8	58.8		
Attica	56.0	62.8		
Peloponnese	58.6	63.4		
North Aegean	47.4	53.6		
South Aegean	48.1	58.5		
Crete	59.3	64.3		
Participation rate by degree of urbanity	**2004-2007**	**2010-2016**		
Capital city	56.8	63.5		
Thessaloniki	53.2	58.7		
Other urban areas	53.3	59.8		
Semi-urban areas	52.5	59.4		
Rural areas	54.6	59.9		

Source: Labour Force Survey, ELSTAT.

bour force can be estimated based on her attributes. In particular, the following estimation equation is used:

$$Pr(Y_i = 1) = \Phi(\beta X_i) \quad (1)$$

where $Y=1$ when the individual participates in the labour force (either employed or unemployed) and zero when the individual does not participate. X is a vector of independent variables presented next and Φ is the standard cumulative distribution. The sampling method used for the LFS means that an individual can be interviewed up to six times. In order to estimate standard errors properly, clustering[7] is used. Since the estimators

7. The interested reader can have a look at <http://www.stata.com/manuals13/rprobit.pdf> for a relevant discussion.

coming from a probit model can be used directly only to define the sign of the impact of the independent variable on the probability of participation, additional average marginal effects for the attributes are calculated.

Ideally, independent variables should capture all factors driving a woman's decision to participate in the labour force, in other words, all factors that shape female labour supply. First, there are macroeconomic factors, as already mentioned, which describe the economic and social environment in a country and can interpret some of the differences in female participation rates between countries. Such factors include access to public child care services, the provision of free health care for the elderly, the tax treatment of the second earner in a household, child support benefits, subsidies for child care, paid leaves for parents or tax incentives to encourage both parents to participate in the labour force (Jaumotte, 2004). In case a single country is concerned, these parameters are common and, thus, they cannot be used. There is the exception of a country that has undergone serious structural changes and has performed important reforms over a period of time, which may change women's motives. Greece could be considered such a country. Nevertheless, this article focuses on microeconomic factors.

Second, there are microeconomic factors which involve specific female attributes that could lead to different outcomes, with respect to female participation rates, within the same macroeconomic surroundings, i.e. they shape labour supply. The choice of such attributes is based on Becker's model of time allocation (Becker, 1965), according to which women choose between leisure, formal work and home production of goods and services. The last category involves activities like caring for children and elderly people in the household, housework, etc. It also means that the female labour supply is more elastic than the male labour supply and it increases further with increasing household duties, e.g. more children. In this context, a number of independent variables are introduced, which include various social and demographic variables. Examples of such variables can be found in the studies of Merz (1990), Christofides and Paschardes (2000), Connelly *et al.* (2001), Marenzi and Pagani (2003), Bloemen and Stancanelli (2008). Perhaps the most common variables are age and its square. In theory –*ceteris paribus*– younger women are more likely to participate in the labour force than older women, since various factors change over time, e.g. working environments become more women friendly, the beliefs of employers change in favour of women, women get more education (cohort effect), etc.

Educational attainment is another key attribute considered when investigating the decision of women to participate in the labour force, since more educated women are theoretically more strongly attached to the labour market due to higher expected rewards (resulting from higher productivity) and due to the higher cost they incurred in order to educate themselves, in terms of time, effort and money. Moreover, in Greece it is common for individuals younger than 24 years old not to have completed their studies, during which it is also common not to work. Therefore, this information is also included in the participation equation. Family status is another parameter which is considered crucial in the decision process, since marriage could discourage women from participating either due to cultural stereotypes or due to a considerable amount of time spent at housework. The national origin may be another reason women make different decisions, if one considers that the primary goal of immigrants is to find a job. On the other hand, there may be some cultural constraints that limit migrant women's chances to enter the labour force.

The number of household members is also expected to affect a woman's decision to participate in the labour force. On the one hand, more household members means more home production is necessary, e.g. in the form of more hours needed for caring for the other members. On the other hand, more household members could force more members to enter the labour market in order to support increased living costs. Special attention is paid to elderly people over 70 years old and the presence of kids below 11 years old in the household. These two groups either demand more care, or on the contrary, they can contribute to the households needs, e.g. by taking care of young children. Therefore, while the presence of young children is expected to have a negative impact on the participation probability of a woman, the impact of the elderly can be either positive or negative. Last but not least, the presence in the household of members who are employed can decrease pressure to other members to enter the labour force, according to the theory of the added worker.[8]

Another set of variables, which affect a woman's decision to participate in the labour market, includes the region of residence. Living in a specific region may involve cultural differences or differences in the type of jobs available, e.g. a lot of part-time jobs may be available in regions that rely heavily on tourism as opposed to demanding manual jobs in regions that rely mostly on agriculture. Moreover, the size of the city or

8. The interested reader can refer to Mincer (1962) for a discussion on the effect of an added worker with respect to women.

the municipality of residence may also determine to an extent the type of jobs available. Since the data involve multiple years, dummies for the year the interview took place are included in the regression, in order to capture the effect of the economic cycle or/and changes that were brought about by reforming the institutional framework during the crisis. Possible seasonality effects are captured by dummies for the quarter of the interview, since it is not uncommon for people to work for a few months and then stay inactive[9] until the next season. Similar variables to those chosen are widely used in many studies investigating the participation of women in the labour force, such as Cavounidis and Cholezas (2013), Scoppa and Stranges (2014), Blau *at al.* (2011), while in other cases with richer datasets additional variables are used, such as the spouse's income, cultural variables, household consumption, etc. (e.g. Fernandez and Fogli [2009], Blau and Kahn [2011], Juhn and Murphy [1997]).

3. Results

Table 3 presents the average marginal effects of the variables used based on the participation regression described in equation (1) for each variable separately and each period. In general, the results seem to be in accordance with the literature. Two axes for the discussion of the results are used. First, the general impact of each variable on the participation probability of women is discussed and, second, how that impact changed during the crisis.

For starters, it seems that age is an important determinant of female labour force participation: the younger the woman, the more likely she is to participate in the labour force. Females who have graduated from a lower than upper secondary education level have fewer chances to participate in the labour force, while women who have graduated from a higher than upper secondary education level have more chances to participate in the labour force. Indeed, with the exception of women with primary or less education, having more education means a higher probability of labour force participation. For instance, during the crisis a woman who holds a Master or/and a PhD has a 28% higher probability of participating compared to an upper secondary graduate, while a university graduate has an 18% higher probability. This finding seems to verify the human capital theory, which predicts that women who have invested more in their education are more likely to participate in the labour force, in order to capitalise on their investment. On the other hand, women who have not finished their studies yet have a considerably lower probability (i.e. close to 50%) to participate in the labour force, probably because they are completely devoted to their studies, a possibility available thanks to family support.

Family status seems to play an important role in the decision of women, since those who are not married currently, and never were, have a much higher probability to participate. Marriage, in particular, decreases the probability of participation more than 13%, both before and during the crisis. National origin does not seem to exert a strong influence in either of the two periods. That could mean that women of migrant origin have been fully integrated and have adopted the behaviour of Greek women. Nevertheless, educational qualification and the extent that they are being certified and rewarded by employers can mask important differences between the two groups of women, while age differences could also operate in the same way.

The results regarding the composition of the household are very interesting. For starters, the presence of children below 11 years of age has a negative impact on the probability of participation, possibly because the time needed to care for them increases and burdens women primarily, especially given the non-existence of free of charge alternative options,[10] e.g. afternoon activities at school, extended school time, etc. The presence of elderly people in the household increases the probability of participation, but that holds only before the crisis. This is probably because elderly people contribute their time and relieve women from the housework burden. The number of household members seems to increase women's household tasks and, thus, reduce the probability of participation. Last but not least, the number of employed members in the household has a positive impact on the female's participation probability. Perhaps this is due to shared common values and conceptions about the value of employment or due to the female's need to contribute to the household's expenses. In this case, the result could have been different, if male employment improved a female's chances of staying home, in a sense that it was high enough to ensure satisfactory living standards for the household.

9. Typically, as long as they are not looking for a job, they are not classified as unemployed.

10. Inactive women may as well want to work. Nevertheless, caring for young children means that there are constraints regarding hours of work, commuting time, etc. Moreover, the opportunity cost should not be ignored, since comparing the cost of assigning child care to someone else to a woman's wage, especially when unskilled, often makes any considerations to find a formal job irrational, at least for several years after birth.

TABLE 3 Average marginal effects on the probability of labour force participation

	2004-2007		2010-2016	
	dy/dx	Std. err.	dy/dx	Std. err.
Age	-0.007***	0.000	-0.010***	0.000
Primary education or less	-0.064***	0.005	-0.032***	0.004
Lower secondary	-0.080***	0.005	-0.051***	0.004
Post-secondary non-tertiary	0.169***	0.006	0.103***	0.005
TEI	0.223***	0.008	0.162***	0.005
University (AEI)	0.238***	0.005	0.181***	0.004
Post graduate studies (Master and/or PhD)	0.327***	0.016	0.278***	0.010
Married	-0.158***	0.005	-0.133***	0.004
Widowed/divorced/separated	-0.061***	0.007	-0.069***	0.005
Immigrant	0.005	0.007	0.006	0.005
Student	-0.474***	0.004	-0.479***	0.005
Children younger than 11 years old	-0.048***	0.004	-0.055***	0.004
Number of members over 70 years of age	0.012**	0.005	0.003	0.004
Number of household members	-0.018***	0.002	-0.014***	0.001
Number of employed household members	0.040***	0.002	0.031***	0.002
East Macedonia & Thrace	0.083***	0.008	0.029***	0.006
Central Macedonia	0.037***	0.008	0.007	0.007
West Macedonia	0.034***	0.010	0.002	0.008
Epirus	0.046***	0.008	0.028***	0.007
Thessaly	0.055***	0.008	0.029***	0.007
Ionian Islands	0.046***	0.011	0.021**	0.009
West Greece	0.016**	0.008	-0.003	0.007
Continental Greece	0.028***	0.008	-0.001	0.007
Peloponnese	0.080***	0.008	0.038***	0.007
North Aegean	-0.023**	0.011	-0.059***	0.009
South Aegean	-0.010	0.010	-0.009	0.009
Crete	0.097***	0.007	0.055***	0.006
Capital city	0.051***	0.006	0.017***	0.005
Thessaloniki	-0.001	0.008	-0.009	0.006
Other urban areas	0.030***	0.005	0.017***	0.004
Semi-urban areas	0.085***	0.004	0.048***	0.003
Q1	-0.004***	0.001	-0.004***	0.001
Q3	-0.010***	0.001	0.000	0.001
Q4	-0.005***	0.001	-0.001	0.001
2005	0.003	0.002		
2006	0.012***	0.003		
2007	0.013***	0.003		
2011			-0.002	0.003
2012			0.002	0.003
2013			0.008**	0.003
2014			0.010***	0.003
2015			0.017***	0.003
2016			0.025***	0.003

Note: ***(**) = level of statistical significance 1% (5%).

With respect to the place of residence, only women in the South Aegean have a lower participation probability compared to those who live in Attica. Moreover, women who live in Athens, along with those who live in semi-urban and rural areas, have better chances to participate in the labour force compared to women who live urban areas and Thessaloniki. These differences may, amongst others, be the result of family help available, which is more common in the countryside and the type of jobs women prefer there.

Turning to the second axis of the discussion of the results, it seems that the impact of all attributes separately decreased during the crisis. This could mean that the crisis decreased the importance of differences in women's attributes. Perhaps this is due to the deteriorating employment prospects for women and the worsening of the terms of employment in general. In particular, there is an important reduction of the impact of education. Being a TEI graduate still increases the participation probability, but the impact is 6.1 percentage points smaller compared to the first period. The same is true for university graduates and all graduates with more than an upper secondary education certificate. The negative impact of lower than upper secondary education levels also decreased. So long as one accepts that the impact of each attribute reflects labour market prospects,[11] either actual or perceived (i.e. the way women perceive them in this case), this means that during the crisis prospects became more homogeneous, so that they "weigh" less on a woman's decision to participate or not. Moreover, the fact that the participation of women increased considerably during the crisis, possibly caused the weakening of the impact of each attribute, since women entered the labour force massively to counterbalance losses in household income. This interpretation explains the decreases in all other attributes used in the regression as well. On the contrary, being a student continues to be, even during the crisis, an important obstacle, indeed the biggest, to the participation of women in the labour force.

To summarise the results, and to compare the impact of variables with statistically significant coefficients across both periods of time, one may argue that, given the variables included in the regression, the greatest impacts come from being a student (it decreases the participation probability by more than 40%), the level of education completed (close to 20% increase in the participation probability for university graduates and 30% for Master and/or PhD holders) and marriage (approximately 13% reduction in the participation probability). Therefore, if the target is to promote the participation of women in the labour force, besides interventions to increase gender-equal opportunities that may encourage women to participate by improving their career prospects, education seems to be a good area for action. This has not changed during the crisis, despite the reduction of the impact of education-related attributes to the participation probability of women. It simply means that interventions in the field of education are expected to have a smaller impact than in the past.

4. Conclusions

The effort to interpret the participation decision of women is constrained by the availability of data. This study employed LFS data collected by ELSTAT and the sample was divided into two periods. The first period (i.e. before the crisis) includes observations from 2004 to 2007, while the second period (i.e. during the crisis) includes observations from 2010 to 2016. Based on this division, the impact of several female attributes on their decision to participate in the labour force or not has been estimated along with the changes that came about during the crisis and, possibly, through the changes caused in the labour market, both institutional and others.

There are two key conclusions from the study. The first one is that education has the strongest impact in shaping a woman's decision to participate in the labour force, at least amongst the attributes that were included in the regression. The second important conclusion is that the impact of almost all attributes used decreased during the crisis, which means that homogeneity increased and that makes any intervention harder. Nevertheless, education still has the strongest impact on the female participation probability. Note that available data defined the depth of this analysis. A richer dataset would allow for more information.

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11. Typically, a person participates in the labour force in order to find a job, not for the sake of it. Therefore, when prospects worsen, he/she is discouraged. If a tertiary education degree managed to improve these prospects considerably before the crisis, but not anymore, whether this is actually true or simply believed so, then it is expected to lose some of its value as a predictor of labour force participation and, likewise, its impact on the decision to participate or not. This is what the results imply.

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Appendix

TABLE A1 Female labour force participation probability, ages 15-64

	2004-2007		2010-2016	
	Coef.	Std. err.	Coef.	Std. err.
Age	0.175***	0.003	0.206***	0.003
Age square	-0.002***	0.000	-0.003***	0.000
Primary education or less	-0.197***	0.014	-0.103***	0.012
Lower secondary	-0.244***	0.016	-0.164***	0.014
Post-secondary non-tertiary	0.551***	0.021	0.345***	0.017
TEI	0.758***	0.029	0.563***	0.020
University (AEI)	0.817***	0.018	0.639***	0.014
Post graduate studies (Master and/or PhD)	1.244***	0.091	1.077***	0.050
Married	-0.556***	0.020	-0.492***	0.017
Widowed/divorced/separated	-0.223***	0.026	-0.265***	0.021
Immigrant	0.018	0.022	0.021	0.017
Student	-1.733***	0.024	-1.667***	0.022
Children younger than 11 years old	-0.163***	0.015	-0.196***	0.013
Number of members over 70 years of age	0.041**	0.017	0.012	0.014
Number of household members	-0.060***	0.005	-0.051***	0.004
Number of employed household members	0.135***	0.008	0.109***	0.007
East Macedonia & Thrace	0.282***	0.026	0.101***	0.023
Central Macedonia	0.125***	0.027	0.024	0.023
West Macedonia	0.116***	0.034	0.007	0.030
Epirus	0.156***	0.026	0.098***	0.024
Thessaly	0.186***	0.027	0.103***	0.024
Ionian Islands	0.156***	0.039	0.073**	0.032

West Greece	0.054 **	0.026	-0.010	0.023
Continental Greece	0.094 ***	0.027	-0.003	0.023
Peloponnese	0.273 ***	0.027	0.135 ***	0.023
North Aegean	-0.077 **	0.037	-0.202 ***	0.032
South Aegean	-0.034	0.034	-0.030	0.030
Crete	0.330 ***	0.026	0.197 ***	0.022
Capital city	0.174 ***	0.022	0.061 ***	0.019
Thessaloniki	-0.002	0.026	-0.031	0.022
Other urban areas	0.103 ***	0.016	0.060 ***	0.013
Semi-urban areas	0.291 ***	0.015	0.170 ***	0.012
Q1	-0.015 ***	0.003	-0.013 ***	0.002
Q3	-0.035 ***	0.003	-0.002	0.002
Q4	-0.016 ***	0.004	-0.004	0.003
2005	0.012	0.008		
2006	0.042 ***	0.011		
2007	0.043 ***	0.011		
2011			-0.008	0.009
2012			0.007	0.012
2013			0.027 **	0.012
2014			0.037 ***	0.012
2015			0.059 ***	0.012
2016			0.089 ***	0.012
Constant term	-2.383	0.063	-2.709 ***	0.059
Log likelihood	-204,945.02		-283,001.72	
Sample size	392,894		561,255	
Pseudo R^2	0.2446		0.2611	

Note: ***(**) = level of statistical significance 1% (5%).

The framework of financial supervision in Europe: Developments and prospects

Christos Triantopoulos*

1. Introduction

The global financial crisis of 2007/2008 and its expansion to the European economy constitutes a cornerstone in Europe's economic integration process. It highlighted the institutional weaknesses of the Economic and Monetary Union (EMU) both in terms of protecting from the crisis (and preventing its diffusion) and in terms of ensuring a sustainable exit –for the whole of the Eurozone economy– from the difficult situation. It was, in fact, a series of institutional weaknesses stemming from the reluctance of the EMU project, which –in the first decade of its life– settled for the integration of the monetary policy, keeping the areas of economic and financial governance at a "loose" level of coordination and cooperation and determining some minimum requirements in specific (important) areas of economic integration. More specifically, the institutional and regulatory framework of the European financial system[1] constituted a particularly "closed" and "protected" sector of the European economy because they were of particular importance for the domestic allocation of resources, the production process and the promotion of policies. Gradually, however, and after recognizing the advantages of the "opening" and consolidation of the financial system markets,[2] the process of the liberalization of these markets started to proceed (Tsoukalis, 1997).

However, the establishment of a corresponding European institutional framework for supervision and regulation did not follow this gradual integration process in order to create the conditions for safeguarding financial stability. On the contrary, until the establishment of the EMU, the rationale that defined all the EU initiatives was aimed at "negative integration". After the foundation of the Eurozone, there was a tentative shift towards "positive integration" that was exhausted in methods of open coordination and cooperation among national institutional actors, away from major institutional interventions (Staikouras and Triantopoulos, 2008). In essence, the European integration project has failed to reach a response to the financial "trilemma" that leaves the European Union (EU) member states, and in particular the members of the Eurozone, unable to attain at the same time the objectives of financial stability, cross-border banking and the maintenance of financial policies at national level (Schoenmaker, 2011). Under these institutional circumstances, however, the financial system of the Eurozone, or, more precisely, its (individual) financial systems, was particularly vulnerable to a major shock, as it became evident during the global financial crisis of 2007/2008. The emergence, therefore, of weaknesses and gaps in the European institutional framework and, more importantly, their negative consequences have been the starting point for a series of revisions in the EU approach and for changes in the architecture, leading (alongside the institutional strengthening of economic governance) initially to the Banking Union and, consequently, to the launching of institutional developments in the other two markets of the financial system, as an integral part of a new architecture of economic governance in Europe.

This article briefly sets out the theoretical background of the debate, analyzes the institutional developments and the financial integration in the Eurozone, and discusses the challenges that arose after the UK referendum on the country's exit from the EU, and the importance of wider institutional developments in Greece.

2. Theoretical background

The promotion of the European integration project proceeded on the basis of intergovernmental negotiations when it came to high-grade policy areas, even though a substantial part of it was based on a process of integration and close cooperation of the member states in lower grade policy areas (according to the neo-functional perspective) (Haas, 1958; Moravcsik, 1998; Tsinisizelis, 2001). However, during the period when the EU project entered the EMU phase, European integration expanded to sensitive aspects of economic and social policies (such as employment, competitiveness, financial supervision, etc.), as the intergovernmental tactics did not seem able to overcome the obstacles that emerged. As a result, the open method

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1. The financial system consists of the banking market, the capital market and the private insurance market.

2. E.g. increase in financial activity, reduction of financing costs, macroeconomic stabilization, etc.

of coordination was developed, where in a non-binding cooperation and coordination environment, both the trends and the orientation of the EU, as well as the "national" positions and the specificities of the member states, co-existed. In parallel, however, with the strengthening of the EMU, the process of the EU enlargement was evolving, highlighting the significant economic and institutional deficiencies of the new member states and the inability to address them directly through the "Community method". This lead to the strengthening of the intergovernmental dimension of the integration process as well as the reinforcement of the "loose" dimension of the open method of coordination of national policies and frameworks. Thus, the European project, as it progressed towards both its integration and its enlargement, was enriched by several cases of open coordination and cooperation but, mostly, by forms of "differentiated" and "negative" integration, which added to the already existing ones (Triantopoulos and Staikouras, 2017).

The more the EU project progressed and the benefits of further integration of a market or an economic field became clearer, the more the characteristics of "negative" integration constituted, ultimately, an obstacle to the integration process. Gradually, therefore, the characteristics of "negative" integration gave way to initiatives based on the "positive" integration approach and, in particular, to maximum regulatory harmonization and strong policy co-ordination. In particular, the "positive" integration approach includes cases such as open mandates to the EU institutions for the formulation of common policies, the convergence and harmonization of national laws, and the coordination of national macroeconomic policies, including significant institutional developments (Stephanou, 2001). Of course, the establishment of EU institutions and the promotion of "positive" integration in a market constitute a particularly time-consuming process of negotiations and legislating, resulting in the development of EU initiatives still being significantly far from developments in the market itself –especially when it is a rapidly growing market. The European financial system is a typical case where a long period of "negative" integration of the institutional framework, coupled with the great financial development of the past decades, has allowed for the development of the financial activity "preceding" the reinforcement of supervision at the European level. The global financial crisis of 2007/2008 and its expansion to the European economies have highlighted the gaps and weaknesses in the institutional framework of the European financial system as a result of the pre-crisis institutional instability of the EU project.

3. Pre-crisis institutional framework and deficiencies

Prior to the global financial crisis of 2007/2008, the consolidation of the institutional framework governing the European financial system was based on the establishment of the EMU, as this major step of economic integration has reinforced the tendency for further institutional integration against the legislative reluctance of the pre-EMU period. In particular, before 1999, European policy on the financial system was based on three basic principles: mutual recognition, minimum legislative harmonization and supervisory control by the member state, while maintaining a wide range of responsibilities and jurisdiction to national regulators and supervisory entities (Lastra, 2003). To this end, the key EU initiatives were the First Banking Directive (1977), the Second Banking Directive (1989), the Capital Adequacy Directive and the Investment Services Directive (Cervellati, 2003).

However, the process of consolidating the institutional framework of the European financial system has been influenced by the new conditions in the banking and (broader) financial environment created by the introduction of the euro. In particular, the introduction of the EMU led (directly) to reducing barriers in financial markets and strengthening macroeconomic stability, enhancing the conditions of competition, protecting against the risk of speculative pressures on European currencies, transnational interbank transactions and the convergence of European financial markets systems. In addition to the new conditions created by the Eurozone, the wider trend of globalization of activity, the dynamics of financial growth and the rapid technological boom and innovation in the financial system have created further pressures to promote financial integration in Europe (Staikouras and Triantopoulos, 2008).

Gradually, the European project began to respond to the new developments. The EU approach regarding the integration of the institutional framework governing the European financial system began to shift (from the sphere of "negative" integration –which now created obstacles– to the sphere of "positive" integration) emphasizing on maximum (possible) regulatory harmonization and intense supervisory coordination. In particular, the basic (initial) EU Initiatives were (a) the 'Financial Services Action Plan 1999-2005' (1999); (b) the introduction of the "Lamfalussy" process (in four levels) for the issue of the relevant rules, the strengthening of cooperation of national supervisory authorities and the establishment of the European Securities Regulators Committee; and (c) extending the "Lam-

falussy" process to the other two markets (2002) with the creation of the Committee of European Banking Supervisors and the Committee of European Insurance and Occupational Pensions Supervisors. Thus, with the introduction of the "Lamfalussy" process in all three markets of the financial system, a new regulatory and supervisory architecture emerged, which followed the unifying logic of "loose" coordination between national actors, frameworks and policies. In parallel with the changes in the architecture of the institutional framework, legislative initiatives were promoted, the most significant of which are the Capital Adequacy Directive II, which incorporated the Basel II capital framework into Community law, and the Financial Markets Directive, which largely updated the institutional framework on investment services (Staikouras and Triantopoulos, 2008).

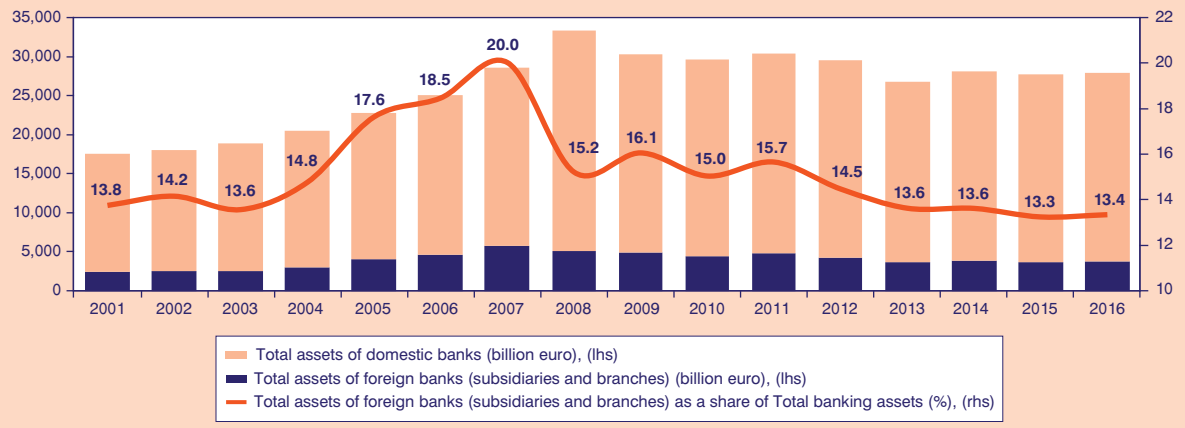
During the period that preceded the global financial crisis of 2007/2008, the process of consolidating the institutional framework began –after the introduction of the euro– to move away from the approach of "negative" integration, with the key features of new EU initiatives being regulatory harmonization and coordination at the supervisory level. This was, of course, a limited-in-range shift, as the new architecture included the introduction of platforms of coordination and cooperation among national authorities, staying away from the establishment of strong EU institutions with specific competences and powers. Thus, instead of a substantial shift towards "positive" integration, the EU reluctance and the great intergovernmental reservations towards the introduction of more significant institutional interventions and changes led to the prevalence of the logic of coordination as a process of promotion –or better preparation– of integration, while the markets of the European financial system were increasingly integrating into the Eurozone environment (Triantopoulos and Staikouras, 2017).

The first decade of the Eurozone (up to the crisis) was characterized by the promotion of the integration of European financial markets, creating a favorable environment for increasing both credit expansion and private debt in the EMU member states. In particular, the European financial system followed a steady integration path, which marked a significant diversification between the markets, as the level of integration was significant in the money market, derivatives and government securities markets, but was just satisfactory in corporate debt markets. In parallel, the level of integration was lower in the stock exchange market and, more importantly, in the banking market, where long-term and medium-term cross-border investment banking and business lending were more integrated. The (extreme) lower levels of integration were evident in retail (consumer) cross-border banking activity, highlighting the critical importance of the banking market in the process of promoting financial integration (Kiehlborn and Mietzner, 2005; Staikouras and Triantopoulos, 2008). With regard, in particular, to the banking market, since the introduction of the euro, cross-border banking activity has shown a steady expansion and integration trend, as at the Eurozone level the share of foreign banks (either branches or subsidiaries) in the domestic market has increased from 13.8% of the total banking market assets in 2001 to 20% in 2007, followed from a downward trend in this cross-border share (Figure 1). At the same time, the branches of foreign banks in the Eurozone member states (in the 19 member states) increased from 563 in 2004 to 706 in 2008, marking an increase of approximately 25% (Figure 2).

The aforementioned signs of expansion of cross-border banking in Europe are also complemented by the European Central Bank (ECB) index for financial integration in the Eurozone and, in particular, the indicator based on the volume of financial activity, which has been steadily increasing up to 2007. Thus, this indicator, from 0.03 in the first quarter of 1999, increased to 0.40 in 2007-2009 (Figure 3). However, the integration was greater in terms of convergence in financial system prices, as this composite index of 0.05 in the first quarter of 1995 reached 0.55 in the first quarter of 1999 and more than 0.80 in the first half of 2007, including the convergence of returns and interest rates on the money and capital markets following the introduction of the euro, which in many cases deviated from the real credit ratings of the member states (see government bonds). This course of financial integration, as evidenced both by the banking activity and by the ECB indicators, has been interrupted by the global financial crisis and has entered a downward trend, while at the same time leading to a convergence of the two composite indicators (price and quantity) which, until the crisis, showed a significant degree of divergence in terms of integration –since consolidation was more visible in terms of prices and not so much in terms of quantity.

Despite the development and (gradual) integration of the European financial markets, the architecture of the European institutional framework maintained some gaps in the field of financial supervision as well as in other dimensions of the economic governance of the Eurozone. The global financial crisis, therefore, demonstrated the institutional defects of the Eurozone, afflicting it in three ways. The first way of transmitting the global crisis to the European economy was the most immediate one, as it concerned the large losses incurred by European financial and

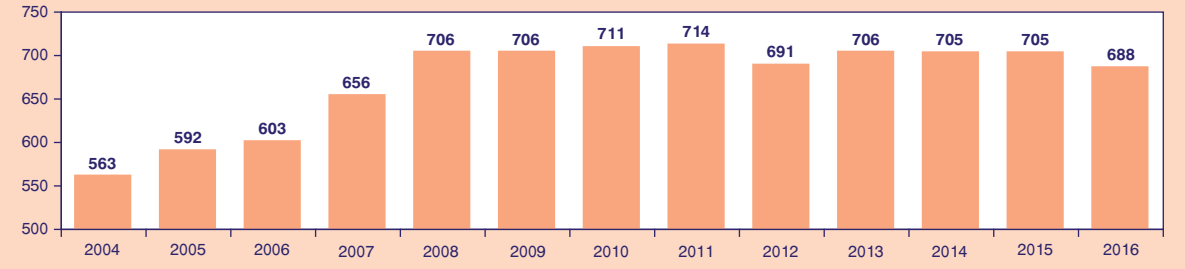
FIGURE 1
Foreign banks activity in the Eurozone banking markets (2001-2016)



Source: ECB (2006), ECB (2007), ECB (2008), ECB (2010a), ECB (2010b), ECB (2015) and ECB (2017).

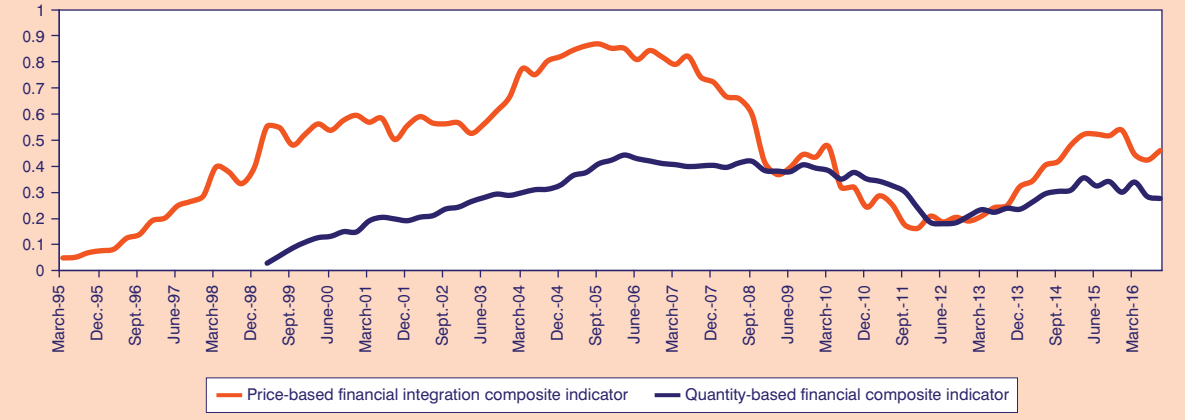
Note: Data for 2008-2016 (ONE-19), 2005-2007 (ONE-16), 2004 (ONE-15), 2003 (ONE-13), 2001-2002 (ONE-12).

FIGURE 2
Branches of foreign banks in the Eurozone banking markets (2004-2016)



Source: ECB (2010a), ECB (2010b) and ECB (2017).

FIGURE 3
Financial integration in the Eurozone (1995-2016)



Source: ECB.

Note: 0 equals to full fragmentation and 1 to full integration.

banking institutions from their exposure to so-called "toxic" products. The burden of dealing with this difficult situation was taken over by the member states, although the possibility of collapse was not just about one economy. This was due to the financial "trilemma" remaining (Schoenmaker, 2011), resulting in the member states –and not the whole of the Eurozone– having to deal with the cost of the financial rescue due to the absence of a relevant institutional framework, and giving rise to great concern in the international markets in terms of the capacity of individual member states to withstand the burden of rescue. The second way of transmission of the global crisis is related to the recessionary pressures that have arisen due to the intense shock in international markets and in which the Eurozone has failed to respond adequately and effectively due to the institutional defects of the EMU and the inability to create an environment of economic competitiveness and fiscal robustness for the entire Eurozone in the pre-crisis period. Finally, the third way of transmission of the global crisis was related to the significant shrinkage of international cash flow after the period of 2007/2008, when the international investment environment tightened its credit-rating approach regarding the weaker and most vulnerable Eurozone members, thus ending the period of euphoria that followed the introduction of the common currency (Triantopoulos and Staikouras, 2017).

Along with the lags in the context of the economic governance in the Eurozone, the institutional framework of the European financial system also included gaps and weaknesses that were made evident during the crisis, which concerned: (a) the absence of supervising attention on emerging financial risks; (b) the inadequate assessment (when an assessment actually took place) of emerging risks in financial activity, as they were not reflected in official estimates of both macro-financial stability and financial innovation; (c) the official ignorance to the 'warning' analyses, as the attention of policy makers was more focused on short-term interests; (d) the lack of supervisory cooperation between national supervisory authorities; (e) the lack of supervisory coordination between national supervisors; (f) the limited scope of action at the European level, as the European institutions were only able –after lengthy debates– to reach decisions in terms of a minimum common ground; (g) the inability of national supervisory authorities to adequately control the domestic market due to the internationalized activity of several financial institutions; and (h) the lack of an effective institutional framework (or institution) capable of implementing a macro-prudential policy and of achieving a coordinated response to limit the expansion of the crisis (Group of Thirty, 2008; Tabellini, 2008; FSA, 2009; De Larosière, 2009; OECD, 2010; Verhelst, 2011; Veron, 2012). Identifying these institutional gaps and weaknesses has led to a wider debate on changing and improving the institutional framework regarding rules and supervision of the European financial system.

4. New institutional framework

Consequently, following the global financial crisis and despite the need for "brave" institutional changes in the institutional framework of the financial system, the initiatives of the first period were still burdened by the institutional reluctance of the pre-crisis period. After all, since the consolidation of procedures and the introduction of rules of economic governance in the Eurozone were delayed, which would create the conditions for some –albeit "reluctant"– financial risk sharing, it was difficult to promote a unified architecture regarding the supervision of the financial system (Triantopoulos and Staikouras, 2017). In this context, following the logic of supervisory cooperation, the European System of Financial Supervision (ESFS) (2010) was established, including: (a) the newly established European Systemic Risk Board with the managerial and administrative involvement of the ECB and competences regarding macro-prudential supervision as well as the evaluation and formulation of proposals for systemic risk limitation tactics (Schoenmaker, 2011), and (b) the three European Supervisory Authorities –the European Banking Authority (EBA), the European Securities and Markets Authority (ESMA) and the European Insurance and Occupational Pensions Authority (EIOPA)– replacing the previous three "Lamfalussy" Coordination Committees and concentrating their activities on the harmonization of financial supervision in the EU through the development of a single framework of rules and prudential procedures for financial institutions, while also being responsible for risk assessments and financial system soundness evaluations. However, under the new institutional environment, European financial institutions have continued to be under the supervision of national supervisory authorities, as the reluctance for a "brave" step of "positive" integration through the creation of a strong common European authority –with a corresponding transfer of national supervision competences– prevailed due to the uncertainty among member states as to the distribution of the cost of such a concentration of financial supervision powers at the European level (De Larosière, 2009; Schoenmaker, 2011; Hennessy, 2014; De Rynck, 2014; Chang, 2015).

The prolonged instability in the European economy, its key elements being the very difficult financial position of several member states and the stagnation of

real economic activity, has contributed to putting more pressure towards a "brave" approach in the field of economic integration. Thus, in the context of European economic governance, especially during the years that followed the outbreak of the crisis, the following were established: a) the Treaty on Stability, Coordination and Governance in the Eurozone; (b) the strengthened Stability and Growth Pact, including a package of five Regulations and a six-pack Directive; (c) strengthened centralized supervision of the national budgets of the Eurozone member states through the two-pack; d) the European Semester; and e) the support mechanisms of the member states, such as the European Financial Stability Facility (EFSF), the European Stability Mechanism (ESM) and the European Financial Stabilization Mechanism (EFSM). Thus, with the ESM –which replaced the 'temporary' EFSF in 2013– after a long delay, the institutional conditions regarding not only managing an economic and financial crisis, but also sharing the cost of overcoming it, began to take shape. At the same time, however, with economic governance integration initiatives, special attention was also –finally– given to the integration of the macro-prudential supervision of the European financial system in an attempt to break the close link between public debt and the banking market and to prevent future banking crises (see the report of "Four Presidents"[3]).

In particular, the disconnection of the close link between the public finances and the robustness of the banking market would be accomplished by giving ESM, in parallel with the operation of the Single Supervisory Mechanism (SSM), the ability to recapitalize European banks directly without incorporating that amount into the public debt of each member state. Thus, the institutional response to the "trilemma" of the financial integration had begun. This was since –in the framework of a (new) architecture in the Eurozone– a European mechanism for assuming and sharing the rescue burden was shaped, it was also possible to move supervisory responsibilities at the European level (Goodhart and Schoenmaker, 2009). Thus, a decisive step was taken towards a "positive" integration of the institutional framework of the European financial system, reflected in the Banking Union project, including the establishment of a common supervisory institution and the establishment of an institutional environment (private and financial) of risk and cost sharing (Buch *et al.,* 2013).

The Banking Union constitutes a major step towards a (broader) European economic integration that has been developed and supersedes the previous institutional framework and consists of three pillars. The first pillar concerns the establishment of the Single Supervisory Mechanism (SSM) for systemically important (or "systemic") credit institutions under the ECB, focusing on safeguarding the robustness of the European banking market and the continuation of financial integration and allowing conditional recapitalization of banks from the ESM, while the other (less important) systemic banks remain under the supervision of the national authorities; the ECB still has the power to intervene immediately if necessary. The Single Supervisory Mechanism is also working with the EBA to assess the assets of European banks (Wymeersch, 2014).

The second pillar –based on an intergovernmental agreement[4] – consists of the Single Resolution Mechanism for credit institutions and the parallel introduction of the Single Resolution Fund (SRF),[5] thus completing the Single Supervisory Mechanism and ensuring that if a systemic bank faces serious difficulties, its resolution will take place in the most effective way and at the lowest possible cost for taxpayers. National competent authorities maintain responsibility for the process of the reorganization of smaller banks. In parallel, the European Commission, in 2017, recognizing the "concern" regarding the ability of the Single Resolution Fund to "cover" a possible widespread crisis requiring greater financial assistance than that foreseen to be covered by private resources by 2024, proposed initially the granting of a credit limit by the ESM to the Single Resolution Fund[6]. Thereafter, the ESM could transform into a European Monetary Fund –under EU law– so that sufficient resources (credit line and guarantees) would be available to deal with an extraordinary situation of a large bank resolution or the successive resolutions of more banks.[7]

3. The report by the President of the European Council in close cooperation with the President of the European Commission, the President of the Eurogroup and the President of the ECB entitled "Towards a Genuine Economic and Monetary Union".

4. See more on the Intergovernmental Agreement on the Transfer and Mutualisation of Contributions to the Single Resolution Fund here: <http://www.consilium.europa.eu/en/press/press-releases/2015/11/30/banking-union-single-resolution-fund-for-1-january-2016/>.

5. The funds of the Single Resolution Mechanism amount to €55 billion that will come from private funds (of banks) gradually up to (at least) 2024.

6. See more: <https://ec.europa.eu/commission/sites/beta-political/files/reflection-paper-emu_el.pdf>.

7. See more: <http://ec.europa.eu/finance/docs/law/171011-communication-banking-union_en.pdf>.

The third pillar –which is also the one that remained incomplete during the planning of the institutional project– concerns the European Deposit Insurance Scheme (EDIS). In the framework of the Banking Union, the establishment of a European framework for the (basic) harmonization of Deposit Insurance Schemes of all member states was promoted in 2014, leaving the possibility open for further initiatives towards a common deposit insurance scheme at the European level. To this end, the European Commission has formed a proposal to establish a European Deposit Insurance Scheme through a three-stage phasing-in process, which in 2017 has been reduced to two phases (see insurance and co-insurance[8]). This will result in national schemes being (increasingly) "co-insured" by the European Deposit Insurance Scheme, which will include the European Deposit Insurance Fund and will be managed by the Single Resolution Board (SRB) of the aforementioned Single Resolution Mechanism (SRM).[9, 10]

The Banking Union project followed the Capital Markets Union, which, according to the relevant European Commission proposal, concerns the promotion of a series of regulations and interventions, emphasizing –as part of the implementation of the "Juncker" investment package– the need to improve access to finance for all businesses, to strengthen and diversify sources of funding, and to enhance the efficiency of the functioning of markets. In this context, the European Commission (from 2015) is moving towards implementing a relevant action plan with key principles in order to create more opportunities for investors, mobilize capital for businesses, build a strong financial system, and deepen financial integration. To this end, the European Commission's initial orientation focused on the securitization, modernization and harmonization of the (relevant) information bulletin on risk capital and covered bonds, the investment treatment of infrastructure projects by insurance entities in the framework of the Solvency II Directive, and the gradual harmonization of audit, regulatory and tax conditions. Also, there is no degree of mobility within the architecture of the institutional framework of the Capital Markets Union.[11] Lastly, it is worth noting that this project concerns the EU and not just the Eurozone, so as to include the UK's financial market system, which is key in capital market terms.

5. Institutional developments and prospects

The institutional framework of the European financial system, after a period of considerable institutional delay and reluctance, was introduced through the promotion of the Banking Union project into a new phase of integration, which was characterized by two main trends. The first trend relates to the strong institutional strengthening of the ECB in the new institutional environment of the Eurozone. With the delegation of the Single Supervisory Mechanism (SSM), the ECB, together with its involvement in the European Systemic Risk Board, is emerging as the key supervisory institution of the EU, acquiring responsibilities regarding: (a) the micro-prudential supervision of systemically important banks, (b) the assessment of consolidated balance sheets and also (c) macro-prudential supervision. At the same time, of course, the ECB extended its activities to a series of interventions related to both monetary policy and financial activity. The second trend concerns the shift in the philosophy of integration from the logic of "negative" integration, "loose" coordination and cautiously "positive" integration that prevailed during the first years of the global crisis, towards a logic of "positive" integration that puts forward the centralized architecture of supervision at the European level. This is a change that involves the consolidation of the institutional framework into common European institutions, thus "responding" to the financial "trilemma" of achieving simultaneously the objectives of financial stability, and cross-border financial activity while maintaining the management of financial policies at the national level, without "retreating" in one of them.

The upcoming UK exit from the EU is an important development to further promote the "positive" inte-

8. The previous (third) phase of full insurance by the European system is not included in the new proposal. See more: <http://ec.europa.eu/finance/docs/law/171011-communication-banking-union_en.pdf>.

9. See more: <http://europa.eu/rapid/press-release_IP-15-6152_el.htm>.

10. Along with the further integration regarding the institutional framework of the European financial system, a series of relevant European legislative acts were put in place concerning alternative investment fund managers, short selling, CDS, over-the-counter derivatives, market abuse, credit rating agencies, capital requirements, markets for financial instruments, insurance and reinsurance and the resolution of credit institutions (Triantopoulos and Staikouras, 2017).

11. According to the Interim Report of 2017, satisfactory progress has been made so far in the implementation of the 2015 Action Plan, with about two-thirds of the 33 actions having been delivered. See more: <https://ec.europa.eu/info/publications/mid-term-review-capital-markets-union-action-plan_en>.

gration of the institutional framework of the European financial area and, in particular, the concentration of competences on common European institutions, as it is the EU Member State, which –although it is a global financial "player" with a critical share in the international market– was (as in other dimensions) wary of promoting the consolidation process, often staying on the side of pursuing "negative" integration. In addition, the forthcoming UK exit from the EU will lead to a significant shift in financial activity –both in the banking market and, most importantly, in the capital market– from the United Kingdom (aka London) to EU financial centers of the Eurozone, further reinforcing the need to promote financial integration in Europe. Thus, the new developments –both in terms of widening European financial activity and in terms of less "intolerance" towards European integration– point to a favorable environment to further promote the "positive" integration of the institutional framework governing the European financial system. These new developments focus, on the one hand, on integrating and strengthening the Banking Union, and, on the other hand, on expanding the integration process across the financial system.

To that end, therefore, there are a number of issues that will relate to the process of the integration of the institutional framework of the European financial system in the coming period, which are:

(a) The fine-tuning of the European supervisory architecture with regard to the architecture of the institutions involved and the allocation of their responsibilities so that there is no overlapping of competences, delays in response or "controversies" on responsibility issues (Wymeersch, 2014). Focusing on the "repositioning" of the three authorities –starting with the European Banking Authority (Chang, 2015)– within the new institutional architecture and on the possibility of creating a high-level structure with a specific organizational and functional status, this could contribute to the coordination and effectiveness of the institutional framework (Triantopoulos and Staikouras, 2017).

(b) The institutional strengthening of the third pillar, at supranational level, with the establishment of a European Deposit Insurance Scheme (EDIS), following the harmonization of the relevant regimes and the European Commission's efforts. Such institutional development could, in accordance with the European Commission's proposal, arise by integrating deposit guarantee into the Single Resolution Mechanism, turning it into a Single Resolution and Deposit Insurance Mechanism, including, alongside the Single Resolution Fund, the Single European Deposit Insurance Fund (Schoenmaker, 2015).

(c) The transformation of the ESM into a European Monetary Fund (EMF), the latter being able to (fully) function as a fiscal protection mechanism of the Banking Union and as the fiscal partner of the ECB in the effort of establishing and maintaining financial stability either in the event of a banking crisis or crisis debt in the Eurozone, or in the case of a threat of such a crisis emerging. In particular, such a strong EU institution could include in its Board the Eurogroup ministers as well as (some) other Eurozone representatives, thus constituting the "Eurosystem of Fiscal Policy". Consequently, the Eurosystem of Fiscal Policy could become the EU institution that would replace the informal Eurogroup as the body responsible for fiscal policy decisions in the Eurozone and would be the political and institutional counterpart of the independent ECB (Sapir and Schoenmaker, 2017).

(d) The promotion and acceleration of the Capital Markets Union project, also focusing on the architectural dimension of its institutional framework. The approach that appears to be followed is the formation of a common market through the removal of obstacles and the harmonization of regulations and procedures, without, however, providing for the establishment of a common (powerful) authority (or authorities) closely monitoring the integration process and overseeing the functioning of the capital market in order to ensure its stability and robustness (Veron, 2015; Lannoo, 2015). The fact that there is limited attention regarding the need to establish a common supervisory mechanism may be related to the fact that this project does not only concern the Eurozone,[12] but all EU member states, including (originally) member states such as the United Kingdom due to its large capital market (House of Lords, 2015). The forthcoming UK exit from the EU, however, allows for the prospect of creating a common European supervisory institution or mechanism within the framework of the

12. The project of the Capital Markets Union is related to the promotion of the Juncker investment package because of the high financial leverage it expects also in non-euro area member states, especially those that are of great significance in terms of growth, development and size of the capital market, such as the United Kingdom.

Capital Markets Union, which the report of the "five Presidents" supports.[13]

(e) The strengthening of regulatory conditions so that the Capital Markets Union project can be –in a European banking system that is bank-centered– a credible alternative to bank financing for small and medium-sized enterprises, focusing on actions both in the stock market and in the bond market. In particular, with regard to entry and the financing of small and medium-sized enterprises by the capital market, a more flexible regulatory environment for small and medium-sized enterprises should be at the top of the list of interventions, reducing barriers to entry and reducing the cost of equities. In terms of the bond market, despite the significant increase in the number of corporate bond issues in the European Union (after the crisis), the European bond market should strengthen secondary liquidity (Thomadakis, 2017).

(f) The strengthening of cooperation between national supervisory authorities in the insurance market by establishing supervision of the insurance market at the European level, with the European Insurance and Occupational Pensions Authority taking up a central role in a European Insurance Union that can overcome the fragmentation of supervision and ensure the monitoring of large cross-border insurance groups (see monitoring of international standards and models), reinforcing the effectiveness of supervision (Schoenmaker, 2016).

(g) The creation of a European pension scheme, which will be provided alongside the products of national pension schemes and can become a "quality label" that will attract and drive European savings into more efficient assets. This product will be under the responsibility of the European Insurance and Occupational Pensions Authority but prudential supervision will remain in the responsibility of the national authorities (Lannoo, 2017).

(h) The elaboration of the twin-peaks architecture scenario in the supervisory framework of the financial system of Europe, where the objectives of systemic supervision and prudential supervision are the responsibility of one authority and the supervision of the business activity of financial institutions is the responsibility of another (distinct) authority. In particular, one of the two "peaks" could have at its center the ECB's Single Supervisory Mechanism, which could take over the current responsibilities of the European Banking Authority (after the UK's exit from the EU), including preparing the technical specifications and prudential supervision as well as developing a close cooperation with the European Insurance and Occupational Pensions Authority, as it can not be merged with the ECB. The other "peak" can relate to strengthening and enriching the role of the European Securities and Markets Authority (after the UK exit) by expanding its responsibilities (to supervision of the functioning of markets and business activity), strengthening its empowerment and strengthening its independence (Schoenmaker and Veron, 2017).

In essence, the institutional interventions referred to above constitute the challenges of the integration of the European financial system, which can be integrated into the wider target regarding the creation of the European Union's Financial Union, complementing the Banking Union project with the Union of the other two pillars of the financial system, and allowing the conditions for a safe and well-founded financial development that will make a decisive contribution to the growth the European economy.

Expanding and deepening the integration of the European financial system is expected to have a positive impact on the Greek financial system and the Greek economy, contributing to the wider effort to create sustainable development conditions in the long run. In particular, deepening integration in all three markets of the European financial system –moving towards the direction of a financial Union of Europe– will contribute to: (a) strengthening confidence (regarding deposits) in the domestic banking market by integrating the deposit insurance scheme; (b) developing conditions for alternative financing of small and medium-sized enterprises from the capital market; and (c) creating a reliable and dynamic private and professional insurance market. These are institutional and structural developments that will contribute significantly to the modernization of the Greek financial system.

6. Concluding remarks

The global financial crisis of 2007/2008 and its direct and indirect effects on the economies and financial

13. This is the report of the President of the European Commission in close cooperation with the President of the European Council, the President of the European Parliament, the President of the Eurogroup and the President of the ECB entitled "Completing Europe's Economic and Monetary Union".

systems in Europe, coupled with the lack of adequate support from the Eurozone, put pressure on shifting the orientation of the institutional integration of the European financial system from a "negative" to a "positive" integration approach as well as towards the "centralization" of the banking market supervision, integrating dynamically the field of financial activity into the EU architecture. It was, of course, a major institutional development, the conditions for the promotion of which were created by shaping the new framework of economic governance in the Eurozone, which includes European mechanisms for taking on and sharing the burden of rescue and more generally the management of a crisis, in response to the (known) financial "trilemma".

In the context of the new rationale of the integration of the institutional framework of the European financial system and in the wake of the Banking Union project, there are a number of institutional interventions which –following the upcoming UK exit from the EU– could, on the one hand, complete the Banking Union and, on the other hand, create corresponding "Unions" in the other two pillars of the financial system (capital market and private insurance market), aiming at the formation of a Financial Union in Europe. Expanding and deepening the integration of the European financial system is expected to have a positive impact on the Greek financial system and the Greek economy, contributing to the wider effort to create sustainable development conditions in the long run.

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Migration and refugee flows into Greece during the period 2015-2017: A descriptive analysis

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1. Introduction

From the middle of 2015 Greece started to receive an unprecedented volume of refugee and migrant flows,[2] which peaked during the year and continued thereafter, albeit on a smaller scale. In 2015 the largest number of refugees and migrants arrived by sea via the Aegean islands situated near the Turkish coast.

This article aims to provide a historical description of migrant flows and their characteristics.[3] We focus, in particular, on the expansion and development of this phenomenon from 2015 to 2017. Subsequently, we present the findings of Greek and international studies which analyse the ways refugees and migrants affect the economy through public expenditure, the labour market, economic developments and welfare programmes. Despite the fact that the majority of refugees is unwilling to remain in Greece,[4] the opportunities to relocate to other European countries have been reduced, thus a large number of newcomers are forced to remain in the country. This calls for a speedy assessment of the situation and the timely application of economic and social integration policies (see also Cavounidis 2017: 45-46).

Applying this framework, attitudes and perceptions of the Greek society are examined with regard to opportunities for the public acceptance and social integration of migrants, while xenophobic reactions of a significant part of the population are also reviewed. The latter have improved slightly, showing signs of humanitarian solidarity, mainly due to the increased presence of migrants after the closure of the northern borders and the unintended entrapment of the migrants in Greek territory.

In the current article, we also examine the financial support provided to Greece by the EU, as well as present data on refugees and migrants who stay in Greece in closed camps or in other forms of hospitality accommodations. Finally, this article presents data related to the applications for international protection and opportunities for the movement/relocation of refugees and reunifications with their families, aiming to present an inclusive review of the developments of migrant movements in the country and the effect that they have on local communities.

Given the continuing arrival of refugees and migrants to Greece and the unsatisfactory system of repatriation of those who are not eligible for asylum (resulting in direct negative effects for island communities), it is imperative that 1) the data and documentation of the efforts of the Greek state to deal with this unprec-

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*, ** The current article is based on authors' previous research; see Kasimati (2016, 2017) and Panagiotopoulou (2016, 2017). The authors would like to thank the anonymous reviewers of KEPE and the internal seminar's participants of the Economic Analysis and Research Department of the Bank of Greece for their constructive remarks and useful comments. Special thanks go to Nuriya Kapralou and Nicky Spanoudis for English editing, to Nikolaos Kardaras for his help on collecting and elaborating various statistical data and research papers and to the Hellenic Coast Guard and especially to Panagiotis Baroulakis for providing statistical data.

1. The views expressed in this article are those of the author and do not necessarily reflect those of the Bank of Greece. Any errors or omissions are the responsibility of the author.

2. A *refugee* is someone who is unable or unwilling to return to his/her country of origin owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion. Refugees are also persons fleeing armed conflict or persecution. A *migrant* is someone who chooses to move because he/she wants to improve his/her life by finding work, or in some cases for education, family reunion, or other reasons. Often he/she is obliged to move due to absolute poverty and unfavorable environmental conditions (UNHCR, 1951). In this article when the sources of evidence refer explicitly to refugees or to migrants we also refer to each category separately. Otherwise, if not possible to make this distinction, our reference is made as refugees/migrants.

3. Often in the statistical figures collected by various organizations who deal with refugee or/and migrant flows, smaller or bigger differences were observed regarding similar data. This happens because of the many sources of evidence collection, which apply different methodologies, or because they are collected on a daily basis.

4. In empirical research conducted by the Refugee and Migrant Watch of the Municipality of Athens from November to December 2016, in a sample of 543 families living in the Accommodation Centre for Refugees at Eleonas, only 5% of the respondents declared that they are willing to reside in Greece. Available at: <http://www.publicissue.gr/wp-content/uploads/2016/11/var-160-oct-2016_ref.pdf>.

edented phenomenon be further analyzed, and 2) the official policies regarding immigration and the actions of other EU countries be reviewed. Immigration-related challenges do not merely represent policy issues for the country accepting migrant flows; in the long run, they develop into a phenomenon of social integration and acceptance of foreigners to the national social net and, as such, demand complicated political initiatives and decisions with long duration. It seems that neither EU states nor Greece are yet adequately prepared to effectively deal with new long-term migration flows or redesign economic and social policies to foster the development and prosperity of their societies. Additionally, the local population is not sufficiently informed of the advantages that migrants and refugees are able to bring, resulting in a wave of nationalism in many EU countries during recent years which expresses itself through the absolute rejection of any efforts to integrate a large number of migrants into these societies.

2. Historical overview of migration flows from and to Greece

After the Second World War, Greece witnessed rigorous migration activity over many years, first as a migrant sending country, then as the destination of returning Greek migrants from Europe and the former Soviet Union countries, and finally, as a migrant receiving country, with flows coming mainly from the Balkans, Africa and Asia.[5] Greece's geographical position as an east gate to enter the EU declares the country as a very attractive migrant destination either for permanent residence or as a transit land allowing permanent settlement in a North European country.

After the war, population movements in Greece have been shaped by considerable changes concerning their destination and their nationalities and migration motivations. In brief, migration flows in Greece can be distinguished in the following time periods (see Table 1):

- 1951-1970: Net migration of the Greek population was rather negative due to the massive migration of Greeks to Northern European countries (mainly Germany, Belgium, Sweden and France).
- 1971-1990: Net migration diminished and gradually became positive because many Greeks, especially from European countries, decided to return to Greece. In parallel, a small number of foreign migrants started to migrate to the country.
- 1991-2000: Net migration was clearly positive because many foreign migrants (mostly from Albania, Palestine, Kurdistan, Bulgaria, Romania, etc.) came in braves to Greece to seek employment and permanently reside in the country or move towards other EU countries or, finally, after some years of stay, return to their home country.
- 2001-2011: Net migration gradually declined because many foreign migrants decided to leave the country.

TABLE 1 Natural population growth and migration flows per decade from 1951 to 2011

Period	Births	Deaths	Natural population growth	Migration flows		
				Greeks	Foreign	Total
1951-1960	1,533,249	577,212	956,037	- 244,450	24,165	- 220,285
1961-1970	1,532,475	693,050	839,425	- 497,169	37,832	- 459,337
1971-1980	1,338,877	801,509	637,368	265,552	78,856	334,408
1981-1990	1,183,634	911,193	272,441	251,190	- 4,148	247,042
1991-2000	1,021,361	999,764	21,617	52,746	629,817	682,563
2001-2011	1,098,440	1,062,785	35,654	-267,620	150,187	-117,433

Sources: Hellenic Statistical Authority, Population and Housing Census 1928-1984. KEPE, *Population of Greece*, Athens 1978 and <http://www.inade.gr/forum/Klimis.htm>.

5. For a detailed analysis regarding the various migration waves, their duration and their socio-economic composition during the 20th century from and to Greece, see Lianos and Cavounidis, 2012.

However, from 2010 onwards a new migration phenomenon of the Greek population has been observed which is closely related with the fiscal crisis and the difficulties encountered by young, educated people to find an appropriate job.[6] It is estimated that according to the data of the General Secretariat for Greeks Abroad of the Foreign Affairs Ministry, the number of Greeks who migrated from 2010 to 2015 is approximately 332,000.[7]

Despite the various fluctuations of migration flows towards Greece, the country displays remarkably high citizenship cohesion. In 1981 only 1,8% of the total population had foreign citizenship; in 1991 the corresponding percentage decreased slightly to 1,6%,; in 2001 it increased considerably, reaching 7% due to incoming economic migrants, and in 2011 the rising tendency continued and reached 8,4%.[8] From mid-1990 onwards the foreign person's percentage has been about 8-10% of the total population and is slightly above the EU average (Kontis: under publication p. 22).

3. Migration and refugees flows

The migration flows into the EU countries –refugees, economic migrants, asylum seekers and illegal migrants– increased drastically starting from the second half of the 2010s. According to the data published by Eurostat, 4.5 million people arrived into the EU in 2015, the highest annual inflow of migrants in history. During the previous year 3.8 million people arrived, while until then annual migration flows had never exceeded 4 million people. The number of asylum applications increased from 626 thousand in 2014 to a historic high of 1.3 million applications in 2015 and stabilized at 1.2 million in 2016 for 28 European countries.[9]

The main countries of entry for the recent migration and refugee flows into the EU are Greece and Italy; Bulgaria, Hungary, Serbia, Croatia, Slovakia and FYROM are the main countries of transit. On the contrary, the three main countries of destination for asylum seekers are Germany, Austria and France, with Germany accounting for 34% of migrants and 60% of asylum seekers in 2016, according to Eurostat (data as of 6/6/2017). The following figures show increased migration and refugee net flows[10] into the EU (Chart 1) and to Greece (Chart 2).

Migration into Europe is not a recent phenomenon. To approach the continent, migrants traditionally use three Mediterranean routes: the Western, the Central and the Eastern Mediterranean route.[11] Depending on the reason for migration, the most appropriate route is chosen, taking into consideration border controls and the level of border protection, the availability of public transport and the legal regime towards migrants in each country of destination or transit. (Alexandridis and Dalkiran 2017: 11-14).

The West Mediterranean route that connects Morocco with Europe (via Spain and France) is a traditional path for the populations of northern and western Africa.

The Central Mediterranean route starts in Egypt, or more often in Libya, and leads to Malta or Italy. Taking into consideration the long nautical distances between the coast of Africa and the coasts of Italy or Malta, this route is considered exceptionally danger-

6. Concerning the difficulties in finding employment due to the unprecedented increase of unemployment (26,5% for 2014), and especially of youth unemployment (about 52,4% for the age group 15-24 years of age), in addition to the unfavorable working conditions and low wages, see Cavounidis 2016: 29-31 and Lazaretou 2016: 37-41.

7. The figure derives from records of Greek Embassies abroad and is provided in an official report addressing the Greek Parliament in September 2016. As noted in the report's introduction, the data figures approximate the real numbers because there is no obligatory registration procedure (Mouriki: under publication).

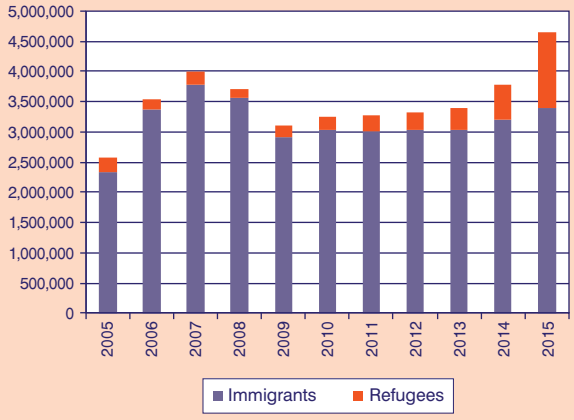
8. Hellenic Statistical Authority's population census. Stateless persons with unknown citizenship are not included; however, citizens from other EU countries are counted.

9. Eurostat (6/6/2017), available at: <http://ec.europa.eu/eurostat/statistics-explained/index.php/Asylum_statistics>. For comparison reasons it is worth mentioning that asylum applications in 1992, after the fall of Berlin Wall, were 672,000, and in the years 1996-2001, during the war in former Yugoslavia and the Kosovo crisis, the respective asylum applications exceeded slightly 400,000 persons annually.

10. Net flow is the difference between outgoing and incoming.

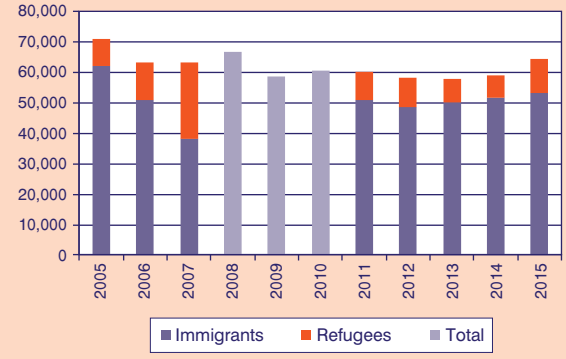
11. According to Frontex three other secondary migratory routes exist which are used less frequently. Precisely, the Western Balkan route, which is used by refugees/migrants from Greece, Turkey and Bulgaria to reach Central or Northern European countries, the Eastern Borders route connecting Russia and Ukraine with Romania and Hungary and the Circular route by Albania to Greece which is used mainly by Albanian economic migrants for seasonal work but also by a small number of migrants from Asian and African countries (http://frontex.europa.eu/trends-and-routes/migratory-routes-map/).

CHART 1
Migration and refugee net flows to the EU, 2005-2015



Source: Eurostat.

CHART 2
Migration and refugee net flows to Greece, 2005-2015



Source: Eurostat.

Note: There are no available data about the refugees in Greece in the 2008-2010 period.

ous (3,200 deaths in 2014; 2,900 in 2015; 4,581 in 2016 and 2,832 in 2017).[12]

The Eastern Mediterranean route is traditionally used by the population of Asia and North Africa; it connects Central Europe with Turkey, Greece, Bulgaria and other Balkan countries. However, after 2014 (when 50,830 people chose this route to migrate) it became the main transit route to Europe with an estimated 1 million people choosing this path in 2015 (more than 885,000 crossed the Greek borders, 17 times more than the year before). After the EU-Turkey Statement was signed on the 18 March, 2016 and the borders with FYROM were closed, the bulk of the migration flows were diverted to the Central Mediterranean route.

Throughout 2015 Greece received 84% of the total migration flows via the Mediterranean. Monthly inflows of arrivals during the years 2015–2017 are shown in Chart 3.

It is obvious that the number of arrivals of migrants and refugees dramatically reduced after the EU-Turkey Statement was reached; however, it is also obvious that migration continued despite the fact that the economic migrants realised that the roads to northern Europe were closed and the controls for legal transit and settlement have been intensified. Starting from April 2016, the majority of migrants and refugees endeavoured to pass to Europe via Italy.[13]

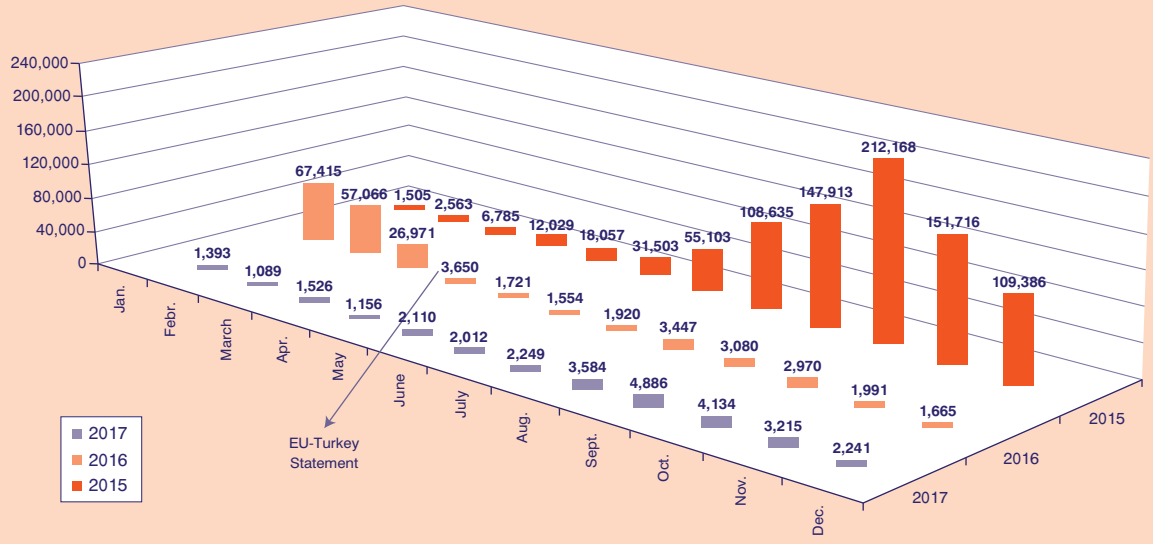
During the last years, when choosing transit routes to Greece, migrants/refugees have shown preference to sea over land routes, as transit from the Turkish coast to Greek islands is safer and quicker, and also due to the fact that since 2012 the borders of Evros have been protected with fence, making the illegal entrance of people via the land route difficult.

The effectiveness of border controls is presented in Chart 4, showing the number of arrests of illegal migrants during the first 10 months of 2016 and 2017. In 2016, 196,659 people were arrested, while in 2017 only 56,351. This difference (-71.35%) is crucial and demonstrates improvements in sea border controls as well as declines in migration flows via the Eastern Mediterranean route. Additionally, in 2015 and 2016 the bulk of illegal migration passed through the islands of the Eastern Aegean, mainly Lesvos and Chios. The islands of Kos, Samos, Leros and Rhodes also suf-

12. IOM (2015a), *Addressing Complex Migration Flows in the Mediterranean: IOM Response Plan, Spotlight on South-Eastern Europe*, available at: <https://www.iom.int/sites/default/files/country/docs/seeeca/SEE-Adressing-Complex-Flows-in-the-Mediterranean.pdf>; IOM (2015b), *Response Plan for the Mediterranean and Beyond, Addressing complex migration flows in the countries of origin, transit and destination*, October 2015; available at: *<https://www.iom.int/sites/default/files/press_release/file/IOM-Response-Plan-for-the-Mediterranean-and-Beyond-Oct2015.pdf>;* and IOM (2018), *Mediterranean Migrant Arrivals Reached 171,635 in 2017; Deaths Reach 3,116,* available at: <https://www.iom.int/news/mediterranean-migrant-arrivals-reached-171635-2017-deaths-reach-3116>.

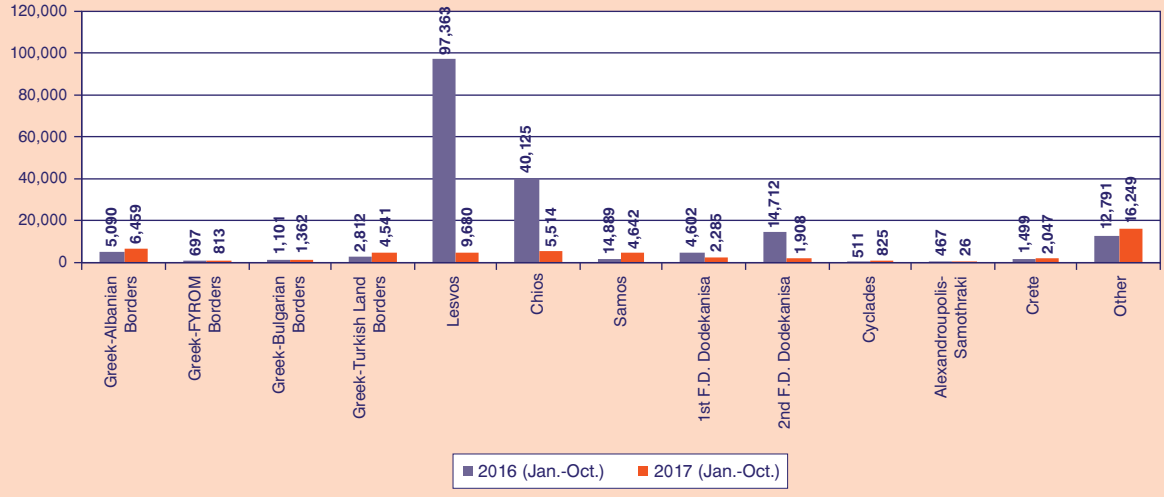
13. In 2015, 155,842 migrants refugees arrived in Italy, in 2016 there were 181,436, and in 2017 the number decreased (119,310 persons), however it still remains the highest number in comparison with other EU countries that receive migrant/refugee arrivals. See IOM (2017) and IOM (2018).

CHART 3
Monthly flow of arrivals of refugees and migrants in Greece (2015-2017)



Sources: IOM (2016a), *Mixed Migration Flows in the Mediterranean and Beyond. Compilation of available data and information, reporting period 2015,* and 2016-2017: <https://data2.unhcr.org/en/documents/download/61395>.

CHART 4
Migrants arrested by police and port authorities for illegal entry and residence (Jan.-Oct. 2016 and Jan.-Oct. 2017)



Source: Hellenic Police, <http://www.astynomia.gr/images/stories//2017/statistics17/allodapwn/10_statistics_all_2017_methorio.png>.

fered significant difficulties from migration flows. This trend holds even after the EU-Turkey Statement was reached.

As of August 2017, there were 62,206 refugees/migrants in Greece (see Annex, Table A). Approximately 23% of those are hosted in reception facilities in the Aegean islands, 12% in reception facilities in Attica and the biggest part (34%) are provided various accommodations (e.g. flats, hotels) that are rented for this purpose by the High Commission for Refugees of the UN and NGOs.

The distribution of refugees/migrants who entered Greece in 2015, according to their origin, is: 56% Syrian, 25% Afghan, 10% Iraqi and 9% who belong to other na-

tionalities. Among them, 45% are men, 20% are women and 35% are children. The main nationalities applying for asylum to remain in Greece (data from 2013 until the first quarter of 2017) are Syrians (38%), Afghans (12%), Pakistanis (12%), Iraqis (8%) and Albanians (4%). Of those who applied for asylum, 32% are below 18 years of age, 48% belong to the 18-34 age group, 19% to the 35-64 age group and only 1% is above 65 years of age. Finally, gender distribution is 49% men, 20% women and 31% children (Asylum Service, 2017).

The 2016 distribution of migrants/refugees according to nationality is not significantly different from that of 2015: 46.5% Syrian, 24.2% Afghan, 15.2% Iraqi, 4.9% Pakistani, 3.1% Iranian and 6.0% who are not identified.[14] It is notable that in 2016 the asylum applications of Syrians represented 52% of total asylum applications in Greece.

4. The impact of the migration flows on the economy

4.1. Public accounts

According to the Bank of Greece (2016, p. 79) a migration crisis mainly impacts three general areas: economic development (fiscal parameters, the labour market and the economic growth rate), the sustainability of the social security system, and, on social and political levels, the integration and acceptance of foreigners by local communities.

To address the humanitarian crisis, the EU approved the support programme totaling € 9.2 billion for the period 2015-16, which was directed at countries providing transit and hosting migrants.[15] In addition to those funds, every country that is involved in the transit and hosting of migrants deals with the cost of examining asylum applications and transporting refugees to other EU countries. The average cost for a European state for processing asylum seekers was estimated at 0.08% of GDP in 2014, increased to 0.14% of GDP in 2015 and for 2016 is estimated to be 0.22%. In Greece, such costs for 2015 were slightly higher than the European average, totaling 0.17% of GDP.[16]

According to the OECD (2015), during the first stages of the refugee crisis, public expenses incurred by Germany –cost of support and integration into the job market– were estimated at 0.5% of GDP in 2016 and 2017. Corresponding figures for Austria and Sweden were 0.3% of GDP and 0.9% of GDP, respectively. Consequently, rising public expenses to address immigration issues were estimated to increase total demand in the European economy by 0.1% - 0.2% of GDP. Additionally, the same study estimates that for Jordan total public expenses in dealing with Syrian refugee flows were 1.8% of GDP in 2013 and 2.4% in 2014 (Nasser and Symansky, 2014).

The IMF (2016)[17] also estimated additional budgetary strains for European economies. Specifically, higher budget expenses, compared to 2014, took place in 2015 and 2016 in Austria (0.08% and 0.23% of GDP, accordingly), in Finland (0.04% and 0.28% of GDP), in Sweden (0.2% and 0.7% of GDP) and in Germany (0.12% and 0.27% of GDP). For Greece an estimated increase was 0.17% of GDP in 2015. Thus, GDP-weighted average public expenses for asylum seekers of the EU member states were estimated to have risen by 0.05% and 0.1% of GDP in 2015 and in 2016, respectively, compared to 2014. The same study estimated that in the medium term the present value of budget contributions of migrants is positive for those who reached the country of destination, and were 10 to 45 years of age, with the aim of permanent relocation. Greece, a country hosting and providing transit to migrants, is unlikely to benefit from migration, as due to high unemployment (20.5% in September 2017[18]) Greece is not a country of final destination, except for 0.8% of the asylum seekers.

4.2. The labour market

The European labour market is estimated to experience a minor positive shock from the entrance of a new workforce.[19] The number of asylum applications compared to the EU workforce represent around 0.5% of the total, while asylum applications made for Germany represent 1% of the workforce of the country. For Greece, the percentage is significantly lower as

14. <http://migration.iom.int/docs/2016_Flows_to_Europe_Overview.pdf>.

15. OECD (2015), *Migration Policy Debates Nº 8*, November 2015.

16. IMF (2016), *The Refugee Surge in Europe: Economic Challen*ges, January 2016.

17. Ibid.

18. Hellenic Statistical Authority (ELSTAT) <https://www.statistics.gr/el/statistics/-/publication/SJO02/->.

19. IMF (2016), *The Refugee Surge in Europe: Economic Challenges*, January 2016.

10,000 asylum applications in 2015 corresponded to only 0.2% of the workforce.[20] According to the High Commission of the UN,[21] 45% of Syrian refugees in Greece (representing 30% of all asylum applicants in 2015) are high school graduates and 29% have a university degree (data as of January 2016).

The integration of refugees into the labour market is slow, mainly due to the following reasons: 1) the insufficient knowledge of the language of the destination country, 2) the absence of starting capital for the creation of business (self-employment) and 3) the insufficient preparation for relocation to the new country, resulting in a lack of recognition of high qualifications.[22] According to Eurostat (2008), migrants who are under the international protection regime face bigger difficulties integrating into the job market. Although around 75% of those who migrate to study or work succeed in finding employment during the second year in residence, the above-mentioned migrant group needs 6 years to achieve a 50% employability rate and 15 years to achieve a 75% rate of employment.

Additionally, IMF research (2016)[23] concerning the integration of migrants into the German labour market shows a 30% difference between the compensation of local workers and migrants who do not speak German. This difference in compensation decreases after migrants learn German and qualify at German technical institutions. Yet, even then, a 12% difference in remuneration remains, which tends to disappear after a 20-year residence in the country.

4.3. Economic growth

Another sector which is affected by migration is economic growth. Migrants without sufficient work experience usually occupy lower-paid employment positions which the domestic population is unwilling to undertake. Therefore, domestic employees are upgraded and usually occupy employment positions with better employment conditions and more money. Similarly, migrants with high educational attainment transfer to the country of destination know-how and skills which, in combination with those of the domestic population, increase productivity. According to Credit Suisse (2015)[24] migrant employment is expected to increase the productivity of the EU from 0.2% to 1.3% per year from 2015 to 2023, while the study does not examine whether this occurs regardless of the migrants' education and vocational training. The sectors with the highest demand for the employment of migrants with high educational attainment are engineers in Germany and Sweden and doctors in the United Kingdom. According to an OECD survey (2016), the cost of vocational training for a refugee doctor in the United Kingdom is calculated at around 25,000 GBP; namely, it amounts to approximately 1/10 of the cost of training of a new doctor.[25]

The population of the EU is ageing, which is mainly due to the low fertility rate (1.55 births per woman[26]), which is well below the population's reproduction rate (approximately 2 births per woman), and to the increase in life expectancy. The ageing of the population leads to fiscal problems, forcing governments to pay more money for the provision of pensions and social benefits to the older generations, without, however, collecting the corresponding taxes and insurance contributions from the younger generations. Statistically, the economically active population in the EU is expected to decrease by 3.5% over the period 2015-2020.[27] Given that the migrants' are relatively young (29% minors, 53% from 18 to 34 years old),[28] their presence is expected to have a positive impact on the demographic characteristics of the country of destination. As a consequence, the economically active population increases and the tax base is respectively expanded, despite the lower wages. Moreover, due to the different culture, migration increases births, temporarily boosting the population, while, at the same time, it increases diversity, which is also mentioned by Legrain (OECD 2016: 20-41) as being one of the 7D benefits. According to his research,

20. Hellenic Statistical Authority (ELSTAT), <www.statistics.gr/statistics/-/publication/SJO01/->.

21. UN High Commissioner for Refugees (UNHCR), *Profiling of Syrian arrivals on Greek islands in January 2016*, 23 February 2016.

22. Migration Policy Center, *From Refugees to Workers, Mapping Labour-Market Integration Support Measures for Asylum Seekers and Refugees in EU Member States*, various authors, 2016, page 16.

23. IMF Staff Discussion Note (2016), *The refugee surge in Europe: Economic Challenges,* January 2016, various authors.

24. Credit Suisse (2015), *Can migrants boost European growth, ease labor constraints?*

25. OECD (2016), *Refugees are not a burden but an opportunity*, available at: <www.oecd.org/social/refugees-are-not-a-burden-but-an-opportunity.htm>. Thus, they attempt to cover medical specialties that are scarce.

26. Credit Suisse (2015), *Can Migrants boost European growth, ease labor constraints*?

27. European Commission Report (2016), *Employment and social developments in Europe 2015*.

28. European Commission (2016), *An Economic Take on the Refugee Crisis*, July 2016.

the potential benefits (7D dividends) of the migration flows to the local societies are:

- Boost of demand (*demand dividend*);
- Refugees work on jobs that locals avoid (*4D dividends*): *dirty*, *difficult*, *dangerous* and *dull* jobs;
- Higher-skilled refugees fill gaps in labour market (*deftness dividend*);
- Increased productivity and enhanced entrepreneurship and innovation (*dynamism dividend*);
- Contribution in culture (*diversity dividend*);
- Age renewal of ageing societies (*demographic dividend*);
- Contribution in public finances and especially in public health and social welfare system (*debt dividend*).

A study of the European Commission (2016) estimates that migration is expected to have a positive impact on the GDP of the country of destination, increasing it by 0.1-0.2% per year by 2020, decreasing, however, the real wage by 0.1% due to the lower remuneration of migrants as compared to the native population.[29] Nevertheless, a significant increase of employment by 0.2-0.3% is projected for the same period. Moreover, in the long term, there is a qualitative improvement in Greece's human capital, which drives the domestic population to improve its skills.[30] At the same time, it is observed that, in the medium and long term, the immigrants' rate of entrepreneurship improves investments and international trade. Finally, the economy of the countries from which the migrants originate also benefits both through the remittances sent to their families and through the commercial transactions carried out between their country of origin and country of residence. A characteristic example is Ethiopia, one of the countries with strong migrant flows abroad, which, over the last decade, has rates of growth from +8.8% to +12.4% of the GDP per year.

4.4. The welfare state

The services offered by the welfare state to migrants and refugees obviously incur a cost. The OECD (2015) estimates that each person spends around € 8,000–12,000 in his/her first year of stay in the new country, which is decreasing due to the implementation of fast-track procedures.[31] The cost is mainly allocated to the accommodation of these persons in rented homes or reception facilities, social benefits, language education and policies for integration into society and the labour market.[32]

A study by Rowthorn (2008) on the United Kingdom estimated that immigrants paid, in tax year 2003-04, 41.2 billion GBP in taxes and used 41.6 billion GBP for services and social benefits. Thus, their financial contribution was -0.4 billion GBP. Through the appropriate adjustments (asylum support, multicultural relations and specially adjusted education, additional medical costs, defense costs as well as adjustment of the budget) there is a resulting positive financial contribution of 0.6 billion GBP.[33] The example of Sweden, which is set out in the study of Ruist (2015),[34] shows a significant variation in the allocation of fiscal costs between the domestic population and refugees. Social support programmes and integration policies incur a tenfold cost per person, whereas the employability cost is fourfold. On the other hand, the domestic population uses 4.5 times more money for pensions, an additional 67% for education and around 35% for the health system (Ruist, 2015).

On the basis of Eurostat calculations, 23,150 unaccompanied children (apart from the refugees' children) entered the EU in 2014, their number soaring to 96,465 in 2015 and decreasing to 63,290 in 2016. This unprecedented number of unaccompanied children requires social care both at the level of basic needs and at the level of education. In Greece, around 2,500 refugees' children obtained access to education (European Commission, 2017), a figure which is very low as compared to the number of school-age minors, but

29. European Commission (2016), *An Economic Take on the Refugee Crisis*, July 2016.

30. Foged M. and Peri G. (2016), Immigrants' Effect on Native Workers: New Analysis on Longitudinal Data, *American Economic Journal: Applied Economics*, Vol. 8, No 2, April 2016.

31. OECD (2015), *Migration Policy Debates N° 8*, November 2015.

32. Ruist, J. (2015), The fiscal cost of refugee immigration: the example of Sweden, *Population and Development Review*, December 2015.

33. Rowthorn, R. (2008), *The fiscal impact of immigration on the advanced economies*, Oxford University Press, Table 2, data from the Institute for Public Policy Research.

34. Ruist, J. (2015), The fiscal cost of refugee immigration: the example of Sweden, *Population and Development Review*, December 2015, Table 4.

is justified by the fact that these children's families are constantly on the move.[35]

4.5. Social acceptance and inclusion

A negative stance of the Greek society regarding the social acceptance and/or inclusion of migrants/refugees is not a new phenomenon. It appears as an everlasting stance which reveals the anxieties and uncertainties of a great part of Greek society. The results of the European Social Survey 2009,[36] which examined the stances and perceptions of Greeks regarding migrants and their residence in Greece, has, in brief, revealed the following results (Varouxi & Sarris 2012: 24-26): The entry and residence of migrants in Greece should be allowed only for a few migrants (46.5%) or to no one (13.5%), even if they belong to the same race or are of Greek origin. More specifically, 83% of the respondents would not accept the entry and residence of migrants in the country if they come from a different race or ethnic group. This percentage (from which 54.6% wants entry and stay to be allowed only to very few, while 28.5% believes that no one should be allowed to enter or reside) is nearly twice as high as the corresponding percentage of all responses from all European countries, which was 48.6%.

More than half of the respondents (51.7%) stated that the presence of foreigners "is harmful for the economy" (also the highest percentage in comparison to the European average, which was 26.2%). One in two Greeks (50.4%) feels that the country's cultural life (cohesion and homogeneity) is "threatened" by migrants and believes that it gets downgraded. Additionally, 53.5% of the Greek sample stated that the presence of migrants in the country makes it a worse place to live.

It is obvious that Greeks feel threatened by the presence of migrants in a clearly higher grade than the citizens of other European countries and they fear that their quality of life will be downgraded. An explanation of this attitude could be the frequent fluctuations of the economy and the labour market, but as well the state's negligence to set up and follow a consistent policy for permitting migrants to reside legally in the country and forbidding illegal residence and work for a great number of migrants (Kontis: under publication). The unprecedented growth of migrant flows from 2014 onwards has exacerbated these xenophobic perceptions.

A Eurostat pilot research (2011) aimed to record the economic and social situation of migrants in comparison to the entire EU population and to build indices of integration, which take under consideration certain basic variables of employment, education, social integration and active citizenship.[37] The main results of the research regarding Greece are summarized as follows:

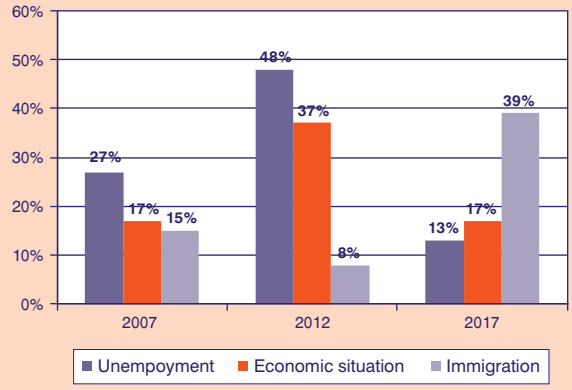
- There is a huge difference between the percentage of self-employed migrants to natives (-19%, by far the biggest difference in the EU), which seems to follow the corresponding high percentage of self-employed natives,
- There were discrepancies between qualifications and work position in the age group 20-64 for migrants (66% for Greece, which is by far the highest percentage, while the EU average was 33%),
- There is a considerable deficit in the educational levels of migrants who reside in Greece, which was estimated at 11%,
- Extreme income disparities concerning the average available income of migrants in comparison to the native population were detected. For the age group 25-54, the difference was 75% less income than the native population. Consequently, there are

35. In May 2016, 40 camps-hotspots all over the country hosted 36,890 persons. Registered minors (0-18 years of age) made up about 37% (13,677 persons) of the total population. According to the registration data, children 4-15 years of age (compulsory and preschool education) numbered about 8,000-8,500. The data of the UN High Commissioner for Refugees confirm that about 37% of arriving foreigners (January-August 2016) were minors. Available at: <https://www.minedu.gov.gr/publications/docs2017/16_06_17_Epistimoniki_Epitropi_Prosfygon_YPPETH_Apotimisi_Protaseis_2016_2017_Final.pdf>.

36. European Social Research (ESR) is being conducted at regular intervals in most European countries to capture the attitudes and perceptions of European citizens on major issues and to allow for the identification of developments and comparisons on a time-scale basis. The National Center of Social Research conducts the respective research for Greece. The 4th round was held in 2008/2009. See European Social Survey Data, Rounds 1-4, <http://ess. nsd.uib.no>, and Papliakou, B., Stathopoulou, Th., Stratoudaki Ch. (eds.), (2011), *Institutions, Values, Behaviours: Study on the results of European Social Research (2008-2009)*, Athens, National Center of Social Research.

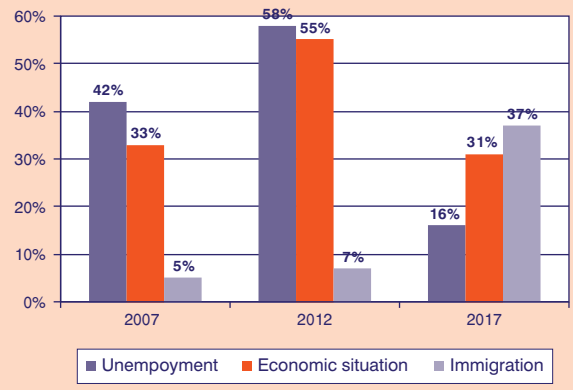
37. The variables composing these indicators contain: participation in economic activity, unemployment, employment rates, self-employment, relation between job qualifications and employment, educational attainment, school leavers, median annual equalized disposable income, poverty risk, self-reported health status, immigrants who acquired citizenship or immigrants who acquired permanent or long-term residence. Available at: <http://ec.europa.eu/eurostat/documents/3888793/5849845/KS-RA-11-009-EN.PDF/9dcc3b37-e3b6-4ce5-b910-b59348b7ee0c>.

CHART 5
Europeans' opinion about the most important problems



Source: Eurobarometer 68 (2007), 78 (2012) and 88 (2017).

CHART 6
Greeks' opinion about the most important problems



Source: Eurobarometer 68 (2007), 78 (2012) and 88 (2017).

a high percentage of migrants who are at risk of poverty or social exclusion.[38]

According to PEW research (Wike R., Stokes B. and K. Simmons, 2016) in 10 EU countries, 59% of the respondents believe that refugees will raise terrorism in the receiving country. Furthermore, 50% consider refugees as a burden for the labour market, while another 30% assumes that refugees are more prone to criminality than the native population. In Greece the attitudes expressed are clearly more the negative regarding the labour market since 72% of Greeks believe that refugees and migrants will influence negatively the possibilities to find a job. This may be associated with the rapid rise of unemployment and with labour uncertainty in the years of economic crisis. Forty-three percent of the total sample maintains a negative image regarding Muslims, who make up the majority of refugees. The corresponding percentage for the Greek sample is 65%. This obvious negative attitude can be explained by the sudden arrival of such a big number of refugees and migrants, which instantly overturned traditional habits of local communities, causing an atmosphere of economic and social uncertainty. Of course, this negative attitude can be explained by other preexisting prejudices.

Among EU citizens, opinions concerning the migration crisis differ. There are citizens who welcome migrants and refugees and try to provide dignified living conditions in the receiving countries, but there are others who do not want their presence either in their neighborhood or in tourism destinations which they plan to visit. Eurobarometer, the annual opinion poll of EU citizens conducted by the European Commission, indicates a shift in public opinion of the European citizens regarding the problems they rank as the most important in recent years (see Charts 5 and 6). The economic situation together with immigration top the most important problems for the EU citizens after 2012.

Research conducted by Dianeosis (2016)[39] asks the respondents to evaluate the recent migration waves which came to Greece from 2014 onwards. Furthermore, besides perceptions and attitudes of Greek citizens concerning refugees, it examines also the actions taken to deal with the problems arising from their presence in Greek territory. Additionally, it examines whether Greek citizens are aware of the dimensions and intensity of the migration phenomenon and whether they believe that it is a transitory or a permanent situation. The results, briefly, are the following:[40]

Greeks believe almost unanimously (92%) that the EU "does not support Greece" in receiving refugees in the Aegean islands. From those, almost half (47%) consider that the EU "does not at all support Greece". The ma-

38. <http://ec.europa.eu/eurostat/documents/3888793/5849845/KS-RA-11-009-EN.PDF/9dcc3b37-e3b6-4ce5-b910-b59348b7ee0c> and Varouxi X., & Sarris N., 2012: 21-22.

39. The research was conducted by the Organisation Dianeosis in a sample of 1,220 people covering all of Greece, from 7 to 15 January 2016, using a questionnaire and under the title *The refugee problem and the Greeks*. Available at: <http://www.dianeosis.org/wp-content/uploads/2016/02/immigration_04.pdf>.

40. <http://www.dianeosis.org/wp-content/uploads/2016/02/immigration_04.pdf>.

TABLE 2 International arrivals to Airports in Greece

Airport	2016	2015	2014	% Change 2016/2015	% Change 2016/2014
Kos	848,682	970,662	1,011,367	-13%	-16%
Lemnos	10,492	12,266	9,804	-14%	+7%
Mytilene	31,480	75,475	75,139	-58%	-58%
Samos	96,830	126,830	122,392	-24%	-21%
Chios	2,266	7,224	8,228	-69%	-72%
Total	989,750	1,192,497	1,226,930	-17%	-19%
Total Greece	**18,634,235**	**17,160,024**	**16,286,717**	**+9%**	**+14%**

Source: Hellenic Civil Aviation Authority, <http://www.ypa.gr/profile/statistics/yearstatistics/>.

TABLE 3 Cruise arrivals

Port	2016	2015	2014	% Change 2016/2015	% Change 2016/2014
Kos	19,222	18,227	42,040	+5%	-54%
Lemnos	4,072	15,787	7,657	-74%	-47%
Mytilene	13,923	24,894	34,150	-44%	-59%
Samos	43,659	10,893	24,865	+301%	+76%
Chios	21,933	25,229	16,963	-13%	+29%
Total	102,809	95,030	125,675	+8%	-24%
Total Greece	**5,197,118**	**4,957,743**	**4,932,373**	**+5%**	**+5%**

Source: Hellenic Ports Association, <https://www.elime.gr/index.php/deltia-typou>.

jority of respondents (66%) is against the closing of the borders as a way to deter entry–transit. This is remarkable if one considers that Greece has received, and is still receiving, considerable pressure from the migrant/refugee flows. Two out of three Greeks (67%) express positive feelings towards refugees (compassion 38%, sorrow 29%, etc.) referring to the humanitarian problem they face. However, 29% of respondents express negative feelings (anxiety 16%, fear 4%, suspicion 3%, threat 3%, etc.). Eighty-four percent declare sympathy for refugees and 66% have a positive impression of them, but have a less positive stance for migrants (59%). However, the issue of permanent residence for refugees in Greece is not accepted by the majority of the respondents. Regarding the highest number of refugees that Greece should host, 53% consider that it should not exceed 10,000 people, a point of view that differs considerably from reality. More than sixty thousand refugees migrants were hosted in the country at the time of the research.

Greek's attitude towards allowing a work permit for refugees is positive (81%), in comparison to those who consider "it should not be allowed to give a work permit" who make a lower percentage of 14%. Referring to the demographic problem, half of the respondents (51%) do not agree that refugees can help with solving the problem, in contrast to those who believe that they can (32%). Furthermore, almost half of the sample (49%) considers that refugees will burden public health and educational systems (41% disagree). Regarding cultural issues, half of the respondents do not believe that refugees can enrich Greek culture (36% agree that they can enrich national culture). About two out of three Greeks (66%) believe that refugees "could be integrated into Greek society because the majority of them are heads of families and peaceful people" and that "they can make Greece their second home" (61%). The results of this research deliver, for the first time, a slightly positive attitude of the native population

towards refugees and less so towards migrants, which does not mean that long lasting anxieties for social inclusion and the consequences for the socio-economic development of the country have been expunged.

Other research by the Greek Tourism Confederation (SETE) conducted in 2016, reports dissent mainly by German and British tourists regarding the Greek tourism market because of the migrant crisis. Specifically, the perception that their holidays would be negatively affected by refugees was enhanced in the second trimester of 2016, compared to the previous trimester. Fifty-two percent of the German and 55% of the British respondents[41] have declared this opinion. Examining the arrivals from abroad to the airports of islands that were affected by the migrant flows, a remarkable decrease of arrivals has been witnessed for the years 2015 and 2016, in comparison to 2014. For the country as a whole, total passenger arrivals from abroad have shown an increase of 9% and 14%, respectively (see Table 2 above).

A similar stance was adopted by cruise passengers traveling to the respective islands. As shown in Table 3 above, despite the islands' efforts to profit from the crisis in neighboring Turkey, arrivals of cruise passengers to the majority of islands, with the exception of Samos, were most probably influenced by the migration crisis.

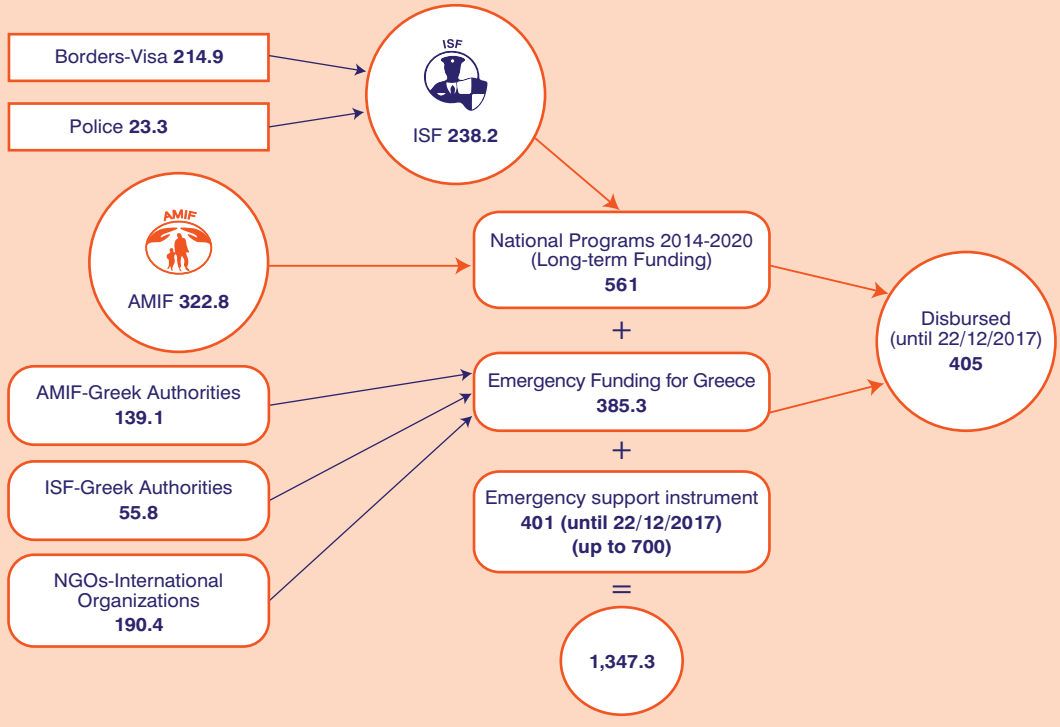
Regarding the above-mentioned research results, it becomes obvious that the tourism sector of islands that are close to Turkey has suffered a considerable decrease regarding tourist arrivals. Most probably this has consequences, like a decrease of income deriving from tourism activities, for the local population. This development may also explain the increase in the percentage of the local population with a negative attitude towards migrants.

5. EU financial support to Greece, the creation of closed camps and the possibilities of relocation and family reunification for the refugees

5.1. EU funding extended to Greece

As mentioned before, Greece is a main entrance gate and host country for refugees and migrants. Thus, and also taking into account the economic difficulties

CHART 7
EU Financial support to Greece (in million euros)



Source: EC, *Managing Migration, EU Financial Support to Greece, 22 December 2017.*

41. INSETE Intelligence (2016), Research Report, refugees/migrants, April, 2016.

of the country, the support from the European Union was necessary as regards technical knowledge on dealing with crisis, funding and workforce. Out of total EU funding, € 561 million is long-term financing from the European Asylum, Migration and Integration Fund (AMIF) and the Internal Security Fund (ISF). These funds are intended for the improvement of living conditions of refugees/migrants, their integration into the society, the harmonization of the asylum system and the enhancement of border controls. In addition to the long-term financing, in the beginning of 2015, emergency funding of € 385.3 million was approved to support Greek authorities and international organisations dealing with the refugee crisis. As of 22/12/2017, from € 946.3 million, only € 405 million has been disbursed. In March 2016 a new financing tool was approved for Greece for 2016–2018, with a credit limit of € 700 million; up to 22/12/2017 programmes worth € 401 million were approved, raising the total EU financing support to € 1,347.3 million (see Chart 7 above).

5.2. The creation of closed camps (Hotspots)

In accordance with the EU-Turkey Statement of 18 March 2016, a new problem has appeared –that of the stranded refugees and migrants in the Greek territory. These stranded refugees include not only those who arrived before the EU-Turkey Statement and were dispersed all over the country, but also those who came after it and are hosted in closed installations (hotspots) created on the islands or who live outside those camps. From the Statement's signing up to the end of 2016, 22,659 persons have arrived to Greece, while before the signing of the Statement (10.3.2016) the stranded numbered just 42,688 persons. At the end of the same year (31.12.2016) their number increased to 62,784 persons, an increase of 47%.[42]

Hotspots were created on the five islands that receive refugees or migrants (Leros, Lesvos, Chios, Samos and Kos) by using either already-existing open camps or by building new closed camps which were designed to discourage auspicious migrants to cross EU borders. Additionally, the scope was to restrict migration flows to EU countries. In brief, the main functions of closed camps are (Alexandridis & Dalkiran 2017: 15-16):

- Registering and screening irregular migrants;
- Debriefing migrants to gather intelligence regarding smuggling networks;
- Channeling asylum seekers into the appropriate asylum procedure;
- Coordinating the swift return of migrants with no right to international protection;
- Providing interpreters in order for the above functions to take place.

These tasks were to be executed by a joint force of three EU agencies —Frontex, Interpol and European Asylum Support Office (EASO) officers— in coordination with the Greek local authorities and a representative officer of the Turkish authorities. In this sense, these camps simultaneously function as reception/relocation centers and removal centers to the countries of previous residence. This is a safe procedure to distinguish refugees who have the right to apply for and receive asylum from economic migrants who do not. It is worthwhile to mention that often the right to apply for asylum is transgressed under the pressure of the huge numbers of applicants and the few places available in the closed camps (Amnesty International, 2016).

Evidently, the concept of hotspots as selection centers among economic migrants and refugees causes problems to the Greek authorities who are obliged to undertake the task of sending back those who entered the country illegally and do not want to be repatriated. Although the migrant/refugee flows have diminished considerably, their arrivals continue and therefore the closed camps have long surpassed the capacity to host them. The result is that housing and living conditions have become very problematic, even inhuman. Despite all kinds of concerns to move refugees from the islands to the mainland, especially vulnerable social groups, finally the Greek government could not avoid the strong pressure of the islands' local authorities and allowed the moving of 5,701 persons to various camps on the mainland.[43] In the hotspots, more and more people who have no right to apply for relocation but do not want to go back to their home countries aggravate the situation, causing tension and violent outbursts, ultimately creating a humanitarian and social problem[44] that puts

42. IOM (2017), available at: <http://migration.iom.int/docs/2016_Flows_to_Europe_Overview.pdf>.

43. More specifically, from October 16 to December 10, 2017, 5,701 persons were moved to the mainland from which 3,589 were asylum seekers settled on Lesvos island, see Georgiopoulou (2017), available at: <http://www.kathimerini.gr/938979/article/epikairothta/ellada/metafer8hkan-5701-aitoyntes-asylo-apo-ta-nhsia-se-dyo-mhnes>.

44. Many NGOs, like Médecins Sans Frontières, Amnesty International and the UN Refugee Agency (UNHCR), have expressed their concerns regarding the function of hotspots and some organizations stepped back from the camps trying to actually demonstrate their denial of this policy (see Amnesty International 2016: 18-20).

increasing pressure on the Greek government and the local communities. Consequently, the problem is that the burden for the five islands with closed camps has become insurmountable regarding the infrastructure (electricity and water supply, drainage system, public transportation, schools, etc.) but also regarding the income losses from tourism or agricultural activities.

5.3. The possibilities of movement/relocation

In order to ease the pressure from the situation of unrest that resulted from the unprecedented influx of migrants/refugees into Greece and Italy in 2015, the Justice and Home Affairs Council prepared and adopted, upon the proposal of the European Commission, a programme for the relocation of refugees to other EU countries. In May 2015 the Council issued a proposal for the relocation of 40,000 asylum seekers. In September of the same year, a new proposal was presented, which provided for the relocation of 106,000 asylum seekers from Greece and Italy, plus 54,000 from an unspecified country, mainly from Hungary, the total number amounting to 160,000 persons.[45] Those entitled to relocate must have been identified and must have filed an asylum application which may be finally decided on in the host country.

The policy for the movement/relocation and return of migrants and refugees from the Greek islands to either Europe or Turkey entered into force upon conclusion of the statement of 18 March 2016. Utimately, relocations were limited only to Syrian nationals. The disagreements[46] and backtracking on the issue concerning the number of refugees which the member states of the EU committed to accept have drastically reduced the number of those that will finally be able to relocate, whereas the procedure for transferring refugees has been carried out very slowly (Amnesty International, 2016). Of a total of 63,302 persons, 21,729 persons, namely 1/3 of the applicants (34.3%), had relocated from Greece by 31.1.2018.[47] Moreover, the return to Turkey of migrants without a right to asylum is also problematic.

It is indicatively mentioned that the persons who were returned under the voluntary return programme of the International Organisation for Migration in March 2017 (Assisted Voluntary Return and Reintegration [AVRR]) amounted to 740 and mainly came from Pakistan, Iraq and Algeria; whereas those who were returned following final lawful procedures amounted to 600 persons and mainly came from Albania (400 persons) and from Pakistan (approximately 30 persons).[48] These data show a gradual change in the composition of the population of migrants/refugees who have been stranded in Greece. This population has changed and transformed from persons entitled to seek asylum into purely economic migrants, whose movement to another country is not ensured by the EC.[49]

Consequently, the selected relocation procedure proves to be not only time-consuming but also ineffective for the countries of entry of migrants/refugees since it does not adequately solve the issue of their accumulation, and their number continuously increases. This results from the reluctance of most countries of the EU to accept refugees and to justify to the native population their contribution to the economic growth of each country. Finally, this policy called into question the solidarity between member states and their will to assist partners thereof who face an unexpected risk.

45. These propositions were based on article 78(3) of the Treaty on the Functioning of the European Union, which enables the Justice and Home Affairs (JHA) Council, after consulting the European Parliament, if a member state is confronted by an emergency situation characterised by a sudden inflow of nationals of third countries, to adopt provisional measures for the benefit of the member state(s) concerned. *Treaty on the Functioning of the European Union*. Available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:12012E/TXT>. The decisions were taken in two special meetings on 14 and 22 September 2015 by the Justice and Home Affairs (JHA) Council. Council Decision (EU) 2015/1523 of 14 September 2015 establishing provisional measures in the area of international protection for the benefit of Italy and of Greece; and Council Decision (EU) 2015/1601 of 22 September 2015 establishing provisional measures in the area of international protection for the benefit of Italy and Greece.

46. Forerunner indicating the commitment dissent of some member states to accept refugees was the closing of the boarders of certain countries belonging to the Schengen treaty trying to control the entry of migrants. Countries like Austria, Germany, Denmark, Norway and Sweden implemented border controls abolishing the Schengen treaty for free circulation of persons but not for commodities to stop illegal migrant arrivals. Border controls have also adopted France for security reasons after repeated terrorist attacks as well as Malta.

47. The process of relocation was initially designed to last until September 2017.See Annex, Table B for those countries who agreed to receive refugees.

48. The results of research conducted by IOM between January and November 2016, in receiving countries of the front line (Greece and Italy) as well as in countries of transit (Hungary, Bulgaria, Serbia, Croatia, FYROM and Slovenia), in a sample of 13,159 migrants demonstrate that Pakistani migrants declare that their main reason for migration is the economic situation in their country, in other words they are mainly economic migrants and not refugees (IOM *Analysis: flow monitoring surveys*, Reporting period January 2016 - November 2016: 6).

49. <http://fra.europa.eu/en/theme/asylum-migration-borders/overviews/april-2017>.

Such solidarity is based on the statutory conventions governing the EU. As stated in the report of Amnesty International, even though many measures have been taken to close borders to and from Greece, not many solidarity measures have, in fact, been taken to improve refugees' living conditions in Greece and to distribute responsibility for the refugees and asylum seekers arriving in Greece (Amnesty International 2016: 12).

5.4. Family reunification

When travelling to Europe from their country of origin or first refugee establishment, the journey of the displaced people may last from two weeks to three months, considering that half of them take the Eastern Mediterranean route.[50] During this journey, families are often separated from one another and arrive at different final destinations. This is why the process of family reunification is being implemented in order to enable refugees to start a smoother transition into their new life in the host countries and to experience a faster integration into societies. The conditions for reunification concern children and spouses who existed as a family prior to leaving their homeland. Children must be under the age of 18 years when applying for reunification and spouses must already have completed one year of marriage.[51]

In 2016, 63,920 children entered Greece (this being 37% of all migrants/refugees) out of whom approximately 8% were unaccompanied minors. About 21,000 unaccompanied children were housed in either specially designed temporary shelters, foster families, or hotspots.[52] According to data (3 April 2017) by the National Center for Social Solidarity (EKKA), a total of 6,189 unaccompanied children were referred to its supervision. In April 2017, out of about 2,000 reported unaccompanied children, 1,382 (69%) were in protective hosting facilities, while 952 were on a waiting list expecting a placement in accommodation facilities. It is obvious that the infrastructure to meet the needs of unaccompanied children in Greece is insufficient, although there are 54 facilities of long or short-stay accommodation throughout the country.[53]

Out of all unaccompanied minors, 39% were aged between 0 and 4, 52% were aged from 5 to 14 years old and 18% were aged from 15 to 17 years old. Eighty-four percent of the unaccompanied children in Greece were boys aged 15 to 17 years old.[54] Many unaccompanied children either lost their parents or relatives during the trip or ventured the trip with groups of known adults with the intention to reach their final destination and then bring their family through the process of family reunification. This practice explains the particularly high proportion of boys aged 15-17 traveling unaccompanied. Forty-two percent of these boys came from Pakistan, a country whose population migrates mainly for economic purposes, while 19% of the boys were from Afghanistan.[55]

The June 2017 figures reveal that 2,616 people[56] in Greece fall into the category of family reunification and the relevant procedures are expected to be carried out. The number of people who have the right to reunify with their families is not negligible; however, the issue can hardly be satisfactorily resolved since the host countries are not always willing to accept them, and reunification conditions are not easy (for example, diaspora of their family members into many EU countries).

6. Conclusions

In 2015, the mass flows of refugees and migrants to Europe created unprecedented challenges in host and transit countries as well as in the EU in general. Studies of Greek and international literature depict a

50. According to the aforementioned IOM research, the Eastern Mediterranean Route is generally used by migrants and refugees travelling with a group (84% of respondents), and 65% of these travel with their families. The rest travels alone. Almost half of the migrants (47%) left their country of habitual residence between two weeks and three months prior to the survey. The other half reported that it had been more than three months since they left their country (21% mention between three and six months and 25% mentioned more than six months before the survey) with exception of 6% of migrants who had been travelling for less than 2 weeks (IOM (2016b), *Analysis: flow monitoring the surveys, Reporting period January 2016 - November 2016:* 3).

51. <https://www.freemovement.org.uk/refugee-family-reunion-a-users-guide/>.

52. <http://fra.europa.eu/en/theme/asylum-migration-borders/overviews/april-2017>.

53. <https://data2.unhcr.org/fr/documents/download/55998>.

54. <http://fra.europa.eu/en/theme/asylum-migration-borders/overviews/april-2017>.

55. <https://data2.unhcr.org/en/documents/download/55971>.

56. Press Release European Commission 6.6.2017, *Migration management Greece: key figures.*

variety of findings on how migrants/refugees affect an economy in terms of budgets, labour markets, economic growth and product produced. Due to its geographical location, being the EU's external border and directly opposite Turkey, Greece has borne the burden of this crisis as no other EU country has. In its effort to confront this humanitarian crisis and to meet the needs of refugees and migrants arriving in its territory, it has spent and will need to keep spending considerable resources. All this during a time that means are very limited due to the economic crisis and the budgetary adjustment programme that Greece implements.

The unexpectedly large number of migrants and refugees who originally entered Greece in order to travel to Northern European countries, but then remained for an indefinite time until convenient relocation opportunities appeared, changed the facts regarding the policy of dealing with the phenomenon. It also changed the economic and social care practices of new populations.

Although Greece followed a migration policy that put bigger or smaller barriers to the integration of migrants, the country was finally driven to a policy of tolerance and partial rights, nevertheless without providing an easy and meaningful possibility of legalization and integration of foreign residents (Triantafyllidou A. and Mantanika R., 2016). This endeavor strikes against the Greeks' long-standing defensive stance towards the ever-increasing number of migrants/refugees. Xenophobic tendencies outweigh the ongoing economic and political crises and create a variety of fears and insecurity for many social classes, on both a personal and a societal level; however, tendencies of sympathy and solidarity for the suffering faced by these populations is also noticed.

These attitudes were reinforced by the Statement with Turkey (18 March 2016) and the ultimate closure of the border in FYROM that occurred a few days earlier, resulting in the stranding of more than 60 thousand migrants and refugees in Greek territory. Their number is gradually rising while their relocation to other EU countries is either delayed or the relocation spaces are reduced due to the reluctance of countries and the negative attitude of their citizens to welcome refugees who they initially stated they intended to integrate. In essence, this means that those migrants/refugees who had entered Greece prior to the EU-Turkey Statement are dispersed in various forms of hospitality or apartments throughout the country, while those who came after the Statement are housed in closed camps. Asylum procedures have been greatly accelerated, but their handling is unsatisfactory due to procedural obstacles or legal ambiguities, and the staffing of the Asylum service with competent people is still incomplete.

It is a fact that the Statement of March 2016 brought relief to Greece regarding the arrival of migrants/refugees, but it is also obvious that their flow has never been completely stopped. Smaller numbers of people still arrive and remain in closed camps on the islands until they are recorded and submit the asylum application for refugees. Economic migrants are returned to their countries of origin or to Turkey; however, the return rates are extremely slow and often ineffective since many of them prefer to remain in the country illegally. Gradually we observe a qualitative differentiation in the composition of migrants who remain in the country. Economic migrants, who have no chance to legally relocate to another EU country but do not wish to return to their countries of origin, increase in numbers. This inevitably creates tension in local communities that have already experienced significant income losses (mainly from tourism) and other activities. If migration influx trends continue, even with lower arrival rates, there is a perceived danger of a strong humanitarian crisis. The humanitarian crisis would not just occur amongst migrants in those islands where people have been forced to offer hospitality, taking into account that hospitality settings are overcrowded and living conditions are dreadful, but it would also affect those migrants who live on the mainland. Financial aid from the EU does not seem to be able to cover that loss of income for the indigenous population. It also does not heal the fears of economic and cultural deterioration of these areas, where in some cases the number of refugees/migrants approaches or exceeds that of the local population.

In conclusion, the issue of integrating migrant flows is a political issue that concerns most EU countries that have not yet found how to face it adequately. Most countries have retreated from their initial commitments under the pressure of the xenophobic tendencies prevailing in many of them. Solidarity of the EU member states also falls short of expectations towards the humanitarian issue of migration and the countries that have been called upon to cope with the flow due to their geographical location. What remains unchanged is the predominant problem of migration flow management and the development of a policy of integration that will revitalize the national economy and relieve both the displaced population and the local host societies.

Annex

TABLE A Refugees and migrants in Greece per structure and hosting facility (as of 1/8/2017)

Structures & hosting facilities	Guests		Capacity
Eastern Aegean Islands	Structures	Hosting facilities*	
Lesvos	4,843	0	3,500
Chios	2130	1,369	1,100
Samos	2,562	0	850
Leros	685	125	1,000
Kos	1,830	1,072	1,000
Other islands		642	
Total islands	**11,146**	**3,208**	**8,685**
Northern Greece			
Polykastro (Nea Kavala)		418	4,200
Serres (Former KEGE)		343	600
Pieria (Iraklis Farm)		14	200
Veroia (Armatolou Kokkinou Camp)		204	400
Alexandria Imathias (G. Pelagou Camp)		274	1,200
Diavata (Anagnostopoulou Camp)		372	2,500
Derveni-Alexil (Thessaloniki)		188	850
Kordelio – Softex (Thessaloniki)		296	1,900
Sinatex-Kavalari (Thessaloniki)		114	500
Derveni-Dion AVETE		0	400
Drama (Industrial Zone)		148	550
Kavala (Perigiali)		345	270
Konitsa (Municipality)		83	200
Doliana Ioannina		66	400
Preveza – Filipiada (Petropoulaki Camp)		165	700
Lagadikia		157	
Total Northern Greece		**3,187**	**14,870**
Central Greece			
Larisa Koutsoxero (Efthimiopoulou Camp)		1,096	1,500
Volos (Magnesia Prefecture)		109	200
Trikala – Atlantik		166	360
Oinoi (Oinofyta) Voiotia		600	600
Evoia-Ritsona (A.F. Camp)		712	1,000
Thiva (Former Textile Factory Sagiroglou)		356	750
Fthiotida – Thermopylae		360	500
Total Central Greece		**3,029**	**4,910**

TABLE A (continued)

Structures & hosting facilities	Guests		Capacity
Southern Greece	**Structures**	**Hosting facilities***	
Andravida (Municipality)		146	300
Total Southern Greece		**146**	**300**
Attiki			
Eleonas		2,038	2,500
Schisto		715	2,000
Skaramagas Dock		3,101	3,200
Merchant Marine Academy (Elefsina)		261	346
Malakasa		700	1,500
Rafina		91	120
Lavrio (Hosting Area for Asylum Seekers)		373	600
Lavrio (Min. Agr. Summer Camp)		270	400
Total Attiki		**7,549**	**10,666**
UNCHR & Other NGO Accomondation Places			
Apartments		9,039	
Hotels		2,125	
Host Families		21	
Places for UASC		415	
“Ag. Eleni” Ioannina		234	508
Civil Society Organizations – NGO		8,672	2,800**
UNHCR & Other NGO Accomondation Places – Mainland		**20,506**	**17,192**
UNHCR Accomondation Places – Islands		**904**	**1,235**
Non-Oficial Structures			
Hockey Court		0	1,400
Arrivals Area		0	1,400
Baseball Court		0	1,300
Total Non-Official Structures		**0**	
Other State-Run Facilities			
Reception & Identification Centers – Mainland		235	240
Pre-Removal Centers		3,676	2,661
Self-Stated (EST.)		8,250	
Total Throughout the Greek Territory		**62,206**	
Functioning Official Structures – Nominal Capacity			**64,067**

Source: Ministry of Digital Policy, Telecommunications and Media, 1/8/2017.

Notes:
* Hosting, facilities capacity refers to UNHCR and other state-run facilities on the islands.
** Formal briefing on the final capacity of civil society organizations is pending.

TABLE B Member states' support to Emergency Relocation Mechanism (as of 31/1/2018)*

Member States		Relocations			
	Places formally pledged[1]	Relocated from Italy	Relocated from Greece	Commitment legally foreseen[2]	Remaining places from commitment
Austria	x	29	x	1,953	1,924
Belgium	1,480	444	700	3,812	2,668
Bulgaria	970	10	50	1,302	1,242
Croatia	246	22	60	968	886
Cyprus	205	47	96	320	177
Czech Republic	50	x	12	2,691	2,679
Denmark	x	x	x	N/A	N/A
Estonia	390	6	141	329	182
Finland	2,128	779	1,202	2,078	97
France	6,540	486	4,394	19,714	14,834
Germany	12,250	4,902	5,371	27,536	17,263
Greece	x	x	x	N/A	N/A
Hungary	x	x	x	1,294	1,294
Ireland	1,152	x	773	600	0
Italy	x	x	x	N/A	N/A
Latvia	563	27	294	481	160
Lithuania	970	29	355	671	287
Luxemburg	470	249	300	557	8
Malta	164	67	101	131	0

Netherlands	2,575	940	1,754	5,947	3,253
Poland	100	**x**	**x**	6,182	6,182
Portugal	2,618	326	1,192	2,951	1,433
Romania	2,102	45	683	4,180	3,452
Slovakia	60	**x**	16	902	886
Slovenia	434	72	172	567	323
Spain	2,000	205	1,124	9,323	7,994
Sweden	3,777	1,390	1,656	3,766	720
United Kingdom	N/A	**x**	**x**	N/A	N/A
Norway	1,500	816	693	N/A	0[3]
Switzerland	1,530	901	580	N/A	49[3]
Lichtenstein	10	**x**	10	N/A	0[3]
Iceland	**x**	**x**	**x**	N/A	N/A
Total	**44,284 of 160,000 25 countries**	**11,792 (out of 34,953)[4]**	**21,729 (out of 63,302)[5]**	**98,255**	**64,734 (of initial 98,255)[6]**

Sources: <https://web.archive.org/web/20180201090007/https://ec.europa.eu/home-affairs/sites/homeaffairs/files/what-we-do/policies/european-agenda-migration/press-material/docs/state_of_play_-_relocation_en.pdf> and <https://www.nds-fluerat.org/wp-content/uploads/2017/08/Member-States-Support-to-Emergency-Relocation-Mechanism-Stand-16.8.2017.pdf>.

Notes:

* Data used in Table were published on 16 August 2017 and 31 January 2018.

1. This reflects the firm commitments made by each country according to the procedure foreseen in Art 5(2) of the Council Decisions.

2. Commitment legally foreseen in the Council Decisions, which does not include the 7,745 persons still to be allocated under the First Council Decision and the 54,000 places which were made available for the purpose of legally admitting Syrians from Turkey to the EU.

3. Norway, Liechtenstein and Switzerland have established bilateral arrangements according to Article 11 of the Council Decisions and joined the relocation scheme. As part of these commitments Norway has formally pledged 1,500 places, Switzerland 1,530 and Liechtenstein 10.

4. Out of 39,600 originally foreseen to be relocated from Italy, 34,953 commitments have been legally foreseen in the Council Decisions.

5. Out of 66,400 originally foreseen to be relocated from Italy, 63,302 commitments have been legally foreseen in the Council Decisions.

6. Of the 160,000, 7,745 have yet to be allocated from the 40,000 Decision and 54,000 unallocated places from the 120,000 Decision were made available for the purpose of legally admitting Syrians from Turkey to the EU.

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