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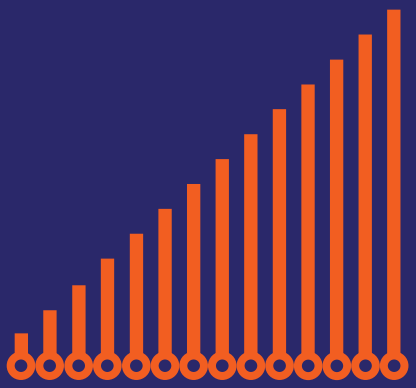
Issue 54, June 2024

GREEK ECONOMIC OUTLOOK



- Recent (macro-)economic developments
- Fiscal developments
- Human resources and social policies
- Reforms-Economic development

GREEK

Economic Outlook

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Executive Summary

The current economic situation is dominated by the challenges of the ***international environment***, which is characterised by low growth performance and increased geopolitical risks (see section 1.5). International agencies' assessments of the global economy are more favourable today than at the beginning of the year. The risks of a sharp fall in US growth due to restrictive monetary policy have diminished, while most major economies have managed to reduce inflation without causing a recession and rising unemployment. Global economic activity has shown resilience despite restrictive economic policies. High-frequency economic indicators point to an improvement in global economic sentiment, while the improved performance of international trade and sustained consumer spending in developed economies are encouraging. However, forecasts for global GDP in 2024 remain modest, expecting growth rates like 2023 (3.1% to 3.2%), affected by high borrowing costs, the withdrawal of supportive fiscal measures, low productivity growth and the economic impact of geopolitical fragmentation.

Data on the ***European economy*** (see section 1.5) show that most European Union (EU) countries are still experiencing weak or negative growth rates. This is due to the increased cost of living, high interest rates, burdened production costs, lack of impetus from international demand and the reimposition of fiscal rules. Despite the challenging conditions, forecasts for 2024 suggest that economic conditions in the EU will improve, although the recovery will be limited due to ongoing pressures in major industrial economies such as Germany. After the European elections, the EU must get to grips with the huge challenges it faces. Exactly how it responds is of crucial importance for the Greek economy as well. One thing is for sure, the EU should focus on strengthening its economic structures while promoting recovery and sustainability. This includes adopting new economic policies, strengthening trade, and investing in sustainable technologies. Only in this way will it be able to catch up with the US in terms of growth momentum, digital transformation, productivity and competitiveness. Regarding economic policy, from the beginning of the new year, new fiscal rules will apply with restrictions on public spending growth and mandatory debt reduction. *These rules will formulate a fiscal framework of mild austerity*. To the extent that the Greek economy is growing at a fast pace, above 2%, it has nothing to fear. But if growth rates fall, the effort will become more difficult. On the trade front, the EU will in the coming period face an invasion of cheap imports from China, particularly of green goods such as electric cars. In fact, the Chinese have set a target of moving a third of the world's market for electric cars by 2030. If that happens, German and French carmakers will face huge competition and will push their leaders for protectionism. But protectionism is not a good solution. It will lead to a loss of prosperity and low growth rates. Finally, the EU needs more investment to finance the strategic plans for the green (and expensive) transition. Greece also needs to fill its investment gap. Essentially, this means that it will have to step up the implementation of reforms of the state (e.g., Public Enterprises), the judiciary and institutions.

The ***Greek economy*** is maintaining a steady pace of growth, but the impact of international conditions is becoming increasingly evident, particularly on investment and external sector performance (see section 1.3). According to the latest data, for the last quarter of 2023 and the first quarter of 2024, the Greek economy posted growth rates above the EU average but below broader expectations. Specifically, GDP growth fell to 1.3% in the last quarter of 2023 and rose to 2.1% in the first quarter of 2024. Growth was mainly driven by private consumption, which was boosted by rising incomes, despite pressures from rising prices. *For 2024, we estimate a growth rate of 1.9%.* This estimate is slightly lower than our previous forecast (2.2%), given that growth rates have been lower than previous estimates, but without significantly affecting the overall performance of the economy.[1]

The year started positively for the ***Greek stock market***, with increased market capitalisation and trading value in the first quarter (see section 1.4). The government and the corporate bond market saw increased investor interest, highlighting the role of corporate bonds as an alternative source of financing for companies. The positive impact of the recovery of the investment grade rating for Greece was reflected in the markets' performance in anticipation of the ECB's monetary pol-

1. However, it is below the estimated growth rate of 2.9% (state budget) and 2.5% (medium-term programme).

icy easing. Despite the positive outlook, markets will be affected by geopolitical developments and inflation, while the goal remains an upgrade by US-based Moody's and the return of the Athens Stock Exchange to developed markets.

The recent news on ***inflation*** is very positive (see section 1.2): inflation fell from 3.2% in April to 2.4% in May. This was expected given that prices have already risen very high. Inflation was triggered in the euro area (and in Greece) by several factors: increased demand for consumption after COVID-19, reduced supply due to disruptions in the supply chain or due to the climate crisis, increased energy prices due to the Ukraine crisis as well as due to the European zero-emission transition policy. Many of these factors have lost their initial strength and, consequently, the speed of price increases has started to fall. However, they are not expected to become zero or negative, because some will continue to exist, such as the climate crisis, which will create extreme weather events with floods, fires and destruction of agricultural products. So will energy. Until we go fully renewable, we will pay more for gas (e.g., compared to lignite). Geopolitical instability in the region has the same effect: it forces us to spend a lot on defence shielding. But this boosts demand, hence prices. In other words, the weakening of inflation is to be expected. But the big thing is to hit the level of the inflation, i.e., to have a fall in prices. In this regard, there is also an overriding question: Why are the prices of many consumer goods and services in Greece higher than in other eurozone member states? For example, supermarket goods, milk, telecommunications, banking services, transport, etc. Obviously, there are also domestic structural factors that keep prices high and do not allow them to fall. Two main consequences of the economic crisis have been (a) the closure of many companies, or their merger with others and the increase in concentration (e.g., in banks, supermarkets, private health care, etc.) and (b) the increase in indirect taxation (excise duties, VAT, fees, etc.). Regarding the first, the concentration of an industry in the hands of a very small number of companies, i.e., the creation of oligopolies, is not a positive development for consumers. Oligopolies are characterized by limited competition, barriers to entry, price rigidity, asymmetric information and 'strategic' behavior by their members to maintain higher prices and profits (greed inflation). Regarding the latter, the tax systems of the euro area countries are based more on direct taxation and less on indirect taxation. In our country, the opposite is the case. *In other words, our tax system has the characteristics of a third world country that is unable to tax fairly based on the taxpaying capacity of individuals*. Consequently, effective measures to tackle inflation in Greece are those that strengthen the functioning of competition. *Enhancing competition and promoting healthy entrepreneurship should be targeted sector by sector,* as the problems are different, e.g., the agricultural sector, manufacturing sector, services, etc. In addition, *at* KEPE, *we believe that we need to look again at the structure and level of indirect taxation,* particularly when the state has been constantly exceeding the primary surplus targets throughout the recent period. There are two issues that must be given particular attention in the case of a reform or reduction of indirect taxation (VAT, excise duties): (a) that it is passed on to consumers and not reaped by businesses and (b) that the fiscal balance is not risked. To ensure that the tax reduction is passed on to consumers, strong control mechanisms are needed. So, we must first strengthen the Competition Commission and then proceed with the reduction. As for fiscal balance, this could be ensured if, at the same time as reducing taxes, we were to reduce non-wage expenditure. We could, for example, review from scratch the usefulness of all public enterprises and organizations and merge or abolish those that are underperforming or not providing sufficiently high quality services to citizens, with a view to reducing public expenditure.

KEPE also monitors, with concern, the evolution of *the* ***current account*** (see section 4.2), which shows continuous and strong deficits, mainly due to the negative balance of goods (excluding fuel and ships). This is a structural problem of the Greek economy. The services balance remains positive, improving the current account balance, but it is not enough. This picture *is reminiscent of the period before the deep recession, as imports of goods excluding fuel and ships are at pre-crisis levels.* However, the fact is that from 2019 to date, exports have increased significantly. In 2023, their share of GDP reached 44.9%. These figures show that we have indeed come a long way in the direction of extroversion of the Greek economy. Undoubtedly, the export picture today is much better even than before the economic crisis. In 2008, Greece's total exports of goods amounted to €17.4 billion and imports to €60.7 billion, with the result that the trade deficit has risen to €43.4 billion. During the economic crisis, the deficit narrowed significantly with low domestic demand playing a key role. Imports decreased, but also several Greek companies, precisely because of the reduced consumption within Greece, sought and found an outlet for their products abroad. In 2015, the year capital controls were imposed, exports totalled €25.50 billion, while imports had fallen to €42.60 billion, with the trade deficit that year standing at €17.10 billion. Behind this positive development, however, there is a "thorn": the mix of Greek exports has not changed towards higher value-added products. According to a

study we carried out at KEPE, from 2008 to 2023, the total value of goods exports almost tripled (+193%), as it increased from €17.4 billion to €50.9 billion (this figure includes exports of petroleum products). However, the export mix remained "poor" over time: cumulatively, the growth of agri-food exports was on the order of 170%. Their value reached €10.85 billion in 2023, and this figure includes the huge increase in international olive oil prices. Looking at the exports of the other goods, i.e., excluding oil products and agri-food, we see that they have decreased by 4.2%. *According to World Bank data, we rank last in terms of exports per capita among European countries with a similar or even smaller population than ours (e.g., Portugal, Sweden, Czech Republic, Austria, Switzerland, Hungary, Austria) and Israel.* Also, countries that went through a similar economic crisis to Greece (e.g., Portugal) have increased their exports to a much greater extent than the Greek economy has done (see section 4.1).

To further increase Greek exports in the direction of high value-added products, it is necessary to adopt strategies that will further enhance the competitiveness and innovation of the Greek economy. First, increasing investment in research and development (R&D) is crucial for the creation of innovative products. This can be achieved through incentives for firms to invest in R&D and through partnerships between universities and industry. At the same time, improving the skills of human resources is fundamental. Training programmes and upgrading of studies in technological and scientific fields can boost productivity. Support for small and medium-sized enterprises (SMEs) is also a crucial factor. By providing incentives and support for their development, such as access to finance and international markets, SMEs can play an important role in the country's export effort. In addition, improving infrastructure, such as transport, telecommunications and energy, is key to supporting the production process and product distribution. Furthermore, expanding international partnerships and promoting the image of Greek products in international markets through marketing strategies is crucial. The shift towards sustainable production and green growth can add value to Greek products, making them more attractive. Finally, reducing bureaucracy and providing tax incentives can make it easier for businesses to develop and export high value-added products.

The ***Greek labour market*** faces challenges, with earnings remaining below the EU27 average (see sections 3.1 and 3.2). Against this background it is important to make five observations on net wages and salaries of households:

- Earnings differ between different types of households.
- Earnings in Greece have increased over the last ten years (2013-2023) at about the same rate for all types of households.
- Despite the increase in pay, the comparison with pre-crisis pay, i.e., in 2009, is both revealing and disheartening.
- In Greece, earnings are below the EU27 average for all household types at both time points (2013 and 2023). In fact, the difference is not the same between household types.
- In recent years, despite the improvement in labour market conditions and the accompanying increase in earnings, because earnings growth has been below the European average, the pay gap between Greece and the EU27 has widened.

While during the crisis in Greece unemployment rose sharply, even exceeding the level of 25%, many people who kept their jobs faced low pay or long stagnation in their earnings and gradually became the ***working poor***. According to Eurostat, the working poor are defined as the proportion of the population who, although working (either in paid employment or self-employment), have an individual disposable income below the poverty line. Thus, the measure is an indication of whether the work offered in an economy is not a sufficient factor to escape from income poverty. The existence of the working poor is not limited to wages alone. There are other factors such as household characteristics, the functioning of institutions, and gender discrimination, the combination of which affect the level of income. For example, regarding household characteristics, a part-time worker living in a high-income household escapes poverty, as opposed to a part-time worker living in a low-income household. At KEPE, we followed two different approaches to measuring working poverty. The first approach, following the official measure of relative poverty, looks at the proportion of people who, although working, have a disposable income below 60 per cent of the median income. According to this indicator, from 2009 to 2015, the working poor ranged between 14% and 15%. Since then, the percentage has decreased, ending up at less than 10% in 2022. In other words, according to this approach, less than 1 in 10 workers are estimated to live below the poverty line. The alternative measure of poverty (fixed poverty line index) shows the proportion of the working poor whose disposable income is less than that of 2009. The main reason for the need for this differentiation is that since the poverty threshold is linked to the respective median income, in periods of significant income contraction, the poverty threshold decreases equally significantly, underestimating the level of income poverty. Therefore, according to the results of the alter-

native definition, in 2015, about 40% of workers of all categories were living with a disposable income below the 2009 poverty threshold, while by 2022, the impact of the long recession of the Greek economy on workers' incomes had not returned to pre-crisis levels. There is no doubt that, compared to the EU27 countries, Greece has gone through a long period of cuts and stagnation in wages. The new jobs created correspond to lower wages and relatively longer working hours. As a result, *by 2022, 23.1% of workers (around 1 in 4) are estimated to live with a disposable income below the 2009 poverty threshold*. The phenomenon of the working poor should be at the heart of the country's development agenda. Increasing employment through the creation of well-paid, quality jobs is a factor in improving living conditions in our country.

Professor PANAGIOTIS LIARGOVAS
Chairman of the Board and Scientific Director,
Centre of Planning and Economic Research (KEPE)

1. Recent (macro-)economic developments

KEPE, *Greek Economic Outlook,* issue 54, 2024, pp. 7-14

1.1. The evolution of aggregate demand components in a period of economic regularity

1.1.1. Introduction - Domestic & foreign demand for 2023

Yannis Panagopoulos

This section records the macroeconomic trends of aggregate demand until the end of 2023 as well as the economic sentiments until April 2024. By extension, the analysis of the data depicted here refers to the previous year (2023) where the increased effects of the energy prices, but not necessarily the inflationary problem, have been gradually incorporated.

Based on the annual data of ELSTAT's *National Accounts,* as they appear in Table 1.1.1, for 2023, we observe a positive but smaller change of the growth rate of the economy, compared to 2022. More specifically, in contrast to the high growth of 2022 (5.37%), in 2023 we have a smaller growth of 1.95%. We could even briefly point out here that all the individual macroeconomic factors for this growth rate in 2023 were relatively lower than the corresponding factors of 2022. The largest increase was recorded by the fixed capital investment (3.89%), followed by the country's total exports (2.81%). Private and public consumption increased almost identically (with 1.56% and 1.55%, respectively).

For the existing components of domestic demand, which are also recorded in Diagram 1.1.1a, the positive contribution of both private and public consumption is demonstrated with 1.28 and 0.54, respectively. Negative for the first time, at least since 2021, was the contribution of gross fixed capital formation (-0.85). In conclusion, as presented in Table 1.1.1 and Diagram 1.1.1a, the overall contribution of domestic demand is rated, for 2023, positively as a factor of GDP growth (1.91).

As regards the share of both domestic and external sector demand (i.e., domestic demand and the balance of goods and services) in the GDP growth, for 2023, the numbers were positive for all components (Diagram 1.1.1.b). Moreover, in the last quarter of 2023, the contribution of domestic demand, the balance of trade and the change in inventories to GDP growth were 1.91, 0.93 and 0.47, respectively.

The Economic Sentiment Index (ESI), as the future "proxy" of the aggregate demand, regarding the expectations of households and businesses, for the period 1/2023-4/2024, are recorded in Diagram 1.1.2. Additionally, if we detract February 2024, where we had a sharp decline in the ESI to 104.9 points, from October 2023 onwards we have a continuous rise in this Index, reaching 108.5 points in April 2024. In conclusion, household and business expectations seem to be in positive territory from the beginning of 2024.

Below, a more detailed discussion on the contribution of the country's balance of trade to GDP for the entire 2023 and for the last quarter of 2023 is presented.

Balance of trade (goods and services)

As far as the contribution of the balance of goods and services (trade) is concerned, we should mention that it stood at 0.47 points as a percentage of the GDP growth rate for the entire year 2023, in contrast to -0.95 points for 2022 (Table 1.1.1). Additionally, in the same table, we observe the increase of total exports in 2023 by 2.81%, in contrast to the relatively smaller increase in total Imports in the same year (1.36%). In more detail, we will refer to the rate of change of goods and separately to the rate of change of services, in both sections (exports and imports). Starting from exports, it should be noted that as far as services are concerned, which constitute the relatively smaller part of exports, they showed an annual increase of 4.03%, while goods, which are usually the largest part of exports, showed a smaller average annual increase of 1.67%. On the import side, services had an average annual increase of 2.94% while goods had a smaller average annual increase of 0.87%.

Regarding the results from the last quarter of 2023 (Diagram 1.1.3), we observed the clear positive contribution of exports to GDP, estimated at 0.78 points; on the other hand, the negative contribution of imports to GDP was at -0.01 points. Therefore, as we have already mentioned, the net result for 2023Q4 was positive (0.77 points).

TABLE 1.1.1 Key macroeconomic factors

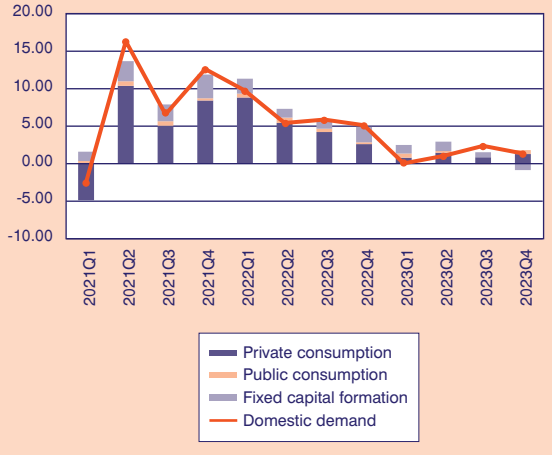
(non-seasonally adjusted)

	Million euro (current prices)	Annual (%) (constant prices)	
	2023	2022	2023
Private consumption	150,788	7.55	1.56
Public consumption	43,436	2.29	1.55
Fixed capital formation	30,618	11.65	3.89
*Domestic demand**	224,842	6.97	1.87
Exports of goods and services	98,846	6.25	2.81
Exports of goods	49,868	3.58	1.67
Exports of services	48,979	9.28	4.03
Imports of goods and services	109,686	7.70	1.36
Imports of goods	82,564	8.55	0.87
Imports of services	27,122	3.33	2.94
Balance of goods & services (% GDP)	-4.92		
GDP	220,141	5.37	1.95
Contribution to the GDP			
*Domestic demand**		6.80	1.91
Balance of goods & services		-0.95	0.47
Change of inventories		-0.08	0.93

Source: National Accounts, ELSTAT, data processing by the author.

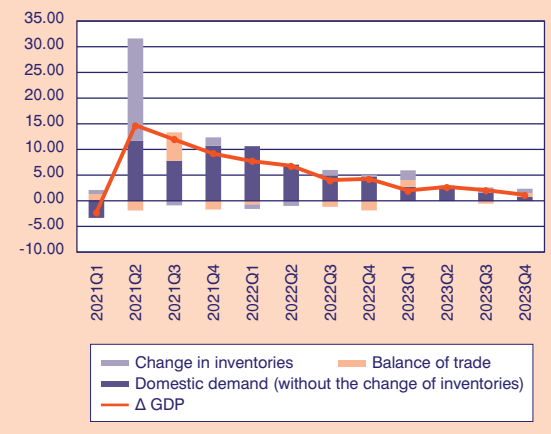
* Without change in Inventories.

DIAGRAM 1.1.1a
Components of domestic demand



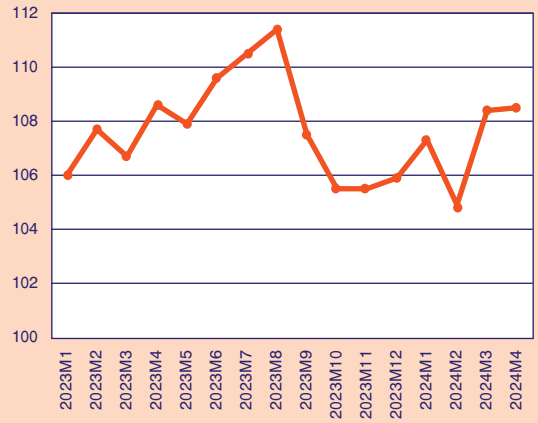
Source: National Accounts, ELSTAT, data processing by the author.

DIAGRAM 1.1.1b
Domestic and net external demand (components)



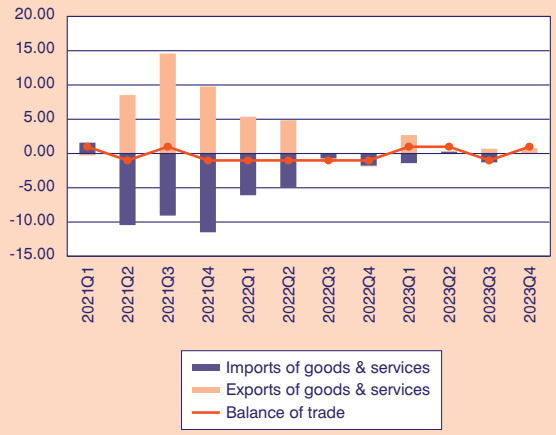
Source: National Accounts, ELSTAT, data processing by the author.

DIAGRAM 1.1.2
Economic Sentiment Index (2023/1-2024/4)



Source: Eurostat.

DIAGRAM 1.1.3
Components of external demand



Source: National Accounts, ELSTAT, data processing by author.

1.1.2. Private consumption and investment

Konstantinos Loizos

1.1.2.1. Private consumption

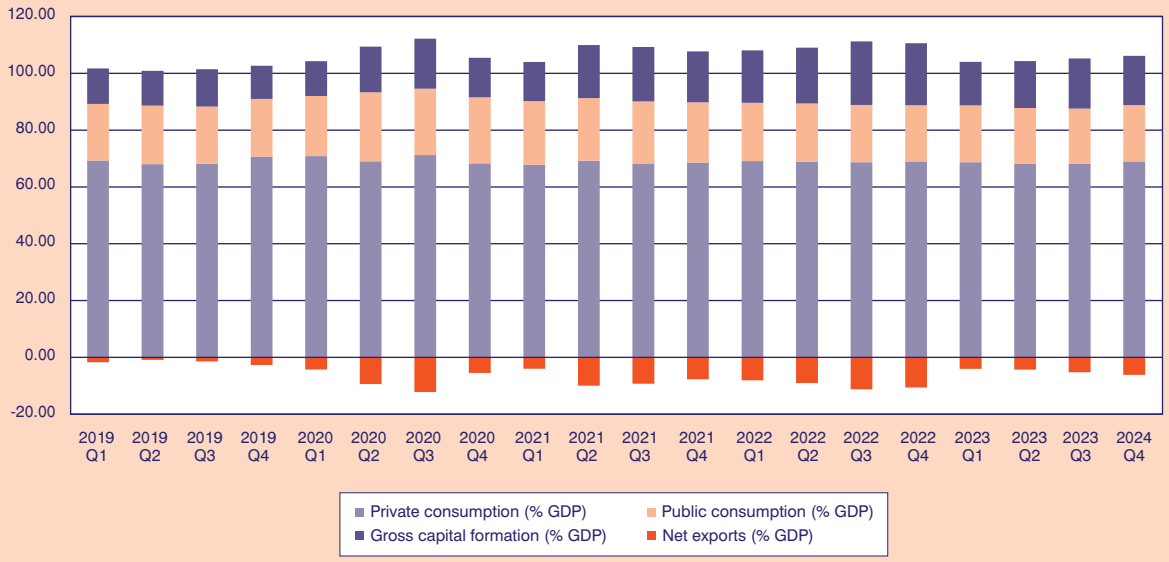
Private consumption expenditure fluctuated without being significantly affected in 2023

According to the quarterly seasonally adjusted *National Accounts*,[1] the private consumption of households and NPISH[2] increased from 37,012 million euros in current prices in the first quarter of 2023 to 37,618 million euros in the second quarter, 37,768 million euros in the third quarter and 38,390 million euros in the last quarter of the year. In contrast, in terms of chain-linked volumes with 2015 as the reference year, private consumption increased from 33,856 million euros in the first quarter to 34,125 million euros in the second quarter of 2023, but it was reduced to 33,936 million euros in the third quarter of that year before rising again to 34,407 million euros in the fourth quarter. In terms of percentage changes[3] with respect to the preceding quarter, based on seasonally adjusted chain-linked volumes, private consumption showed positive and rising rates in the first two quarters, namely 0.2% in the first quarter of 2023 and 0.8% in the second quarter, but a negative rate of change (-0.6%) in the third quarter before achieving a new positive rate of change (1.4%) in the fourth quarter. The relevant rates with respect to the corresponding quarter of the previous year were 1.1%, 2.1%, 1.2% and 1.8%, showing also in this case fluctuations.

Private consumption as a percentage of GDP was 68.50% on average during 2023, which was slightly lower than its average in 2022 (68.91%), while public consumption was 19.73% of the total expenditure (20.24% of GDP in 2022). Moreover, gross capital formation (fixed capital and changes in inventories) was on average in 2023 16.69% of GDP, lower than its average in 2022 (20.58% of GDP), while the deficit in the balance of trade was halved on average as a percentage of GDP from -9.73% on average in 2022 to -4.92% of GDP in 2023. Given this data, private consumption expenditure during 2023 showed a rising trend in current prices, but in terms of chain-linked volumes, it fluctuated, while its share in GDP reduced on average in 2023 with respect to its average in 2022. Moreover, in terms of percentage share in GDP, the fall of public consumption and gross investment between 2022 and 2023 was counterbalanced by the significant reduction of the trade deficit as a percentage of GDP in 2023 in

1. *Quarterly National Accounts,* Press release, ELSTAT, March 7, 2024.
2. Non-profit institutions serving households.
3. Percentage changes are calculated using the formula $\frac{X_t - X_{t-1}}{X_{t-1}}$.

FIGURE 1.1.4
Evolution of private consumption and other components of demand as a percentage of GDP
(expenditure approach) (seasonally adjusted data in current prices)



Source: ELSTAT, data processing by the author.

comparison to 2022 (Figure 1.1.4). The decrease in the trade deficit as a percentage of GDP is characterized as a positive development, but it reflects a corresponding fall mainly in investment and public consumption and less in the percentage share of consumption expenditure in GDP, hence, it does not alter the composition of GDP in the direction of a higher productive capacity of the economy.

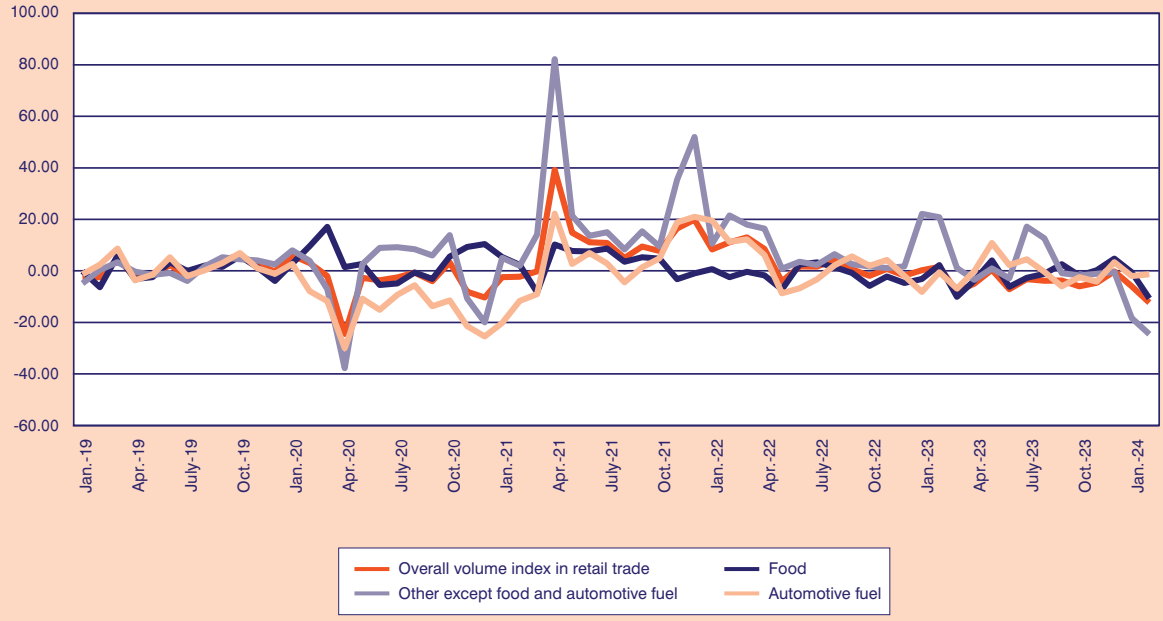
Retail trade showed negative average percentage change

The evolution of retail trade in terms of percentage changes in the overall volume index was negative on average in the first two months of 2024 (-9.19%) with respect to the corresponding months of the previous year, based on ELSTAT monthly data as depicted in Figure 1.1.5. In addition, the average percentage changes in the overall volume index during 2023 were negative (-3.28%), in contrast with the positive average percentage changes in 2022 (3.53%). In food items, we observe the same developments during the first two months of 2024 (the average percentage change is -5.59%) and the year 2023 (average percentage change -1.23%), but in this case, the average percentage change in 2022 was also negative (-1.43%). Developments in automotive fuel reinforce the trend in the overall volume index since the relevant index shows a negative average percentage change during the first two months of 2024 (-1.65%), a negative value in 2023 as well (-0.63%) but a positive percentage change in the year before that (3.56%). Finally, in the case of other items except automotive fuel, positive percentage changes of the relevant index in 2022 (7.23%) and in 2023 (5.36%) were followed by a high negative average percentage change in the first two months of 2024 (-21.45%). Therefore, the overall outlook is not encouraging for retail trade in the first two months of 2024, with negative percentage changes in all indices, while it remained at negative levels on average percentage changes in all indices except for the category of other items except automotive fuel and during the whole year 2023.

Vague fluctuations in retail trade expectations

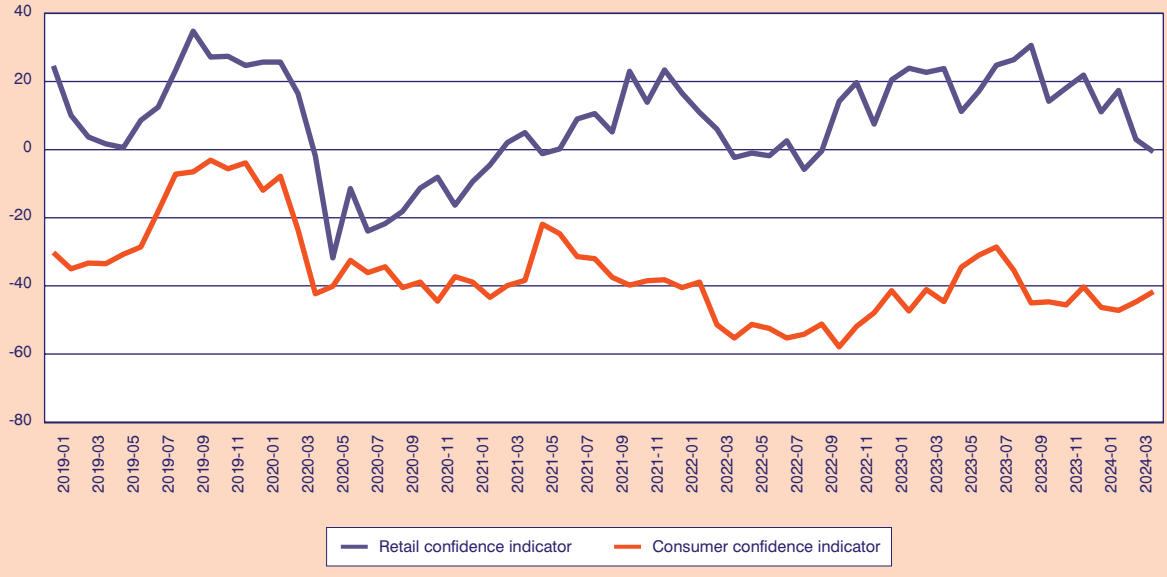
Considering the confidence indicators which are published by Eurostat and depicted in Figure 1.1.6, we observe fluctuations in both indices of expectations during the last two years and the first four months of 2024. However, the picture was much clearer in 2022 when the retail confidence indicator showed a downward trend in ten out of twelve months during that year, with an average rate of change of -3.80%. During the

FIGURE 1.1.5
Percentage changes in the seasonally adjusted overall volume index and the main sector indices in retail trade



Source: ELSTAT, data processing by the author.

FIGURE 1.1.6
Confidence indicators in retail trade



Source: Eurostat, data processing by the author.

same year, the consumer confidence indicator showed a falling trend in half of the months of the year, with an average percentage change very close to zero (0.02%). On the contrary, in 2023 the retail confidence indicator reduced only in three months out of twelve, and hence, it showed a positive average percentage change of 0.21%, while the consumer confidence indicator decreased in seven out of the twelve months of the year with zero average annual percentage change. Finally, in the first four months of 2024, the retail confidence indicator demonstrated a downward trend in three out of these four months, with an average rate of -0.49%, and the consumer confidence indicator fell in just two months, showing an almost zero average percentage rate (0.01%). In conclusion, the uncertainty surrounding the developments in retail trade is confirmed by the vague fluctuation of the relevant indices. The positive side of this evidence is that we do not observe a consistent falling trend while the negative side is that the rising trend that was true at least in the case of the retail confidence indicator in 2020 and 2021 does not seem to continue during the next few months.

1.1.2.2. Investment

Negative developments in gross investment for 2023

Gross fixed capital formation rose from 7,440 million in the first quarter of 2023 in current prices to 7,560 million euros in the second quarter and to 7,989 million euros in the third quarter, but fell to 7,628 million euros in the fourth quarter of the year. On the contrary, in terms of chain-linked volumes, gross fixed capital formation demonstrated a continuous fall from 7,113 million euros in the first quarter of 2023 to 7,072 million euros in the second quarter, 6,921 million euros in the third quarter and 6,740 million euros in the last quarter of 2023. In terms of percentage changes with respect to the corresponding quarter of the preceding year, we initially observe a rising trend with percentage changes of gross investment of 8.2% in the first quarter and 9.2% in the second quarter; in the third quarter, there is a deceleration of the upward trend with a reduced positive rate of change of 4.8% and, finally, in the fourth quarter, this trend is reversed with a negative rate of -5.7%. However, concerning the rates of change with respect to the previous quarter, the trend is definitely negative in all quarters of 2023 with increasing intensity since the relevant percentage changes are of the magnitude of -0.5% in the first, -0.6% in the second, -2.1% in the third and -2.6% in the fourth quarter of 2023, according to the seasonally adjusted chain-linked volumes.

Gross fixed capital formation as a percentage of GDP (Figure 1.1.7) demonstrated a falling trend on average in 2023, with a rate of change of -1.74% contrasting the positive average rate of change in 2022 (2.41%). The same holds for the two main components of gross investment. Machinery and transport equipment showed a positive average annual rate of change as a percentage of GDP of 0.77% in 2022 but a negative one of -3.15% in 2023. Buildings (both dwellings and other buildings and structures) as a percentage of GDP showed a positive average rate of change of 7.11% in 2022 but a negative average rate of change -0.35% in 2023. The fall of the share of gross investment in GDP in 2023, which we have also noted above in our analysis, along with its continuous decrease in terms of chain-linked volumes, is not a favorable development for the Greek economy since it shrinks its productive capacity and the accumulation of capital. This observation is valid especially in the case of machinery and transport equipment, where the average percentage reduction is the most significant.

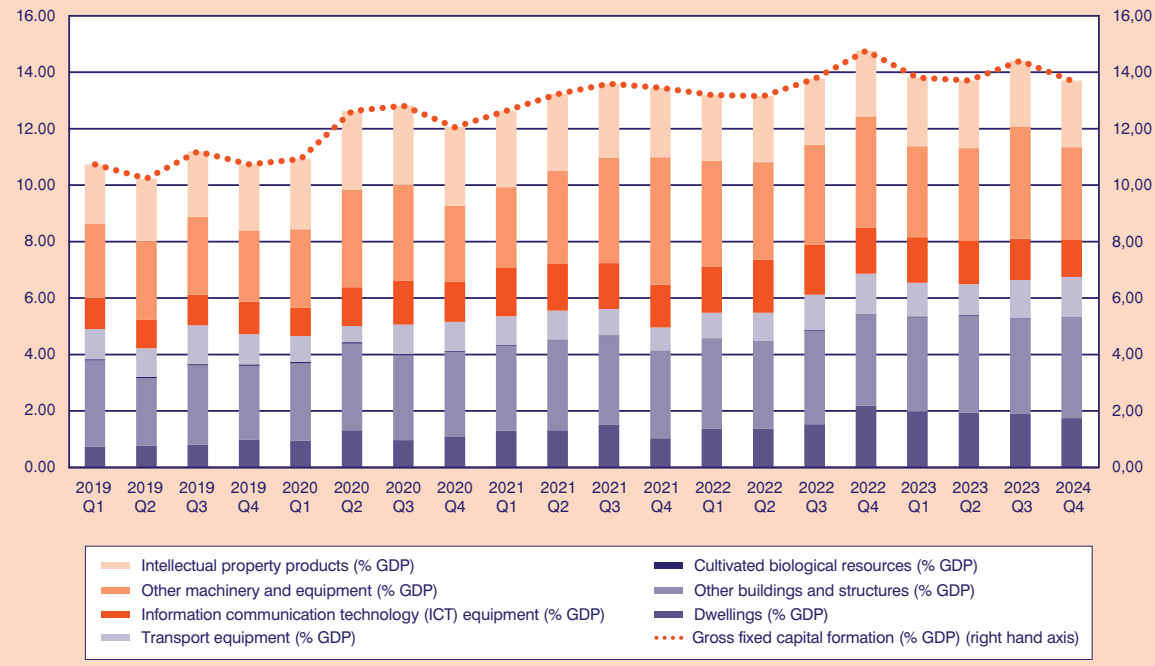
The share of machinery and transport equipment in gross investment remains higher than that of buildings

According to Figure 1.1.8, the share of buildings in gross investment was lower than the one of machinery and transport equipment during 2023, despite fluctuations. However, on average, the share of buildings in gross investment increased from 35.05% in 2022 to 38.27% in 2023, and correspondingly, the share of machinery and transport equipment fell from 47.75% in 2022 to 44.46% in 2023. It remains to be seen if this rising trend in buildings, which is present in the data as early as from 2022, will continue in the future and what the implications will be in the medium-term for income and expenditure in the Greek economy.

Cautious optimism in the construction sector

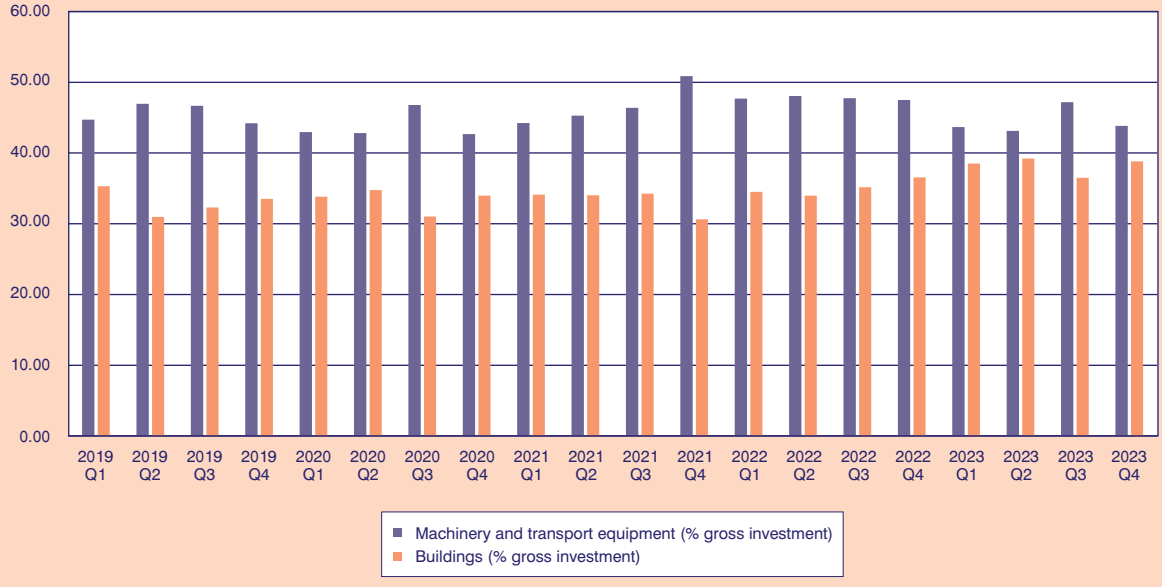
Optimism regarding business expectations in the construction sector seems to continue its course in 2023 despite fluctuation but it turns into a rather cautious optimism in the first four months of 2024. Indeed, the relevant confidence indicator showed a falling trend only in four out of the twelve months of 2023, as opposed to eight months in 2022. However, the average rate of change of the construction confidence indicator was lower in 2023 (0.21%) in comparison with 2022 (1.15%). On the other hand, for half the period in the first four months of 2024, this indicator demonstrated a falling trend, and its average rate of change for the

FIGURE 1.1.7
Gross fixed capital formation as a percentage of GDP (overall and by asset)
(seasonally adjusted data in current prices)



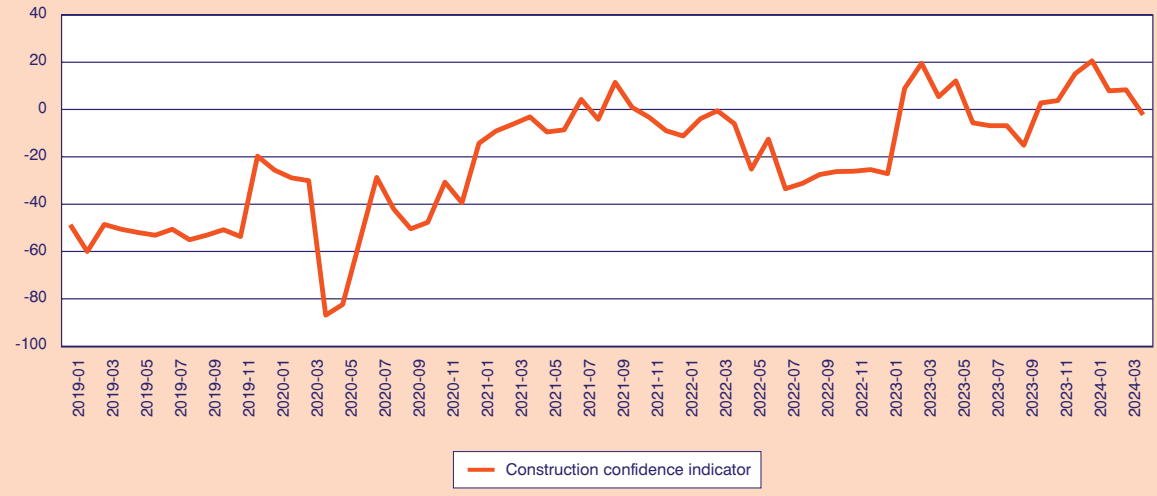
Source: ELSTAT, data processing by the author.

FIGURE 1.1.8
Machinery and transport equipment and buildings as a percentage of gross fixed capital formation



Source: ELSTAT, data processing by the author.

FIGURE 1.1.9
Construction confidence indicator



Source: Eurostat, data processing by the author.

whole period was negative and equal to -0.37%. This evidence justifies a characterization of the economic climate in this sector as one of cautious optimism without being able to clarify the landscape of expectations.

1.1.2.3. Conclusions

The above analysis foreshadows a rather negative framework of developments in the Greek economy, taking into account the data of 2023 and the first four months of 2024. Private consumption was not affected significantly by these developments, but this is not the case for the other components of expenditure and especially for investment. Most notably, this is not the case for gross investment, which is associated with the degree of maintenance of the existing capital in the economy. Moreover, the developments in the first four months of 2024 were negative in all components of retail trade, as opposed to 2023. On the other hand, within investment, buildings continue to expand their share at the expense of machinery and transport equipment. Moreover, expectations both in retail trade and in constructions are not able to provide a clear indicator of future trends in the relevant expenditure variables. It is true that the year 2023 included successive elections in May and June, which had an impact on expectations and expenditure. However, it is also true that the developments in the second half of 2023 were not sufficient to improve the average annual value of each expenditure and expectation variable we have examined, while the evidence from the first four months of 2024 are, on average, in a negative direction both in retail trade and in expectations in both the retail and the construction sector. Even the positive side of this period concerning the reduction in the external trade deficit seems to have affected private consumption expenditure to a lesser degree than public consumption and especially gross investment as a percentage of GDP.

1.2. Inflation in May slowed to 2.4%: Food inflation declined to 3.1%, although it remains the most significant contributor to the overall index

Emilia Marsellou

Introduction

The national Consumer Price Index (CPI) in Greece in May 2024 grew at a rate of 2.4%, well below the 3.1% growth rate in April 2024. The core CPI also rose by 2.7%, a lower rate than the 2.9% in April 2024. The biggest impact on the formation of inflation in May 2024 was the group of Food and non-alcoholic beverages with 0.69 percentage points, Hotels-Cafés-Restaurants and Transport each with 0.55 p.p., Clothing and footwear with 0.33 p.p. and Health with a contribution of 0.17 p.p.

On the other hand, in the euro area, based on Eurostat's flash estimates, inflation stood at 2.6%, a level slightly higher than the 2.4% in both April and March 2024. Core inflation also strengthened slightly to 2.9% compared to 2.7% in April. The highest rate of price increase is expected to be recorded by Services (4.1%) and the Food, alcohol and tobacco group (2.6%), followed by Non-energy industrial goods (0.8%) and the Energy group (0.3%).

1.2.1. Greece

Based on monthly data, the National CPI in May 2024 recorded an annual increase of 2.4% compared to 3.1% in April 2024. The Core CPI growth rate was slightly lower at 2.7% compared to 2.9% in April 2024. On a monthly basis, the National CPI decreased by -0.3% in May 2024 against an increase of 0.5% in April 2024. The evolution of the Harmonized CPI is similar. Specifically, in May 2024, HICP inflation stood at 2.3% and the corresponding core inflation at 2.7%.

Inflation in May was mainly fueled by increases in the prices of the Food and non-alcoholic beverages group with a contribution of 0.69 percentage points, followed by the Hotels-Cafés-Restaurants group and Transport, each with a contribution of 0.55 p.p., the Clothing and Footwear group with 0.33 p.p. and the Health group with a contribution of 0.17 p.p. On the contrary, the Housing services group had the largest negative contribution to the formation of inflation with -0.19 p.p. This negative contribution is due to the significant reduction in the Energy group prices (electricity and natural gas) and the reduction in municipal fees, which was partially offset by the increase recorded in the rentals for dwellings.

More specifically, the annual increase of the National CPI in May 2024 by 2.4% is a combined result of the following changes in the price indices of sub-groups of goods and services. More specifically, increases were recorded by:

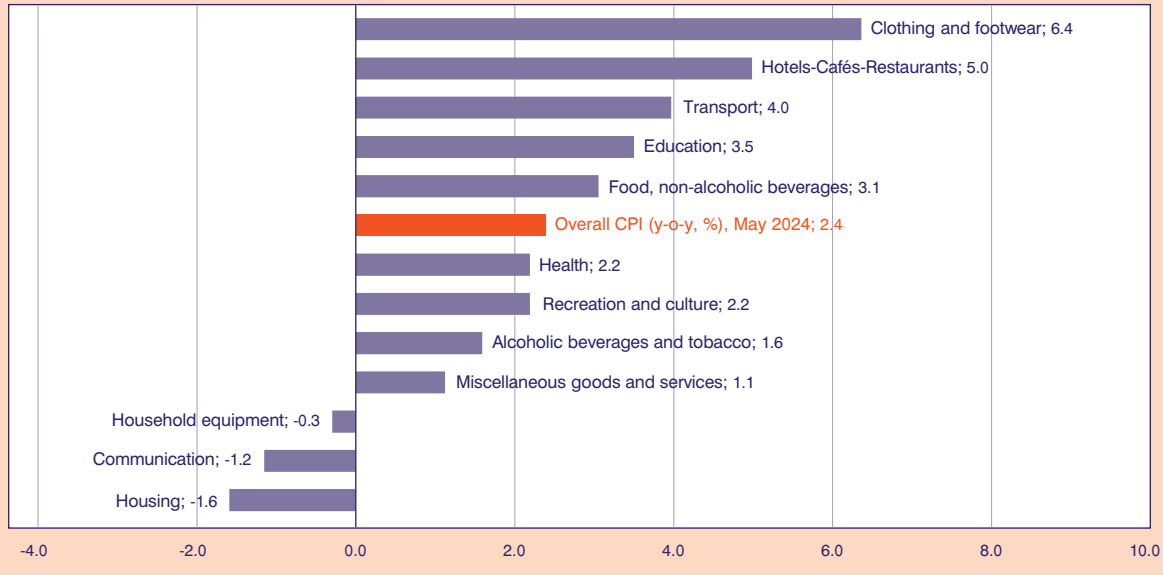
- 3.1% in the group Food and non-alcoholic beverages. This increase is mainly due to the rise in the prices of meat (1.9%), fresh fish (12.5%), olive oil (56.8%), fruit (1.7%), vegetables (1.2%), sugar-chocolates-sweets-ice creams (2.3%), mineral water-soft drinks-fruit juices (7.7%). This increase was partially offset by the drop in the prices mainly in bread and cereals (-0.9%), dairy and eggs (-1.9%), and other edible oils (-14.8).
- 1.6% in the Alcoholic beverages and tobacco group. This increase is mainly due to the rise in the prices of non-served alcoholic beverages (+3.5%).
- 6.4% in the group Clothing and footwear. This increase is mainly due to the rise in prices of clothing and footwear.
- 2.2% in the group Health. This increase is mainly due to the rise in prices of pharmaceutical products (1.3%), medical-dental and paramedical services (2.3%), and hospital care (3.4%).
- 4.0% in the group Transport. This increase is mainly due to the rise in prices of new motor cars (1.2%), second-hand motor cars (0.7%), spare parts and accessories for motor cars (3.1%), fuels and lubricants (5.3%), maintenance and repair of motor cars-motor cycles (4.1%) and tickets for passenger transport by air (7.7%).
- 2.2% in the group Recreation and culture. This increase is mainly due to price increases in information processing equipment (5.6%), small recreational items-flowers-pets (2.2%), cinemas-theatres (5.0%), newspapers, books and stationery (2.1%), and holiday packages (10.9%).

TABLE 1.2.1 Inflation in Greece (%)

	National CPI	CPI (m-o-m, %)	Headline inflation CPI (y-o-y, %)	Core inflation (y-o-y, %)	Harmonized inflation (y-o-y, %)	Core HICP (y-o-y, %)
2023M05	114.9	0.4	2.8	6.7	4.1	7.3
2023M06	115.6	0.6	1.8	4.9	2.8	4.8
2023M07	114.3	-1.1	2.5	5.4	3.5	5.4
2023M08	114.3	0.0	2.7	5.3	3.5	5.4
2023M09	116.3	1.8	1.6	3.9	2.4	4.2
2023M10	117.0	0.6	3.4	3.5	3.8	3.6
2023M11	116.6	-0.4	3.0	3.3	2.9	2.8
2023M12	116.5	-0.1	3.5	3.1	3.7	3.3
2024M01	115.5	-0.8	3.1	3.2	3.2	3.1
2024M02	115.6	0.1	2.9	2.7	3.1	3.0
2024M03	117.4	1.5	3.2	3.2	3.4	3.4
2024M04	118.0	0.5	3.1	2.9	3.2	3.1
2024M05	**117.7**	**-0.3**	**2.4**	**2.7**	**2.3**	**2.7**

Sources: ELSTAT, Eurostat.

FIGURE 1.2.1
Annual % changes in National CPI sub-categories (May 2024)



Source: ELSTAT.

TABLE 1.2.2 Annual % changes in National CPI sub-categories, January 2024-May 2024

Groups of goods and services	Jan.	Feb.	Mar.	Apr.	May
1 Food and non-alcoholic beverages	8.3	6.7	5.3	5.4	3.1
2 Alcoholic goods and tobacco	2.6	2.4	1.8	2.6	1.6
3 Clothing and footwear	3.5	1.3	5.8	4.0	6.4
4 Housing	-2.7	-0.3	0.6	-0.5	-1.6
5 Household equipment	1.9	1.6	0.0	0.1	-0.3
6 Health	5.7	3.5	4.4	3.6	2.2
7 Transport	0.2	0.5	2.0	3.2	4.0
8 Communication	-2.2	-1.9	-1.8	-1.3	-1.2
9 Recreation and culture	2.6	2.9	3.3	2.1	2.2
10 Education	3.5	3.5	3.5	3.5	3.5
11 Hotel-Cafés-Restaurants	6.4	6.5	6.4	5.2	5.0
12 Miscellaneous goods and services	1.7	1.7	1.3	2.3	1.1
General Index	**3.1**	**2.9**	**3.2**	**3.1**	**2.4**

Source: ELSTAT.

- 3.5% in the group Education. This increase is mainly attributed to the rise in the prices of fees of pre-primary and primary education (4.0%), fees of secondary education (3.6%) and fees of tertiary education (2.8%).
- 5.0% in the group Hotels-Cafés-Restaurants. This increase is mainly due to the rise in prices in restaurants-confectioneries-cafés-buffets (5.1%).
- 1.1% in the group Miscellaneous goods and services. This increase is mainly due to price increases in hairdressing salons and personal grooming establishments (3.5%), other personal effects (3.9%), private insurance connected with health (14.0%), and motor vehicle insurance (5.6%). This increase was partially offset by the drop in the prices, mainly in other appliances and articles for personal care (-4.7%).

On the other hand, prices decreased in the following groups of goods and services:

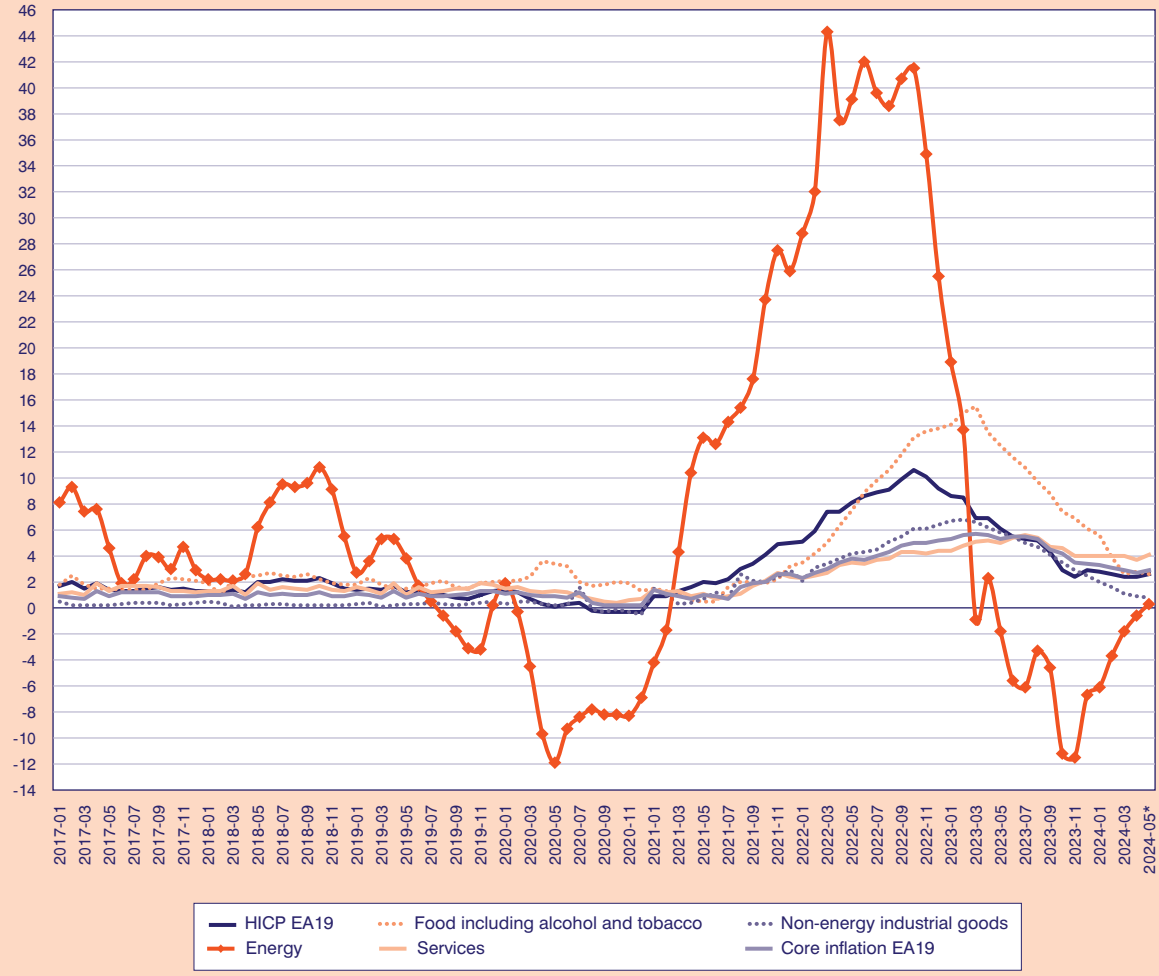
- -1.6% in the group Housing. This decrease is mainly due to the drop in prices for municipal charges for refuse collection (-1.5%), electricity (-13.8%) and natural gas (-11.6%). This decrease was partly offset by price increases in rentals for dwellings (4.4%), services for the repair and maintenance of the dwelling (2.2%) and heating oil (6.3%).
- -0.3% in the group Household equipment. This decrease, which is mainly due to the drop in prices for non-durable household articles (-2.6%), was partially offset by the increase in the prices mainly for domestic services (2.7%).
- -1.2% in the group Communication. This decrease is mainly attributed to the fall in the prices of telephone services (-1.3%).

1.2.2. The euro area

According to Eurostat's preliminary estimates, in May 2024 inflation in the euro area is expected to reach 2.6% against 2.4% in both March and April 2024. Based on the same estimates, core inflation will reach 2.9% in May, from 2.7% in April 2024. Among the individual groups of goods and services of HICP, Services (4.1% vs. 3.7% in April) and the Food, alcohol and tobacco group (2.6% vs. 2.8% in April) are expected to record the highest growth rate, followed by the Non-energy industrial products (0.8% vs. 0.9% in April) and the Energy group (0.3% vs. -0.6%).

Among the euro area countries, the highest inflation was recorded in Belgium (4.9%), Croatia (4.3%) and Portugal (3.9%), while on the opposite side, with the lowest inflation, is Latvia (0.2%), Finland (0.5%) and Lithuania (0.8%). Apart from the three mentioned above, the countries with inflation below the European Central Bank's 2.0% target are Ireland, with 1.9% inflation, and Italy, with 0.8%.

FIGURE 1.2.2
HICP in the euro area, monthly data, annual % change



Source: Eurostat.

* Flash Estimates.

BOX 1

In this Box, we update the analysis presented in Issue 52 of *Greek Economic Outlook* (October 2023, pp. 15-25) titled "External and internal inflationary pressures in the Greek economy".[1] In this analysis, we examine via an indirect way the components of income that contribute to the price formation [see ECB (2006); Hahn (2019, 2021, 2023); Arce et al. (2023); Weber and Wasner (2023) etc.]. Specifically, we calculate the contribution of the income distribution categories, wages and profits, along with the taxes and subsidies, in the formation of the GDP deflator. In this way, through the evolution of income distribution variables, the behavior of firms is captured, that is, the way they choose to shape product prices under the pressure of increases in input (non-labour) prices. If at a time when the prices of energy or some basic raw materials are increasing, and at the same time downward trends are observed in the contribution of the unit profit to the formation of the price deflator growth rate, this is an indication that companies are "absorbing" part or all of the increase in production costs, while if the contribution of the unit profit remains unchanged or increases, this indicates that product prices have increased by the same extent as the cost increase or more (Hahn, 2023).

The contribution of wages and profits to domestic price increases can be assessed through the GDP deflator, which captures the prices of gross value added (including taxes minus subsidies to production) produced in the country. The GDP deflator can be decomposed into unit profits (gross operating surplus plus mixed income per unit of real GDP), unit labor costs, and taxes on production minus subsidies per unit of real GDP. Figure 1 presents the percentage contributions of each component of GDP to the rate of change of the GDP deflator or core inflation.[2] Because in Issue 52 the analysis of the evolution of the GDP deflator and its components for the period 2019q1-2023q2 was extensive, for brevity in this Box we focus on the evolution of the last four quarters and, where appropriate, perform comparisons with the previous period.

The first thing we note in Figure 1 is the de-escalation of the growth rate of the GDP deflator or core inflation, which in the first quarter of 2024 was 3.0%. The largest contribution to this growth rate is the component of subsidies per unit of real GDP, which ranges between 1.7 p.p. and 5.6 p.p. This positive contribution is due to the significant reduction of government subsidies during the period 2023q2-2024q1.[3] This development leads to a slower decline in the GDP deflator, despite the reduction in the category of taxes on production and imports per unit of real GDP (their negative contribution ranges between -0.8 p.p. and -3.3 p.p.). Regarding the categories of income distribution, we observe that the contribution of unit profits to the rate of change of the GDP deflator over the last four quarters has narrowed (their contribution ranges between -1.2 p.p. and 1.3 p.p.) compared to the period 2021q1-2023q1, during which they had a dominant role (the 2021q1-2023q1 period contribution varies between 1.6 p.p. and 6.8 p.p.). This is partially a base effect result as the most recent increases in the gross operating surplus are compared y-o-y with the previous period's strong increases. The contribution of wages per unit of real GDP has a positive sign and ranges between 1.3-1.6 p.p. This is partially a result of the base effect as well, given that unit wages increased with a lower rate (compared to the profits) in the previous quarters, the increases in the most current quarters yield a relatively high rate of growth, which eventually strengthens their contribution, and the fact that, as we saw, the contribution of the unit profits fell significantly.

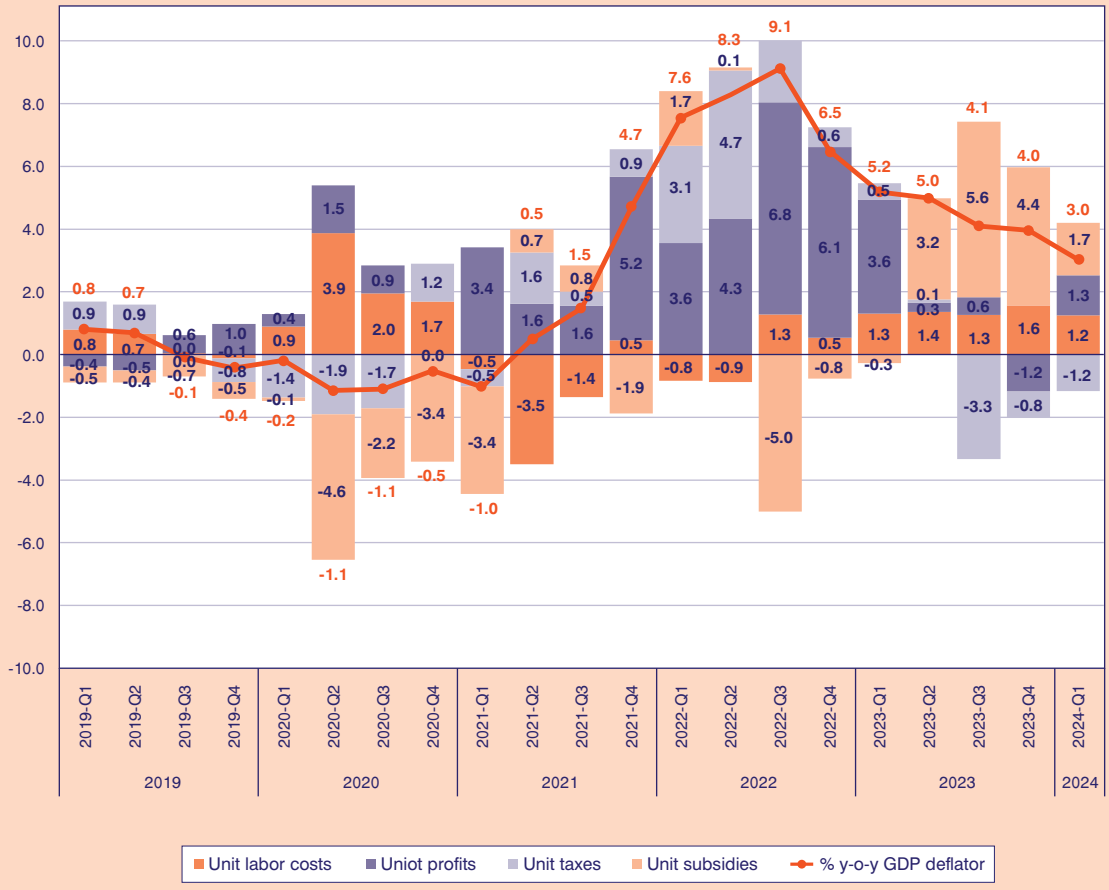
In what follows, we decompose the gross operating surplus into its components in order to identify those individual income accounts that drive the variations in the contribution of the unit gross operating surplus outlined before. In Figure 1 we used the gross operating surplus and mixed income account for the whole economy, which consists of the following individual sub-categories: a) the consumption of fixed capital, b) the net operating surplus from all institutional sectors [non-financial corporations (NFCs), financial corporations (FCs), households (HHs) and

1. See <https://www.kepe.gr/wp-content/uploads/2023/11/prosfates-ekselikseis-ston-plithwrismo-tis-elladas-kai-tis-evrwzwnis.pdf>.

2. Due to the high correlation of the rate of change of the GDP deflator with indicators of core inflation, the income components of GDP are important determinants of core inflation (Hahn, 2023).

3. It is noted that subsidies enter the nominal GDP equation with a negative sign (GDP = wages + profits + taxes - subsidies) and because they decrease, appear to have a positive effect on GDP and therefore on the GDP deflator if we divide each term by real GDP.

FIGURE 1
GDP deflator decomposition
(Annual percentage changes %, p.p. contributions to annual percentage changes, quarterly data)

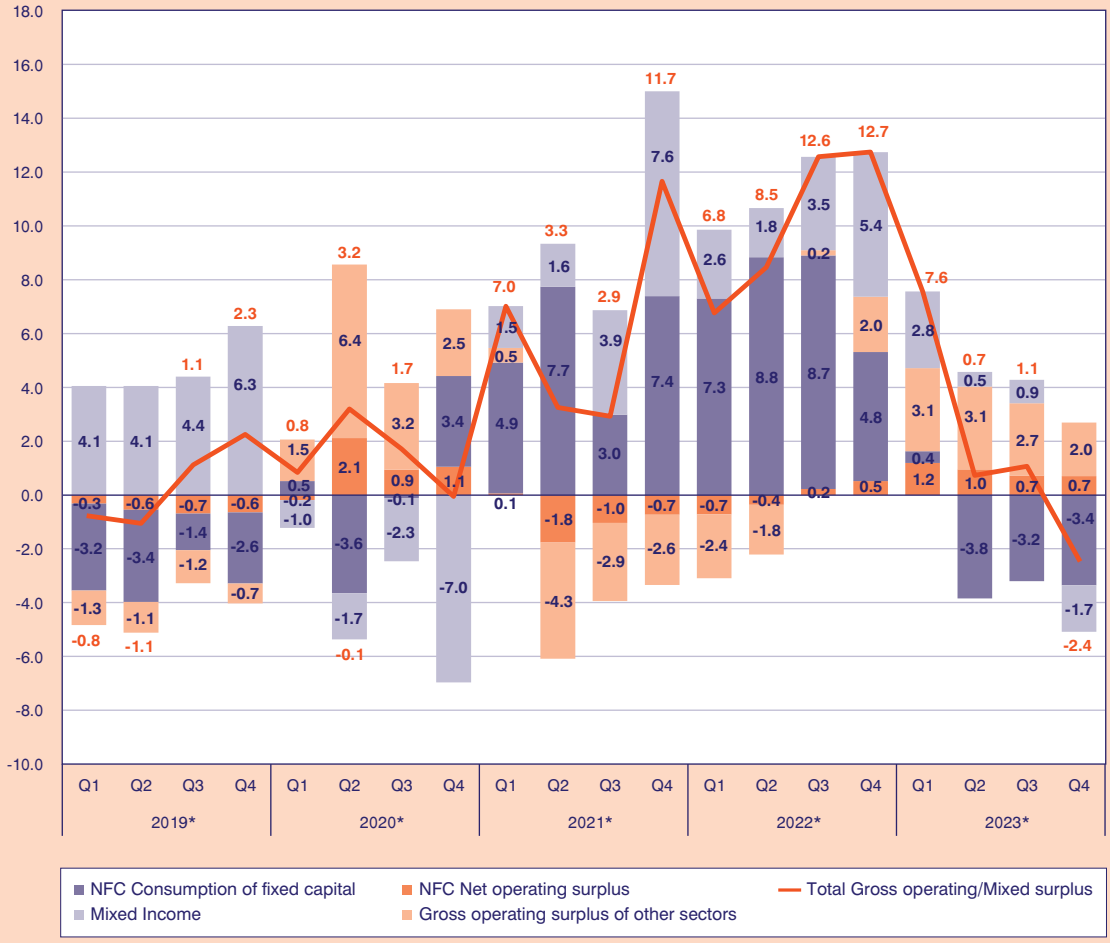


Source: Eurostat, KEPE calculations.

non-profit institutions serving households (NPISH), general government], c) mixed income, and d) rents, interest, and other income from corporate assets. The concept of profits that interests us in this analysis is that of the net operating surplus of non-financial corporations.

Figure 2 presents the contribution of each component of gross operating surplus to its growth rate. It appears that the contribution of the net operating surplus of NFCs and mixed income, which dominated throughout the 2021-2022 period, was minor to negative in the last three quarters of 2023. In particular, the contribution of the net operating surplus of NFCs ranges between -3.2 p.p. and -3.8 p.p. against 3.0 – 8.8 p.p. during the 2021q1-2022q4 period. Similarly, although on a lesser scale, the contribution of mixed income over the final three quarters of 2023 ranges between -1.7 p.p. and 0.9 p.p., whereas throughout the period 2021q1-2022q4, the corresponding contribution amounts to 1.5 p.p and 7.6 p.p. The component of profits that appears to have the greatest contribution during the quarters under evaluation is the gross operating surplus of the other institutional sectors (i.e., Financial Corporations, Households and NPISHs, and General Government). Their contribution to the growth rate of total gross operating surplus (plus mixed income) has a downward trend and ranges between 2.0 p.p. and 3.1 p.p., while it was primarily negative from 2021q1 to 2022q4. Finally, the component of the consumption of fixed capital of NFCs had a positive contribution ranging between 0.7 p.p. and 1.0 p.p., while it had mainly a small and negative contribution during the two preceding years 2021-2022.

FIGURE 2
Unit profits decomposition
(Annual percentage changes %, p.p. contributions to annual percentage changes, quarterly data)



Source: Eurostat.

* Preliminary Data, KEPE calculations.

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

Factor Model Economic Forecasting Unit
Ersi Athanassiou, Aristotelis Koutroulis, Emilia Marsellou, Theodore Tsekeris

The current section presents the updated forecasts of KEPE concerning the evolution of the rate of change of real GDP in Greece in year 2024.[1] The forecast is conducted using KEPE's dynamic structural factor model.[2] The underlying time series database used to estimate the model and produce the forecasts includes 126 variables,[3] covering the main aspects of economic activity in the country on a quarterly basis and spanning the period from the first quarter of 2000 up to the first quarter of 2024.

The current conjuncture is dominated by the challenges of the international environment, which is characterised by weak economic growth and increased geopolitical risks. Based on the available data on the course of the European economy in recent months, most EU countries still remain in a state of low or even negative growth rates, affected by the increased cost of living, high interest rates, inflated production costs, the lack of impetus from the side of international demand and the gradual adjustment to meet fiscal rules. At the same time, current forecasts for the evolution of EU growth in the course of 2024 point in the direction of an improvement in conditions, with the intensity of the recovery being, however, restricted in the short term, due to the pressures still affecting Germany and other important industrial economies of Europe.

In this framework, the Greek economy remains on a stable path of satisfactory growth rates, although the imprint of the above conditions is becoming increasingly visible, particularly with respect to investment dynamics and the performance of the external sector. According to the latest data incorporated in the updated forecast of KEPE and referring to the last quarter of the year 2023 and the first quarter of 2024, while still remaining higher than the EU average, Greece's growth rates turned out to be lower than expected. More specifically, according to the revised provisional data of the *Quarterly National Accounts,* the rate of change of the Greek economy's GDP slowed to 1.3% in the final quarter of 2023 and moved to 2.1% in the first quarter of 2024, on an annual basis, receiving significant support from the private consumption component, which continues to be boosted by rising incomes and despite the pressures from rising prices.

In the above context, Table 1.3.1 presents the updated econometric estimates for the rate of change of Greece's real GDP in 2024, based on KEPE's factor model and incorporating data up to the first quarter of the year.[4] According to the estimates, the average annual rate of change of real GDP for the whole of 2024 is projected at 1.9%, and the rates of change for the first and second halves of 2024, compared to the corresponding periods of 2023, are estimated to reach about the same level. Forecasts on a quarterly basis show a smooth growth outlook throughout the year (1.6% in the second quarter, 1.9% in the third quarter and 2.0% in the fourth quarter). The current estimate for the average annual growth rate in 2024 is slightly lower than the corresponding previous forecast of KEPE (2.2%), given that the rates of change of GDP in late 2023 and early 2024 came to be lower than previously expected, but at the same time, no notable shifts were observed in the general course of the economy.

More specifically, for the first quarter of 2024, the quarterly data of the *National Accounts* at constant prices compared to the corresponding quarter of 2023 depict a further significant rise in private consumption, a mild strengthening of fixed capital investment and a large increase in inventories. At the same time, the data reflect, on the one hand, a decline in general government consumption, which is consistent with the gradu-

1. The date of the forecast is June 12th, 2024.

2. A detailed description of the model can be found in Issue 15 (June 2011, pp. 19-20) of KEPE's scientific journal entitled *Greek Economic Outlook*. See <https://www.kepe.gr/images/oikonomikes_ekselikseis/issue_15enb.pdf>.

3. The database incorporates both real economy and nominal variables, as well as a considerable number of variables reflecting expectations and assessments of economic agents, as reported in earlier issues of the *Greek Economic Outlook*. The seasonal adjustment of the time series is carried out by use of the Demetra+ software, using the TRAMO/SEATS filter.

4. According to the most recent ELSTAT *Quarterly National Accounts* publication, dated June 7, 2024.

TABLE 1.3.1 Real GDP rate of change in year 2024 (%, y-o-y)

	2024		
Quarters	**2024Q2**	**2024Q3**	**2024Q4**
Quarterly rate of change	1.59 [1.47 , 1.72]	1.85 [1.60 , 2.09]	1.96 [1.61 , 2.32]
Mean rate of change, 1st half*	1.87 [1.81 , 1.93]	-	
Mean rate of change, 2nd half	-	1.90 [1.60 , 2.21]	
Mean annual rate of change*		1.89 [1.71 , 2.07]	

Note: Values in brackets indicate the lower and upper boundaries of the 95% confidence interval of the forecasts. *The mean rate of change for the first half of 2024 and the mean annual rate of change for 2024 incorporate the officially available (provisional) data for the first quarter of 2024, on a seasonally adjusted basis.

al return to compliance with fiscal targets, and, on the other hand, unfavorable trends regarding the course of overall external demand. In particular, while exports of services maintained their upward trend, mainly due to the further strengthening of tourism receipts, exports of goods showed a noticeable decline, under the weight of the weak economic environment in Europe.

Regarding the course of indicators reflecting the activity of key sectors of the economy, developments varied considerably from case to case. First, in the industry sector, the overall industrial production index registered an increase compared to the corresponding quarter of 2023, as the values of the index increased in all relevant subcategories except *capital* goods. At the same time, the turnover index in industry remained more or less stable, as the decline in the individual index for the external market was almost offset by the rise in the index for the domestic market. In the trade sector, the volume index in retail trade showed a decline in six of the eight relevant subcategories, with the exceptions being *automotive fuel* and, marginally, *pharmaceutical products-cosmetics*, while a downward trend was also recorded in the turnover index in wholesale trade. On the other hand, a significant boost was observed for yet another quarter in travel receipts, which increased by 24.3% compared to the corresponding quarter of the previous year, while developments were also favorable with regard to the production index in construction. Concerning the course of the domestic labor market, in the first quarter of 2024, the number of persons employed expanded by 1.8% compared to the first quarter of the previous year, but at the same time, the number of unemployed persons also increased by 4.3%, respectively.

Concerning price data for the first quarter of 2024, developments were indicative of a further decline in energy costs, as the European harmonized energy price index for Greece decreased compared to the previous quarter. In addition, a further small improvement was recorded in relation to average inflation, with inflationary pressures remaining, however, high in key categories of consumer goods and services, such as *food and beverages*, *hotels-cafés-restaurants* and *health services*. In terms of the yield of Greece's ten-year government bond, which is linked to the levels of uncertainty in the economy, a significant decline was observed as compared to the fourth quarter of 2023, with the spread against the corresponding German bond also showing visible improvement. In relation to the indicators reflecting agents' expectations and assessments regarding the economic climate in the country, developments in the first quarter of 2024, compared to the fourth quarter of the previous year, demonstrate an improvement of the economic climate in Greece and the EU, and a rise in business expectations in Greece in the industrial and construction sectors.

The forecasts for the evolution of the real GDP of the Greek economy in the course of 2024 are subject to a significant degree of uncertainty, due to the serious risks arising from geopolitical tensions and the climate crisis, but also given the challenges that continue to be presented in relation to inflation and interest rates. According to estimates so far, the de-escalation of inflation and interest rates will be gradual, and pressures

on household purchasing power and investment will therefore continue. At the same time, new significant uncertainties and risks have emerged due to the war crisis in the Middle East, which affects, among others, the prospects for international trade, the smooth functioning of value chains and transport costs. On the other hand, the projected gradual increase in the average growth rate of the European economy favors the Greek economy and may contribute to the recovery of Greek exports of goods. Moreover, although at the present time Greece is significantly affected by the uncertainties and instability in the international environment, the country continues to present positive prospects in key sectors of activity (e.g., industry, tourism), while it also has at its disposal important tools for maintaining a consistently positive course. The expected inflow of financial resources through the Recovery and Resilience Facility within the year and the upgrade of the country's credit rating present critical opportunities for strengthening investment and improving the outlook in key sectors of the economy, thus having the potential to lead to a more favorable development in GDP.

KEPE, *Greek Economic Outlook,* issue 54, 2024, pp. 25-29

1.4. The first four months of 2024 ended with positive returns for the stock market

Fotini Economou

1.4.1. Introduction

The first four months of 2024 ended on a positive note for the Greek stock market, recording positive returns and increased capitalization and transactions values. The European Central Bank (ECB), after the consecutive interest rate hikes carried out in 2023, kept interest rates stable during the first four months of 2024.[1] Under these conditions, bond yields in April 2024 were decreased compared to October 2023, but slightly higher compared to December 2023. Reissues and new issues of government bonds highlighted the strong demand for Greek securities, with corporate bonds also showing increased investment interest and corporate bond indices recording positive returns.

The return to investment grade in 2023 was very important for the positive course of the Greek market, making Greek stocks and bonds eligible for a much larger investment audience, thus paving the way for the return of the Greek stock market to the developed markets in the future. Note that the goal of an upgrade from the American rating agency Moody's, which is the only one that has not yet given Greece an investment grade, also remains (Table 1.4.1).

This article presents a brief overview of the course of the Greek stock market during the first four months of 2024, focusing on key stock market indices and data. Moreover, the course of the bond market is presented for the same period. The final section of the article summarizes and concludes.

1.4.2. The course of the stock market during the first four months of 2024

The first four months of 2024 ended with positive returns for the Greek stock market. More specifically, according to ATHEX data (Table 1.4.2), the Athex Composite Share Price Index recorded a positive return of 12.01%, reaching 1,448.48 points on 30/4/2024, from 1,293.14 points on 29/12/2023. The FTSE/Athex Large Cap and the Athex ESG Index also recorded high returns of 12.49% and 12.12%, respectively, while lower but still positive returns were recorded for mid-cap and small-cap indices, with the Hellenic Mid & Small Cap Index at 9.60% and the FTSE/Athex Mid Cap Index at 5.34%.

TABLE 1.4.1 Greece's credit rating

Rating Agency	Rating	Outlook	Date of last review
Standard & Poor's	BBB-	Positive	19/4/2024
Moody's	Ba1	Stable	15/3/2024
Fitch	BBB-	Stable	31/5/2024
DBRS Morningstar	BBBL	Stable	8/3/2024
Rating and Investment (R&I)	BBB-	Stable	31/7/2023
Scope Ratings GmbH	BBB-	Stable	26/1/2024

Source: Public Debt Management Agency (PDMA)-June 2024.

1. The first interest rate cut occurred in June 2024. See Section 1.4.3.

Positive returns were also recorded for the ATHEX sectoral indices, with the sole exception of the FTSE/ATHEX REAL ESTATE, which recorded losses of -1.82%. Among ATHEX sectoral indices, FTSE/ATHEX CONSUMER STAPLES and FTSE/ATHEX INDUSTRIALS stood out, recording returns over 20%, reaching 24.65% and 22.05%, respectively, while FTSE/Athex Banks and FTSE/ATHEX FINANCIAL SERVICES follow, with returns of 16.56% and 16.13%, respectively.

According to ATHEX (2024) data, the market capitalization of the ATHEX (assets under custody of domestic and foreign investors in total listed equities with the participation of the Financial Stability Fund) reached €94.69 billion at the end of April 2024 from €80.77 billion at the end of December 2023, recording an increase of 17.23%. The participation of foreign investors (with the participation of the Financial Stability Fund) remains high at 65.60% at the end of April 2024, with foreign investors recording inflows of €53.47 million and 58.7% of total transactions in April 2024. The cash value of settled transactions of April 2024 reached €2,824.59 million, recording a significant increase of 122.80% compared to April 2023, which was at €1,267.77 million, and an increase of 48.73% compared to December 2023, which was at €1,899.19 million. Moreover, the cash value of settled transactions of equities increased in April 2024 to €2,771.67 million compared to April 2023, which was at €1,245.31 million, also recording an increase for the first four months of 2024 compared to the first four months of 2023, at €11,558.57 million from €8,234.11 million, respectively.

Examining the uncertainty about the short-term course of the market with the help of the KEPE GRIV Implied Volatility Index, the so-called "fear" index, an increase in uncertainty was observed at the end of April 2024 compared to the end of 2023, with fluctuations within the first four months of 2024. The KEPE GRIV index reflects the uncertainty of the derivatives market participants about the expected short-term course of the Greek market and is calculated on the basis of the FTSE/

TABLE 1.4.2 Prices and returns for selected indices of the ATHEX (30/4/2024)

	30/4/2024	Year min	Year max	Year change (%)
FTSE/Athex Large Cap	3,512.98	3,122.79	3,570.36	12.49%
Athex ESG Index	1,650.10	1,471.77	1,674.82	12.12%
Athex Composite Share Price Index	1,448.48	1,293.14	1,462.68	12.01%
Athex All Share Index	335.51	304.60	336.70	11.10%
Hellenic Mid & Small Cap Index	2,114.15	1,929.00	2,117.48	9.60%
FTSE/Athex Mid Cap Index	2,371.02	2,167.92	2,459.55	5.34%
FTSE/ATHEX CONSUMER STAPLES	6,342.68	5,069.68	6,458.99	24.65%
FTSE/ATHEX INDUSTRIALS	6,202.08	5,044.08	6,202.16	22.05%
FTSE/Athex Banks	1,237.38	1,057.67	1,282.54	16.56%
FTSE/ATHEX FINANCIAL SERVICES	5,822.78	4,996.31	6,031.37	16.13%
FTSE/ATHEX TECHNOLOGY & TELECOMMUNICATIONS	5,642.16	4,915.95	5,705.00	11.23%
FTSE/ATHEX CONSUMER DISCRETIONARY	5,432.14	4,993.33	5,557.48	8.30%
FTSE/ATHEX ENERGY & UTILITIES	5,296.40	4,961.47	5,369.12	6.19%
FTSE/ATHEX BASIC MATERIALS	5,052.02	4,577.28	5,876.05	3.75%
FTSE/ATHEX REAL ESTATE	4,870.22	4,639.72	5,120.52	-1.82%

Source: Daily official list of trading activity of the ATHEX 30/4/2024.

Athex Large Cap options prices. More specifically, the KEPE GRIV index increased in April 2024, reaching 26.70% on 30/4/2024, from 22.40% on 28/3/2024 and 23.86% on 29/12/2023. Furthermore, the average daily value of the index increased, reaching 26.32% in April 2024, from 24.44% in March 2024. The index remained below its historical average level (since January 2004) for the Greek market, which stands at 32.23%. The evolution of the index indicates an increase in uncertainty for the expected short-term course of the Greek market compared to the end of 2023, with fluctuations within the first four months of 2024.

1.4.3. Greek Government T-bills, Greek Government bonds and corporate bonds during the first four months of 2024

The course of the bond market is directly linked to the course of interest rates. Therefore, the monetary policy decisions of the ECB greatly influence the course of the bond market. After ten consecutive increases in key interest rates by the ECB from July 2022 until September 2023,[2] when the last increase was recorded, with the aim of a timely return of inflation to the ECB's medium-term target of 2%,[3] interest rates remained unchanged until June 2024, when the ECB decided to lower the three key interest rates for the first time since 2019.[4] So, the key ECB interest rates remained unchanged during the ECB meetings of the first four months of 2024 (main refinancing operations 4.50%, marginal lending facility 4.75% and deposit facility 4.00%), with inflation easing and the ECB considering that "the past interest rate increases continue to weigh on demand, which is helping to push down inflation".[5]

Under these circumstances, by examining the issues of Greek Government T-bills during the first four months of 2024 (Table 1.4.3), it is observed that their yields decreased compared to the end of 2023 for 13- and 26-week T-bills, while 52-week T-bills recorded a small increase. Moreover, looking at the interest rates of the Greek Government benchmark bonds, according to Bank of Greece data for the first four months of 2024 (Figure 1.4.1), we notice that the average monthly yield of the Greek government bonds was clearly lower for all maturities in April 2024 compared to October 2023, which was the maximum for the period under examination after which a de-escalation of bond yields was observed. However, the average monthly yield of the Greek government bonds was increased in April 2024 compared to December 2023, for all maturities. The 3-year bond presented the largest increase.

At the same time, the successful bond issues of the first quarter of 2024 (new issues and reissues) reflected the increased investment interest in Greek securities in view of the expected easing of monetary policy.

TABLE 1.4.3 Greek Government T-bills yields (issues from the end of 2023 to April 2024)

Auction date	13 weeks	Auction date	26 weeks	Auction date	52 weeks
30/4/2024	3.67%	24/4/2024	3.69%	6/3/2024	3.73%
3/4/2024	3.75%	27/3/2024	3.75%	6/12/2023	3.70%
31/1/2024	3.83%	21/2/2024	3.83%		
3/1/2024	3.84%	24/1/2024	3.77%		
1/11/2023	3.88%	27/12/2023	3.87%		

Source: Ministry of Economy and Finance.

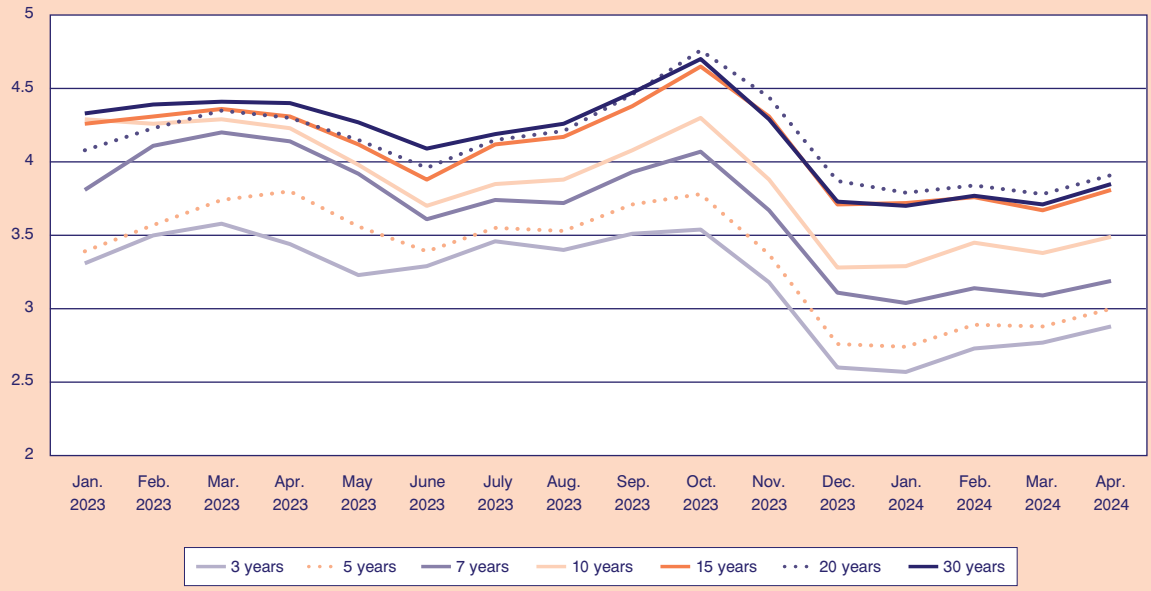
2. See Information about the ECB interest rates, Bank of Greece.

3. See ECB Press Release of the 14th September 2023.

4. See ECB Press Release of the 6th June 2024.

5. See ECB Press Release of the 11th April 2024.

FIGURE 1.4.1
Monthly average yield (%) of Greek Government benchmark bonds (Jan. 2023 – Apr. 2024) for maturities of 3, 5, 7, 10, 15, 20 and 30 years



Source: Bank of Greece.

Indicative of the strong demand for Greek bonds was the new 10-year bond issue of 30/1/2024, of which €4 billion were raised with a coupon of 3.375% and a re-offer yield of 3.478%. According to the Public Debt Management Agency,[6] this is the highest amount raised after 2010. Moreover, the final orderbook was in excess of €35 billion, the largest orderbook for any syndicated Greek Government issue since 2010, surpassing the previous record of €30 billion achieved in June 2021. Furthermore, the bond pricing recorded the tightest spread for new 10-year Greek Government Bonds after 2010.

Finally, note the increased investment interest in the corporate bonds market. The ATHEX corporate bond indices completed the first four months of 2024 with positive returns.

According to ATHEX data, the Hellenic Corporate Bond Price Index[7] recorded a return of 0.40% and the Hellenic Corporate Bond Index[8] a return of 1.40% for the first four months of 2024.[9] Moreover, the cash value of settled transactions of corporate bonds increased in April 2024 compared to April 2023, reaching €25.94 million from €8.57 million, respectively, also recoding an increase for the first four months of 2024 compared to the first four months of 2023, at €123.31 million from €65.22 million, respectively.

1.4.4. Conclusion

The year 2024 started positively for the Greek stock market, with positive returns, increased capitalization and value of transactions during the first four months of 2024. Increased investment interest was recorded in the government bond market, as well as in the corporate bond market, highlighting the role of the latter as an alternative source of financing for businesses. The positive effects of the return to investment grade for Greece were reflected in the course of the mar-

6. See Public Debt Management Agency announcement of 30/1/2024.

7. Based on the net price of each bond.

8. Based on the net price, accrued interest and the value of the payments of each bond.

9. Returns on 26/4/2024 according to the daily official list of trading activity of the ATHEX of 30/4/2024.

kets during the first four months of 2024 in anticipation of the ECB monetary policy easing. The effect of the de-escalation of interest rates combined with the challenges that remain regarding geopolitical developments and the course of inflation are expected to affect the markets in the coming period, while the immediate goal of an upgrade by the American rating agency Moody's, as well as the ultimate target of the ATHEX to return to developed markets remains.

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1.5. Recent developments and prospects of the global economic activity: The outlook for the global economy is gradually improving

Aristotelis Koutroulis

The projections for the global economy have been revised upwards with global GDP growth estimated at 3%. The outlook for the global economy has been improved as major economies have managed to curb inflation faster than initially expected. At the same time, the US economy seems to maintain its growth momentum.

1.5.1. Recent developments and short-run prospects of the global economy

The medium-term prospects of the world economy have improved. Indeed, an assessment of recent economic developments suggests that (a) the risk of a sharp decline in the rate of US economic growth due to highly restrictive monetary policy has receded, (b) most major economies have managed to curb inflation without triggering a new recession and without rising unemployment, and (c) global economic activity showed considerable resilience against a restrictive economic policy mix (EC, 2024; IMF, 2024; OECD, 2024; and UN, 2024). Moreover, the improved performance of international trade, the strong household consumption in advanced economies and the overall upward trend of high-frequency economic indicators are all signs that the global economy has entered a stabilization phase.

Despite the optimism that pervades the latest reports of international organizations, the forecasts regarding global GDP growth for 2024 are quite moderate. It is projected that the rate of expansion of the global economy will remain unchanged in relation to 2023 (see Table 1.5.1) and therefore below the average of the last decades. This estimate mainly reflects (a) high borrowing costs, (b) withdrawal of supportive fiscal policy measures, (c) anemic productivity growth and (d) adverse economic effects from ongoing geopolitical fragmentation (IMF, 2024).

Regarding the risks that threaten to derail the global economy from returning to a stable growth trajectory, these include (a) the maintenance of restrictive monetary policy for a long period due to a resurgence of inflationary pressures, (b) new increases in international energy prices due to escalating geopolitical tensions, (c) a greater than expected slowdown in the Chinese economy, and (d) a sharp shift in fiscal policy towards a highly restrictive direction (IMF, 2024). Justifiably, the greatest concern is the risk of climate change, as the increased frequency of extreme weather events appears to threaten not only current economic activity, but also many of the gains –in terms of economic prosperity and growth– of recent decades (UN, 2024).

1.5.2. Inflation, employment, and investment

Headline inflation is on a downward trend in most economies (see Table 1.5.2). The tight monetary policy, the relative stabilization of international prices of energy and food products at lower levels, the de-escalation of pressures on global value chains, and the reduction of the intensity of secondary upward pressures on manufactured product prices collectively explain the disinflation process worldwide (IMF, 2024; OECD, 2024; and UN, 2024).

Global inflation is projected to decline further this year and stand at 5.9% from 6.8% in 2023 (IMF, 2024). The reduction in inflationary pressures will be noticeable in advanced economies, as annual inflation will decline on average by 2 percentage points (IMF, 2024). In the developing world, price developments remain a concern as inflation is projected to remain on average at 2023 levels (see Table 1.5.2).

Core inflation is declining as well. Yet, services price inflation exhibits remarkable persistence, remaining above pre-pandemic levels. This is due to (a) the rising demand for services, (b) the large participation of labor costs in the production of services, in combination with the increase in nominal wages, and (c) the high profit margins in many services sectors (OECD, 2024).

According to the latest OECD report, the large increase in migration flows to the advanced economies of Europe and North America in 2023 had a positive effect on the labor pool of these countries. At the same time, the higher growth rate of the labor force combined with the higher labor force participation rates seem to facilitate the gradual restoration of balances between supply and demand in the labor markets (OECD, 2024). At the same time, recent surveys show that in several countries the rate of employment growth has

TABLE 1.5.1 Real Gross Domestic Product[1,2]

(annual percentage changes)

	2023*				2024**				2025**			
	IMF	EC	OECD	UN	IMF	EC	OECD	UN	IMF	EC	OECD	UN
World economy	3.2	3.1	3.1	3.1	3.2	3.2	3.1	3.1	3.2	3.3	3.2	3.2
Advanced economies	1.6	:	:	1.5	1.7	:	:	1.6	1.8	:	:	1.6
USA	2.5	2.5	2.5	2.5	2.7	2.4	2.6	2.3	1.9	2.1	1.8	1.7
Euro area	0.4	0.4	0.5	0.4	0.8	0.8	0.7	0.8	1.5	1.4	1.5	1.4
Japan	1.9	1.9	1.9	1.9	0.9	0.8	0.5	1.2	1	0.8	1.1	1.1
United Kingdom	0.1	0.1	0.1	0.1	0.5	0.5	0.4	0.8	1.5	1.4	1	1.5
Developing economies	4.3	:	:	4.1	4.2	:	:	4.1	4.2	:	:	4.3
Brazil	2.9	2.9	2.9	2.9	2.2	2	1.9	2.1	2.1	2.1	2.1	2.4
Russia	3.6	3.6	:	3.6	3.2	2.9	:	2.7	1.8	1.7	:	1.5
India	7.8	7.7	7.8	7.5	6.8	7	6.6	6.9	6.5	6.9	6.6	6.6
China	5.2	5.2	5.2	5.2	4.6	4.8	4.9	4.8	4.1	4.6	4.5	4.5

Sources: IMF (2024); European Commission (2024); OECD (2024); and United Nations (2024).

* Estimations, ** Projections.

Notes: 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 1.5.2 Inflation[1]

(annual percentage changes)

	2023*			2024**			2025**		
	IMF	EC	OECD	IMF	EC	OECD	IMF	EC	OECD
World economy	6.8	:	:	5.9	:	:	4.5	:	:
Advanced economies	4.6	:	:	2.6	:	:	2	:	:
USA	4.1	4.1	3.7	2.9	2.9	2.4	2	2.4	2
Euro area	5.4	5.4	5.4	2.4	2.5	2.3	2.1	2.1	2.2
Japan	3.3	3.3	3.3	2.2	2.8	2.1	2.1	2.2	2
United Kingdom	7.3	6.8	7.3	2.5	2.4	2.7	2	2	2.3
Developing economies	8.3	:	:	8.3	:	:	6.2	:	:
Brazil	4.6	:	4.6	4.1	:	4	3	:	3.3
Russia	5.9	59	:	6.9	6.6	:	4.5	4.5	:
India	5.4	:	5.3	4.6	:	4.3	4.2	:	4.2
China	0.2	0.2	0.3	1	:	0.3	2	:	1.6

Sources: IMF (2024); European Commission (2024); and OECD (2024).

* Estimations, ** Projections.

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

TABLE 1.5.3 Annual unemployment rates (advanced economies)

	2023*			2024**			2025**		
	IMF	EC	OECD	IMF	EC	OECD	IMF	EC	OECD
USA	3.6	3.6	3.6	4	3.9	3.9	4.2	4	4
Euro Area	6.5	6.6	6.5	6.6	6.6	6.6	6.4	6.5	6.4
Japan	2.6	2.6	2.6	2.5	2.5	2.5	2.5	2.5	2.4
United Kingdom	4	4	4	4.2	4.4	4.5	4.1	4.4	4.7

Sources: IMF (2024); European Commission (2024); and OECD (2024).

* Estimations, ** Projections.

moderated, job vacancies have decreased, and the total number of working hours has declined (OECD, 2024). Nevertheless, tight conditions are still the main feature of labor markets in most advanced economies (Europe, North America and Japan), with unemployment rates remaining at historically low levels (see Table 1.5.3) (UN, 2024).

Regarding investment, global investment activity has been on a downward trend over the last 3 years with the rate of change of global Gross Fixed Capital Formation estimated at 2.8% for 2023 (UN, 2024). The low rate of capital accumulation partly reflects (a) high borrowing costs, (b) tight fiscal policy, and (c) escalating geopolitical uncertainty. Looking ahead, investment growth is expected to remain weak as business expectations for interest rates reductions lead to the postponement of investment projects (UN, 2024).

1.5.3. Regional developments

Advanced economies

Over the next two years, annual GDP growth in advanced economies is expected to remain almost unchanged, reaching approximately 1.6% (see Table 1.5.1). However, medium-term economic growth prospects differ significantly across countries. On the one side of the Atlantic, the US economy is set to maintain last year's growth momentum thanks to the strong private consumption, the favourable labour market conditions, and the gradual interest rate cuts. On the other side of the Atlantic, the growth rates of the economies of the United Kingdom and the Eurozone are projected to settle at 1%. As for Japan, weakening external demand is expected to slow down economic growth.

Emerging and developing economies

In the developing world, the improved performance of Central Asia and Sub-Saharan economies is projected to offset the growth slowdown of China, India, Russia, and Brazil, leaving unchanged the average growth rate of the whole group (IMF, 2024). In China, slower growth in 2024 is linked to the negative outlook of the real estate market and the weakening domestic demand. Unlike China, the slowdown in the Indian economy this year is not a cause for concern. India's GDP is projected to grow by 7% in 2024 on the back of rising domestic and external demand and strong labor force growth (IMF, 2024). As for the Russian economy, the forecast for a slowdown in economic growth reflects the effects of tight monetary policy on domestic demand (EC, 2024). Finally, the economic slowdown in Brazil in 2024 appears to be the result of two factors: the implementation of a fiscal consolidation program and lower agricultural production.

1.5.4. World trade and commodity prices

In 2023, international trade expanded marginally by 0.3% (see Table 1.5.4). The factors that explain this stagnation include (a) the decrease in demand for manufacturing products and the low performance of global manufacturing production, (b) the preferences of com-

TABLE 1.5.4 World trade volume
(annual percentage changes, goods and services)[1]

		2023*	2024**	2025**
World economy		**0.3**	3	3.3
Imports	Advanced economies	-1	2	2.8
	Developing economies	2	4.9	4.1
Exports	Advanced economies	0.9	2.5	2.9
	Developing economies	-0.1	3.7	3.9

Source: IMF (2024).

* Estimations, ** Projections.

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

panies to cover a large part of the demand from their high inventories, (c) the tight monetary policy, and (d) the large strengthening of the US dollar, mainly against weaker national currencies (EC, 2024).

In 2024, the rate of expansion of international trade (goods and services) is expected to stand at 3%. This significant improvement reflects (a) the continuation of the positive course of the US economy, (b) the adoption of fiscal measures to support the Chinese economy, and (c) the recovery of international trade flows between the most dynamic Asian economies (OECD, 2024).

Regarding international prices of basic commodities, most prices are on a downward trend. On average, however, commodity prices are set to remain 38% above their pre-pandemic levels. This is due to the upward pressures exerted by (a) geopolitical tensions, (b) increased investment in the energy sector, and (c) increased spending on industrial and infrastructure investment in China (World Bank, 2024). As for oil prices, the average annual price of Brent oil is expected to increase marginally this year, reaching US$84 per barrel, mainly due to geopolitical tensions in the Middle East (World Bank, 2024).

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2. Fiscal developments

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State Budget, public debt and fiscal figures perspectives

Elisavet I. Nitsi

2.1. State Budget execution, January-April 2024

According to the most recent data retrieved from the General Accounting Office,[1] on a modified base, the execution of the State Budget in the period January-April 2024 shows an improvement compared to the corresponding period of 2023 but is significantly better than the monthly estimates, as they were reflected in the executive summary of the State Budget for the fiscal year 2024. The deficit has been substantially reduced, while a primary surplus is observed against the forecast deficit, due to the significantly increased revenues.

According to the data shown in Table 2.1.1, the State Budget had a deficit in its balance amounting to 250 million euros in the period January-April 2024, against a deficit of 789 million euros in the corresponding period of 2023, and a target for deficit of 2.7 billion euros. The State Budget Primary Balance, in surplus, stood at 3.3 billion euros in comparison to the primary deficit of 2.4 billion euros for the same period in 2023 and the primary surplus target of 631 million euros.

Net revenues of the State Budget (Table 2.1.1 and Graph 2.1.1) increased compared to the corresponding period of the previous year, as they amounted to 22.5 billion euros, showing an increase of 1.5 billion euros or 7% compared to the revenues of the first four months of 2023 and by 2.3 billion euros or 11.6% against the targets set by the 2024 Budget. Public Investment Program (PIP) revenues reached 2.5 billion euros, increased both compared to the corresponding period of 2023 (749 million euros or 42.7% more), and mainly those of the estimate of the 2024 Budget by 1.2 billion euros or 86.2%. More specifically, the rise in revenue compared to the corresponding period of 2023 is owed to tax collection (2.4 billion euros, of which 1.3 billion euros or 25.1% is from personal income tax, 0.8 billion euros or 230% from property tax and 0.6 billion euros or 8.3% from VAT), while transfers are reduced (1.3 billion euros or 32.7%). The results in relation to the objectives set by the 2024 Budget are similar. Finally, 1.8 billion euros were budgeted in the 2024 Budget to the Recovery and Resilience Fund, of which only 159 million euros were absorbed, which shows a low absorption in the period under review.

Regarding the revenue execution rate (Graph 2.1.1), taxes are at the same or slightly lower execution rate as in the corresponding period of 2023. Transfers fall short by 10% compared to last year's execution rate, while sales of goods and services fall short by 7%. Only tax refunds have a higher execution rate, of 7%, compared to 2023.

On the expenditure side, which amounted to 22.8 billion euros, the State Budget in the January-April 2024 period increased by 0.9 billion euros or 4.3% compared to the corresponding period of 2023, while in comparison with the target set at 22.9 billion euros, it falls short by 109 million euros or 0.5%. The main reasons for this expansion compared to the same period last year are the increase in interest payments by 322 million euros or 10%, and sales of goods & services by 315 million euros or 152.9%. Conversely, transfers show a decrease of 793 million euros or 7.6%. In addition, it should be noted that, while it was foreseen that there would be a fund under allocation of appropriations, these were ultimately allocated to the remaining categories to meet current needs. Moreover, the PIP expenditures, amounting to 3.2 billion euros, increased by 505 million euros or 18.9% compared to the same period last year, while they increased by 860 million euros or 37.1% compared to the target set by the 2024 Budget. Finally, in the 2024 Budget, 1.8 billion euros have been budgeted from the Recovery and Resilience Fund in the period under review, from which only 159 million euros were absorbed.

Regarding the execution rate of expenditures (Graph 2.1.2), both benefits to employees and transfers are at

1. Based on preliminary data published in the State Budget Execution Monthly Bulletin, General Accounting Office, May 2024.

TABLE 2.1.1 State Budget execution, January-April 2024, in mil. € on a modified cash basis

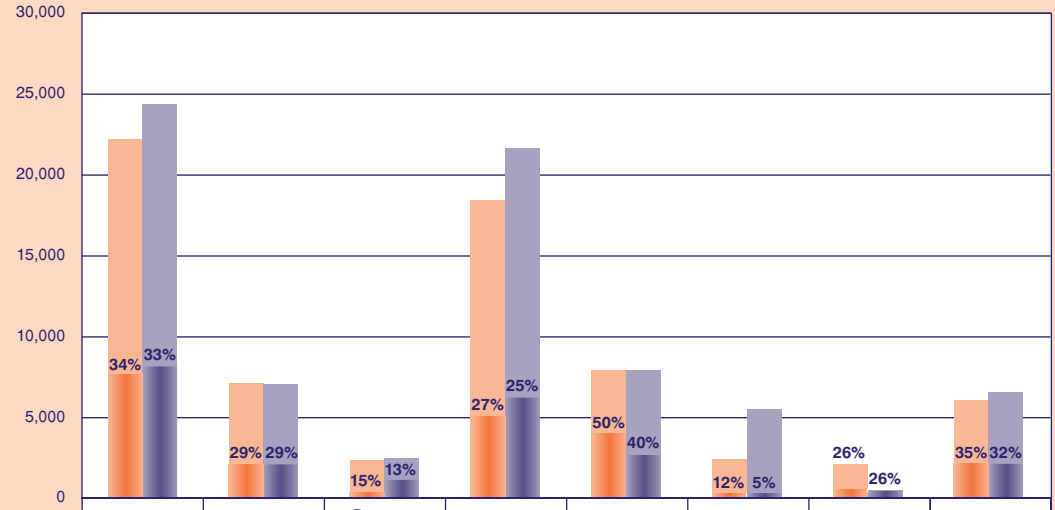
	Jan.-Apr. 2023	Jan.-Apr. 2024	
	Outcome[2]	Outcome	Budget estimates 2024[1]
State Budget			
Net Revenue	**21,057**	**22,538**	**20,198**
Revenue	**23,158**	**24,686**	**22,297**
Taxes	17,803	20,244	18,166
VAT	7,544	8,170	7,955
Excise taxes	2,032	2,115	2,040
Property taxes	353	1,165	323
Income taxes	4,991	6,246	5,443
Social contributions	19	20	19
Transfers	3,959	2,663	3,180
Sales of goods & services	284	342	299
Other current revenue	557	436	146
Tax returns	2,128	2,148	2,100
Expenditures	**21,846**	**22,788**	**22,897**
Compensation of employees	4,602	4,886	4,868
Social benefits	137	80	116
Transfers	10,418	9,625	10,133
Purchases of goods & services	325	346	291
Subsidies	91	0	3
Interest payments (gross basis)	3,236	3,558	3,330
Other current expenditures	21	22	51
Non-allocated expenditure	0	0	510
Purchase of fixed assets	206	521	616
Public Investment Program (PIP)			
Revenue[3]	1,756	2,505	1,345
Expenditures	2,670	3,175	2,315
Recovery and Resilience Fund			
Revenue[4]	1,718	159	1,797
Expenditures[5]	141	576	663
State Budget Primary Balance[7]	**2,443**	**3,282**	**631**
State Budget Balance[6.7]	**-789**	**-250**	**-2,699**

Source: Budget Introductory Report 2024, Ministry of Finance. State Budget Execution, General Accounting Office, Ministry of Finance, May 2024.

TABLE 2.1.1 (continued)

Notes:
1 Budget estimates, as depicted in the 2024 Budget Introductory Report.
2. Data for the revenues and expenditures of the State Budget for the years 2023 are temporary and will be finalized with the ratification of the Revenue and Expenditure Report of the State for the fiscal year 2023.
3. Public Investment Budget revenues are included in lines “Transfers” and “Other current revenues”.
4. Revenues from the Recovery and Resilience Facility Fund are included in lines “Transfers”.
5. The Recovery and Resilience Facility Fund expenditures are heterochronic and the estimated payments for the months of January-April are expected to be made in the following two months (May and June).
6. + Surplus, - Deficit.
7. Data is presented according to the new economic classification (Presidential Decree 54/2018).

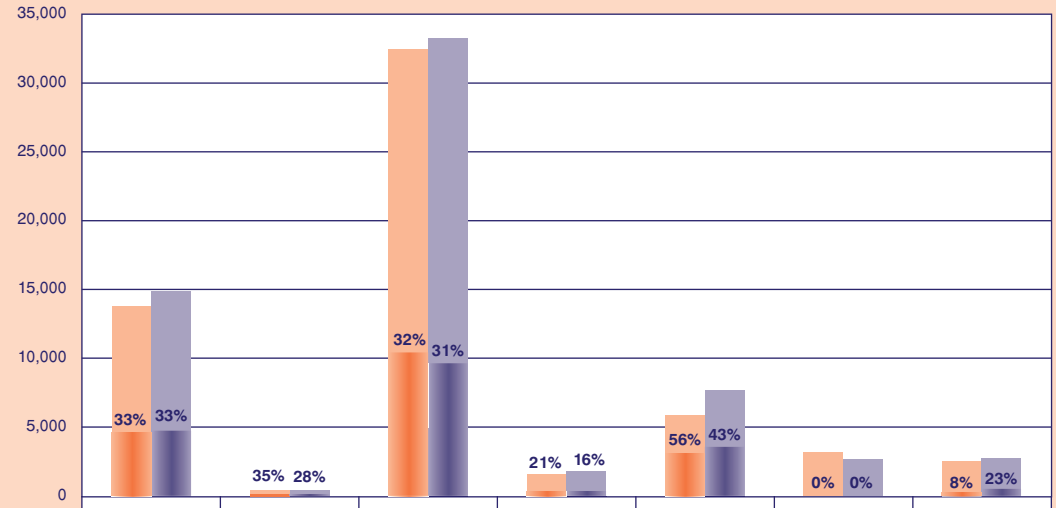
GRAPH 2.1.1
State Budget execution for total revenues for the first quarter of 2024



	VAT	Excise taxes	Property taxes	Income taxes	Transfers	Sales of goods & services	Others current revenue	Tax returns
State Budget 2023	22,217	7,115	2,380	18,476	7,953	2,418	2,124	6,110
State Budget 2024	24,391	7,065	2,487	21,669	7,960	5,559	552	6,588
Outcome period 2023	7,544	2,032	353	4,991	3,959	284	557	2,128
Outcome period 2024	8,170	2,115	1,165	6,246	2,663	342	436	2,148

Source: General Accounting Office, Ministry of Finance.
Note: The percentage refers to the execution during the first quarter.

GRAPH 2.1.2
Total expenditure's State Budget execution for total expenditures for the first quarter of 2024



	Compensation of employees	Social benefits	Transfers	Purchases of goods & services	Interest payments	Other current expenditures	Purchase of fixed assets
State Budget 2023	13,796	397	32,476	1,541	5,821	3,156	2,531
State Budget 2024	14,850	411	33,229	1,792	7,701	2,668	2,727
Outcome period 2023	4,602	137	10,418	325	3,236	0	206
Outcome period 2024	4,886	80	9,625	346	3,558	0	521

Source: General Accounting Office, Ministry of Finance.

Note: The percentage refers to the execution during the first quarter.

the same execution rate as in 2023, while social benefits and purchases of goods and services show an increase of 7% and 5%, respectively. The execution of expenditures for the purchase of fixed assets has decreased by 15%.

2.2. The evolution of Greek public debt, first quarter 2024

According to the latest data available from the Public Debt Management Agency,[2] on 31/3/2024 the General Government's debt amounted to 356.1 billion euros, reduced by 645 million euros (0.2%) compared to the end of 2023 and by 746 million euros (0.2%) from the end of 2022. The debt has a fixed interest rate, and the weighted average duration is 19.19 years. The average repricing duration is 18.5 years, while the servicing cost on a cash basis including Swaps is 1.33%. The net debt result of the General Government, without cash reserves (which amounted to 35.7 billion euros), reached 320.4 billion euros in the period under review. The net debt of the General Government is reduced by 2.7 billion euros (0.8%) compared to the end of 2023 and by 4.9 billion euros (1.5%) from the end of 2022.

Regarding the Central Government's debt, it amounted to 405.5 billion euros, showing a decrease of 1 billion (0.2%) compared to the previous quarter, i.e., end of 2023, while it increased by 4 billion (1%) compared to the corresponding quarter of 2023. In addition, cash deposits decreased by 1.8 billion (8.7%) compared to the end of 2023, while they increased by 0.3 billion (1.7%) compared to the first quarter of 2023.

The composition of Central Government debt in the first quarter of 2024 is depicted in Table 2.2.1. The

2. *Public Debt Bulletin,* March 2024, Public Debt Management Agency.

TABLE 2.2.1 Central Government debt[1] (in million €)*

Period	2023Q1	2023Q4	2024Q1
Outstanding Central Government debt	**394,547.18**	**400,275.64**	**401,528.24**
Debt by type of interest rate			
Fixed rate [2]	401,528.24	406,522.91	405,540.58
Floating rate [2,3]	0.00	0.00	0.00
Debt by way of trading			
Tradable	95,563.72	102,443.77	105,440.55
Non-tradable	305,964.52	304,079.14	300,100.03
Debt by currency			
Euro	401,528.24	406,522.91	405,540.58
Non-Eurozone currencies	0.00	0.00	0.00
Cash Deposits of the H.R.[4]	**19,098.80**	**21,272.80**	**19,426.70**
Debt guaranteed by the Central Government	**29,339.40**	**28,697.90**	**28,704.30**

Source: Public Debt Bulletin, Public Debt Management Agency.

Notes:

1. Central Government Debt differs from General Government Debt (Maastricht definition) by the amount of intra-sectoral debt holdings and other ESA '95 adjustments.
2. Fixed/floating ratio is calculated taking into account i) interest rate swap transactions, ii) the use of funding instruments by the ESM regarding the loans that have been granted to the Hellenic Republic and iii) the incorporation of the risk metrics of the EFSF's liability portfolio into the Greek debt portfolio.
3. Index-linked bonds are classified as floating rate bonds.
4. Included balance of dedicated cash buffer account, 15,697.3 million euro on 31/12/2023 & 31/3/2024.

* Estimates.

debt of the Central Administration in the first quarter of 2024 is in its entirety at a fixed interest rate and in euros. Regarding the percentage ratio of Central Government debt based on the mode of negotiation, there is a small change in favor of negotiable debt over non-negotiable, which stood at 26% and 74%, respectively, during the period under examination against the previous quarter (25.2% and 74.8%, respectively), as well as against the corresponding quarter of 2023 (23.8% and 76.2%, respectively). In addition, as regards the guarantees granted by the Greek State, these are stable compared to the end of 2023, while they are reduced by 635 million or 2.2% compared to the corresponding quarter of 2023.

The distribution of debt, based on the residual maturity in the first quarter of 2024, is reflected in Table 2.2.2. Short-term Greek government securities (with maturity less than one year) represent 17.2% of the total, compared to 12% from the medium-term notes (with maturities of one to five years), and 70.8% from long-term issues (maturity after five years) from 17.7%, 11.2% and 71.1%, respectively, which were the last quarter of 2023. Compared to the same quarter of 2023, a decrease in the share of short-term and long-term securities is observed, with an increase in medium-term securities.

The average residual maturity of the total Central Government debt stood at 16.85 years, decreased from that of 17.46 years in the corresponding quarter of 2023. Furthermore, regarding the new borrowing of the Greek government during the reporting period, the weighted average maturity rose to 9.10 years, showing a decrease from the level of 12.80 years at which it had formed at the end of 2023. New borrowing for the first

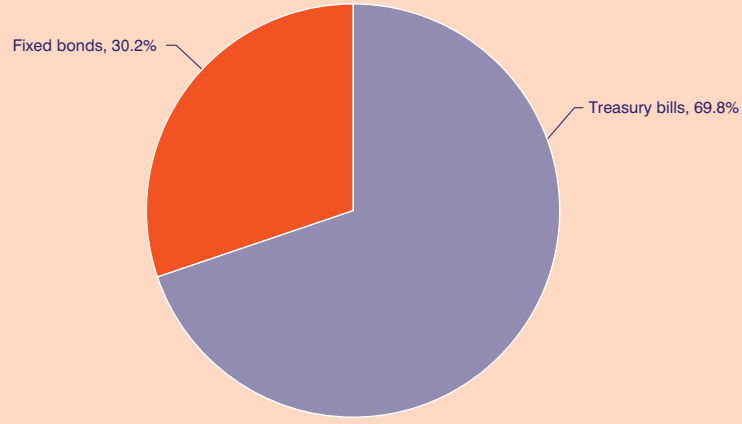
TABLE 2.2.2 Budgetary Central Government debt by residual maturity (amounts in mil. €)*

Period	2023Q1	2023Q4	2024Q1
Total amount	**401,528.24**	**406,522.91**	**405,540.58**
Short-term (up to 1 year)	68,241.03	71,986.49	69,797.43
Medium-term (1 to 5 years)	47,402.77	45,536.20	48,801.48
Long-term (more than 5 years)	285,884.44	289,000.22	286,941.67

Source: Public Debt Bulletin, General Accounting Office, Ministry of Finance.

* It concerns the volume of bonds, interest-bearing bills and short-term securities and not the total Debt of the Central Administration.

GRAPH 2.2.1
Composition of borrowing, first quarter 2024



Source: Public Debt Bulletin, General Accounting Office, Ministry of Finance.

quarter of 2024 decomposes to 30.2% in fixed bonds and 69,8% in Treasury bills (Graph 2.2.1).

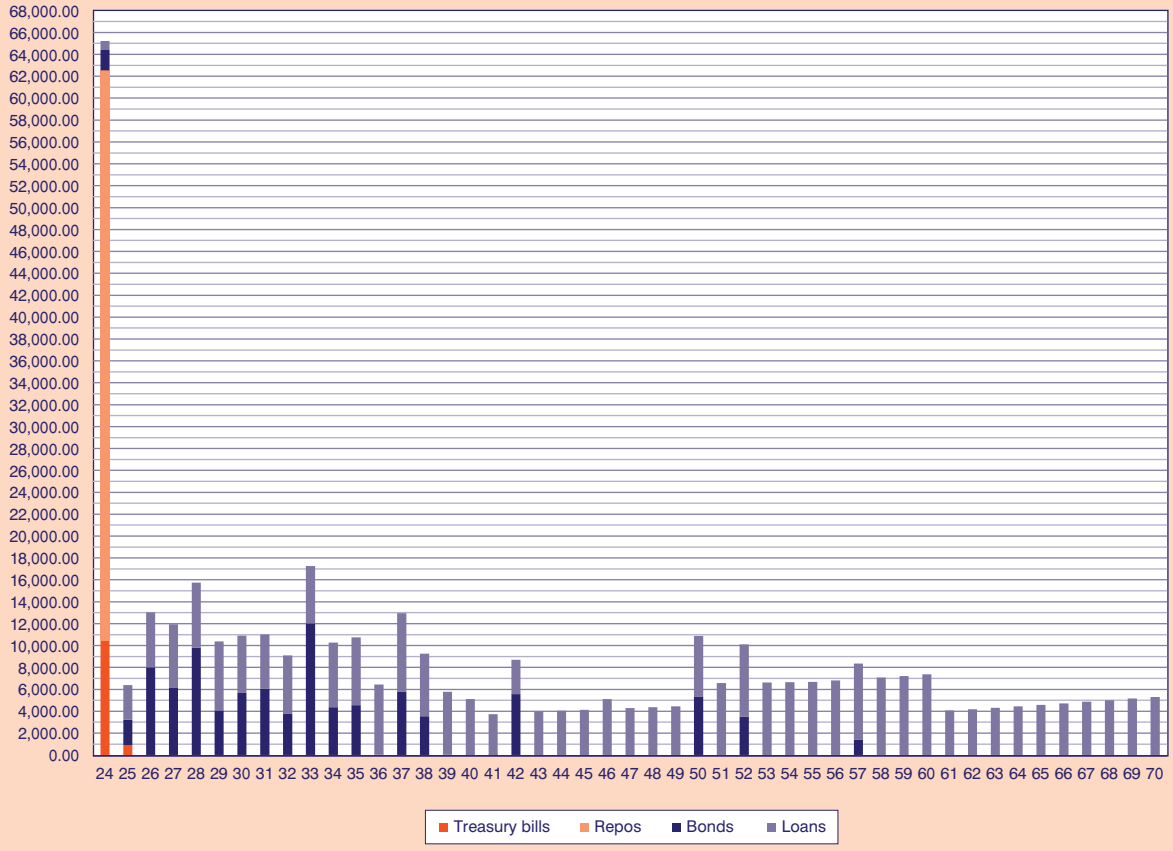
Graph 2.2.2 shows the redemption schedule of the Central Government debt based on the latest published data. From the display of newer data, it seems that apart from the present year (2024), the dispersion of the burden of redemption of public debt has now leveled, with few exceptions, at less than 10 billion euros per year until 2070.

In conclusion, the debt stabilized in the first quarter of 2023, which demonstrates that the financial needs of the Greek economy during this period were met by the revenues of the State Budget and funding from the European Union funds to cover the emergency needs from not only the energy crisis, but also the financial crisis due to inflationary pressures.

2.3. Fiscal figures perspectives

According to the fiscal forecasts for the years 2024-2025 recently submitted to the European Commission Stability Program, the Greek economy will continue the path of convergence, achieving higher growth rates than the EU average. At the same time, the fiscal balance, the continuation of debt reduction and the implementation of social policies with interventions in wages, pensions and taxes that have already been announced for the period in question are ensured.

GRAPH 2.2.2
Redemption schedule of Budgetary Central Government Debt on 31/3/2024 (amounts in million euro)



Source: Public Debt Bulletin, General Accounting Office, Ministry of Finance.

Note: Buy-backs are scheduled for the smoothening of redemptions.
Including extension of EFSF loans agreed on at the Eurogroup of 22-6-2018.

More specifically, a primary surplus of 2.1% of GDP in 2024 and 2025 and a growth rate of 2.5% for 2024 (lower by 0.4% compared to the 2024 Budget) and 2.6 % for 2025 are forecasted, which will lead to the de-escalation of the debt-to-GDP ratio from 172.7% in 2022 and 161.9% in 2023, to 152.7% in 2024 and 146.3% in 2025. International markets and rating agencies will use these results to further upgrade the Greek economy.

In addition, the change in the production model will occur with increases in foreign direct investment, gradually re-industrializing the economy, changing the export mix in favor of goods, improving the business environment, reducing tax evasion, but also changing the behavior of markets and investors.

However, despite the positive results of the Greek economy, the sustainability of the country's fiscal figures is significantly affected by contingencies that should be considered as risks, i.e., sources of large potential deviations from the fiscal forecast. Some of these contingencies are known fiscal pressures that are expected, although in some cases the degree of predictability of costs is a continuum, and the future costs of some evident and actual budgetary contingencies are much more uncertain, while finally, there are fiscal risks whose very existence is unknown, like the COVID-19 pandemic.

Known and expected fiscal pressures are the population ageing and the demographic problem that the country is facing, as there are clear estimates for the population's evolution, and for which the necessary measures should be taken to avoid fiscal pressure on insurance funds, as well as in the economy with the reduction of the active population. Although measures have been taken in this direction, such as the creation of the new supplementary insurance system for the insurance funds' sustainability and the increase

of the tax-free allowance for families with children and the birth allowance, etc. for the population's increase, these measures are not sufficient, as actuarial studies do not bode well for the insurance funds' sustainability. Also measures regarding the population's increase are not enough for the problem's magnitude and funding should be increased significantly.

The second category includes risks that are known but whose magnitude is difficult to predict, such as the climate crisis, geopolitical conflicts, the country's health system, etc., for which some measures have been already taken, but are not sufficient. For the climate crisis, important infrastructure projects will have to be implemented to prevent disasters from fires and floods, but also a safety net, a "piggy bank", to deal with these emergencies and help rebuild the affected areas. The country's health system may require significant resources to deal with emergencies, such as the pandemic, but also the population ageing. Of course, the health system already faces many shortages, mainly in medical and nursing staff, and does not operate at a satisfactory level, which requires even more funding. Finally, geopolitical risks, such as the war in Ukraine, the invasion of Palestine, the attacks of the Houthis in the Red Sea, etc., create significant economic effects, with price increases mainly in energy, but indirectly in all other products. In addition, Turkey's permanent threat requires increased funds for the country's armaments programs.

3. Human resources and social policies

KEPE, *Greek Economic Outlook,* issue 54, 2024, pp. 43-49

3.1. Recent developments in key labour market variables

Ioannis Cholezas

3.1.1. Introduction

This issue follows a slightly different approach since at the time of the writing the Labour Force Survey data for the first quarter of 2024 were not yet available. Hence, the analysis relies on monthly data from the same source to explore the evolution of the population, the employed, the unemployed, the labour force and the economically inactive aged 15-74. The data show that the population continued to shrink in the first three months of 2024, although at a slower pace. The employment rate continued to increase, and the unemployment rate dropped further. However, neither the number of the employed nor the number of the unemployed have reached the respective numbers of 2008. Despite the expansion of the labour force participation, which is a necessary requirement to compensate for the losses in population size, the number of labour force participants has yet to reach its pre-crisis level, although it has increased compared to the first three months of 2023. At first glance, the decrease in the number of economically inactive individuals is also a positive sign, but it should be investigated in more depth. Developments in paid employment seem to verify that the labour market has improved further, since there is a positive balance in the first three months of 2024, although some findings suggest that one should stay alert.

The analysis concludes with the discussion of two separate issues that often monopolise public dialogue. The first one is job vacancies, and the second is the evolution of net earnings from work. The former have been increasing considerably over the past years, and that is something that should mobilise policy makers and intensify efforts to mitigate the phenomenon, before job vacancies cause additional problems. Even though net earnings from work, for the four types of households chosen, have been increasing over time, this increase so far has been slower than the European average. This has led to the widening of the differential between Greece and the EU27. Moreover, there is evidence that convergence to higher levels of earnings has been slower for households with children.

3.1.2. Labour Force Survey (monthly data)

The analysis that follows relies on seasonally adjusted data from the Labour Force Survey, which includes limited and aggregate information for people aged 15-74. Hence, it discusses the developments in the first three months of 2024, comparing key labour market variables to the situation that prevailed a year ago.

Population

We showed in previous issues that the number of people aged 15-64 has been declining since 2008. The same is also true for the first three months of 2024 and for the people aged 15-74. The fact that the rate of decline got smaller this year is a good sign, but not good enough to lead to complacency. Table 3.1.1 reports that the average monthly decline in the size of the population in the first three months of 2024 reached 23.5 thousand when the respective declines reached 31.2 thousand in 2023 and 32 thousand in 2022. Overall, in the period March 2008 – March 2024, the size of the population declined by 693 thousand people, which represents an 8.2% decline. Even though the pace of the fall slowed, the population decline is an issue that should cause concern to the society and the state, both regarding the drop in the birth rate and migration flows from and to the country. Admittedly, there are no easy and quick fixes for the demographic problem. Recent policies that address this issue, like the raise in the birth grant, the implementation of paternity leave and the expansion of the maternity allowance to self-employed mothers and farmers, undoubtedly constitute steps in the right direction, but evidently, they are not enough.

The employed

On the contrary, the number of the employed went up by 130.5 thousand people each month on average in

TABLE 3.1.1 Average change in Q1 (in thousand)

	Population	Employed	Unemployed	Labour force	Economically inactive
2008	2.5	59.0	-42.7	16.3	-13.8
2009	-30.4	-46.6	64.8	18.2	-48.6
2010	-52.1	-100.5	121.5	21.0	-73.1
2011	-77.3	-278.8	201.2	-77.6	0.3
2012	-43.9	-380.7	309.4	-71.4	27.4
2013	-76.6	-278.1	235.2	-42.9	-33.7
2014	-45.9	-15.2	-15.5	-30.7	-15.2
2015	-52.3	39.7	-76.7	-36.9	-15.4
2016	-41.3	105.4	-62.8	42.5	-83.8
2017	-36.5	44.6	-72.4	-27.8	-8.7
2018	-34.3	59.6	-113.6	-54.0	19.8
2019	-41.5	89.7	-78.5	11.2	-52.8
2020	-44.7	-36.6	-141.9	-178.5	133.8
2021	-29.9	-98.3	-31.9	-130.1	100.2
2022	-32.0	407.3	-110.8	296.5	-328.5
2023	-31.2	56.1	-88.9	-32.8	1.6
2024	-23.5	130.5	-27.1	103.4	-126.9

Source: Labour Force Survey, ELSTAT.

the first three months of 2024 compared to the respective months of 2023. This is much better than 2023 (56.1 thousand) but worse than 2022 (407.3 thousand). However, the year 2022 followed the decline in employment due to Covid-19 in 2020 and 2021, as shown in Table 3.1.1, which means that the size of the increase is probably due to the bouncing back after two years of employment losses. In any case, when comparing March 2008 to March 2024, it becomes clear that there were 291.6 thousand fewer people employed in 2024, which represents a 6.3% gap compared to the pre-crisis level of employment.

The evolution of the number of the employed also explains the increase in the employment rate, which reached 55.6%, i.e., 1.7 percentage points higher than March 2023 and 3.6 percentage points higher than the respective month in 2008. The decline of the population, which is the denominator in the employment rate, leads to a higher employment rate with fewer people employed. As shown before, the number of the employed in March 2024 was 6.3% smaller than 2008, while the size of the population was 8.2% smaller. In sheer numbers, there were approximately 292 thousand fewer employed in March this year, but 693 thousand fewer people compared to March 2008.

The unemployed

The number of unemployed individuals moved in the opposite direction (Table 3.1.1). The average monthly decrease reached 27.1 thousand individuals in the first three months of the year. Compared to March 2023, there were 47.3 thousand fewer unemployed. It is important to note that so long as the decrease in the number of unemployed people is accompanied by an increase in the number of the employed, the situation in the labour market is improving. Otherwise, it may be driven by people dropping out of the labour force for various reasons, e.g., retirement, emigration, etc. During the period of concern, though, the number of the

employed went up, and this increase overcompensated for the decrease in the number of unemployed people, as already shown. In this case, the inflows may be dominated by graduates finding their first job or people who were economically inactive in the past.

The total number of unemployed people aged 15-74 in March 2024 reached 492.9 thousand. This number is bigger than the respective number in March 2008 by 84 thousand. In other words, there were 20.5% more unemployed individuals in March 2024 compared to 16 years ago. Unsurprisingly, even though the unemployment rate fell to 10.2% in March, the lowest in the past few years, it was still bigger than March 2008 by 2 percentage points. In any case, it should be stressed that the decrease in the unemployment rate is a positive outcome for the labour market, but it should not weaken efforts to improve employment prospects, especially for those groups who suffer the most, like women, immigrants and youth, as discussed in previous issues of the *Greek Economic Outlook*.

The labour force

The labour force is the sum of the employed and the unemployed. In other words, it consists of those who are either working or are willing and able to work, are trying to get a job, but have not managed to find one yet. The size of the labour force increased in the first three months of 2024, reversing its previous shrinking reported in 2023. The average monthly increase reached 103.4 thousand individuals, and it was the biggest increase of the past few years, except for 2022, which, as shown in Table 3.1.1, was driven by the increase in the number of the employed. A strong annual increase was recorded in February (vs. February 2023) by 140.6 thousand people, while in January, the increase surpassed 101 thousand people. In March 2024, there were 68.3 thousand more people in the labour force compared to last year. Note that the balance has been mostly negative in the previous years in the first three months, a few times being positive but small, due to the fall in economic activity during winter. It is obvious that this considerable increase in the labour force is due mainly to the great increase in the number of the employed, as is evident in Table 3.1.1, which was four times bigger than the decrease in the number of the unemployed, despite the population decline. This means that new people, previously inactive, have entered the labour force and found a job.

Based on the above changes, the size of the labour force in March exceeded 4.8 million people. However, it still fell short of the respective size in March 2008 by 207.3 thousand people. On the contrary, the labour force participation rate for people aged 15-74 reached its maximum value of 61.9% in March 2024. This is the highest rate ever. Even so, it was lower than the respective rate in many European countries. It suffices to mention that, according to Eurostat,[1] the average participation rate for people aged 15-74 exceeded 65% in the last quarter of 2023. Therefore, as in the case of the unemployed, efforts to attract more people to the labour force should continue, targeting especially those groups who prefer to abstain, like women or even those who retired early, but are still willing and able to work, and have been facilitated in this direction by Law 5078/2023. The fact that the population is shrinking makes it even more necessary to increase the participation rate first, and then, increase employment.

The economically inactive

Labour force inflows can come from economically inactive individuals. These are people aged 15-74 who, for various reasons, choose to neither work nor look for a job. The last column in Table 3.1.1 shows that the average monthly decrease of this group of people reached 127 thousand people in the first three months of 2024. Some of that decrease may concern people leaving the country, while another big part probably consists of people who decided to enter the labour force, driving the relevant increase discussed above. The total number of inactive people in March 2024 reached 2.97 million people, i.e., approximately 485.8 thousand fewer than the respective number in March 2008; in relative change, the decrease reached 14.1%. These numbers represent good signs for the labour market, especially since they are accompanied by an increase in labour force participation.

The inactivity rate also went down, but the change is far less impressive. The rate stood at 38.1% in March, one percentage point lower than March 2023 and 2.6 percentage points lower than March 2008. At any rate, it seems that the labour market is moving in the right direction. However, since the respective rate in the

1. The information was retrieved on 23/5/2024 from Eurostat: <https://ec.europa.eu/eurostat/databrowser/view/lfsq_argan__custom_11530903/default/table?lang=en>.

EU27 in the last quarter of 2023 was 34.5%, according to Eurostat, there is no room for complacency.[2]

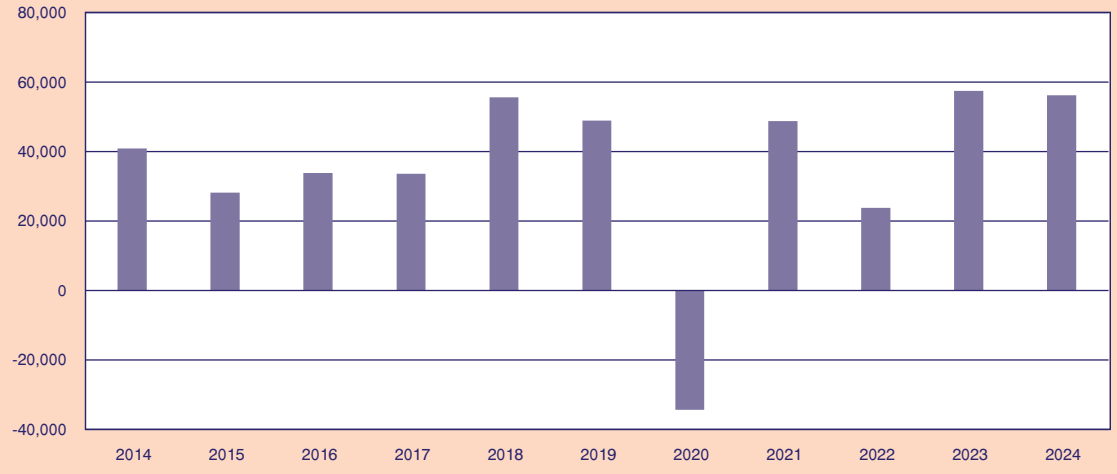
3.1.3. Paid employment

Paid employees constitute the majority of the employed in the Greek labour market. Almost seven out of ten were paid employees in 2023. Hence, what happens to paid employment affects the entire labour market, even though the share of the employed in paid employment continues to be low compared to European standards. It suffices to note that the respective share in the EU27 stood at 85% in 2023.

The balance of paid employment flows was negative in January and positive in February and March 2024. The losses in January were the biggest recorded in the period 2013-2023 (almost 32 thousand), but the same goes for gains reported in March (63.7 thousand). Given the positive balance in February, which exceeded the average of the period 2013-2023, 56.2 thousand new jobs of paid employment were created in the first three months of 2024 (Graph 3.1.1). This number is only slightly smaller than the best performance reported in 2023 (57.5 thousand). During the first three months of the year, 644 thousand hires and 588 thousand withdrawals (layoffs and quits) were reported. Both numbers are the biggest of the past few years. This finding suggests increased mobility in the labour market without losing its upward trend. Whether this is desirable or not cannot be decided without further analysis.

A favourable observation is that most hires involved full-time job contracts. The respective share reached 52.9% from January to March (340.7 thousand). The second biggest share involved new part-time job contracts (37.2% or 239.8 thousand) followed by new work-in-shift job contracts (9.9% or 63.6 thousand). However, a comparison to the same period in previous years reveals that the share of work-in-shift new job contracts has been increasing while the shares of both full-time and part-time new job contracts have been decreasing (Graph 3.1.2). There are similar mixed findings when looking into conversions of full-time job contracts to part-time or work-in-shift job contracts. The total number of conversions reached 9.8 thousand in the first three months of 2024, approximately 800 more than 2023, but 1,500 less compared to 2022. Most of them involved conversions to part-time job contracts, while the number of conversions to work-in-shift job contracts without the consent of the employee fell considerably (3.2% of total in 2024 vs. 12.7% in 2023, 9.5% in 2022 and 5% in 2021).

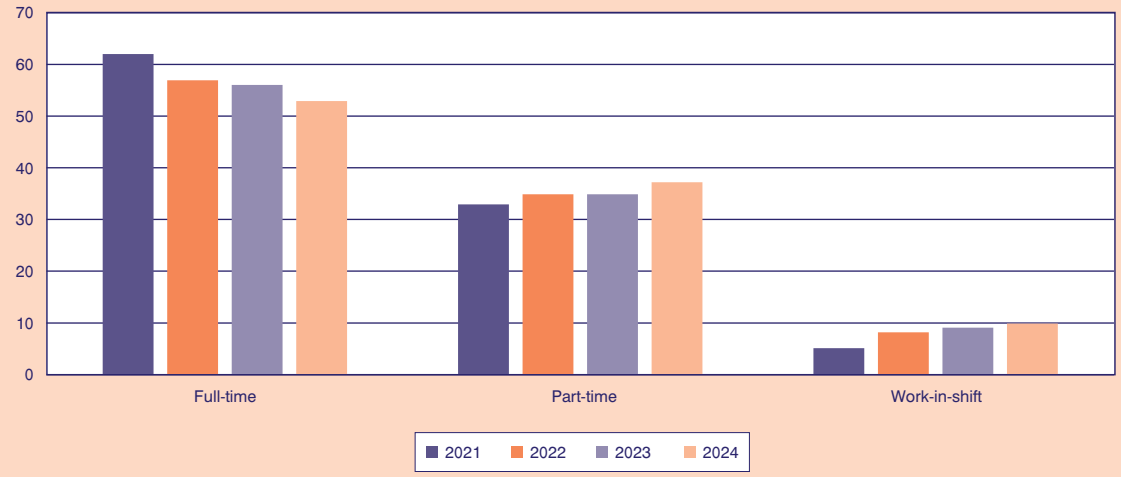
GRAPH 3.1.1
Paid employment balance (in thousand), Q1



Source: ERGANI Reports, Ministry of Labour and Social Security.

2. The information was retrieved on 24/5/2024 from Eurostat: <https://ec.europa.eu/eurostat/databrowser/view/lfsq_ipga__custom_11530808/default/table?lang=en>.

GRAPH 3.1.2
Hires by type of job contract (% of total), Q1



Source: ERGANI Reports, Ministry of Labour and Social Security.

3.1.4. Job vacancies

Labour supply shortages in various sectors of economic activity have been in the spotlight lately. Indeed, job vacancies, which is the most common term, have been increasing in the Greek economy, and that is something that should cause concern, irrespective of their actual number. One look at Eurostat's data reveals that in 2023, the job vacancy ratio for the business economy,[3] i.e., the ratio of vacancies to total employment, reached 2%. The respective average index in the EU27 was 2.9%. Considering that the number of employed people aged 15-64 in the business economy in 2023 marginally exceeded 2.48 million, then job vacancies were less than 50 thousand in Greece. This number does not seem that big, even when compared to the European average. However, one should also consider the following.

First, the job vacancy ratio has been increasing over time; it started at 1.5% and fewer than 31 thousand job vacancies in 2014. Moreover, in the last quarter of 2023, ELSTAT[4] reported an increase in job vacancies of over 80% compared to 2022. This upward trend suggests that stronger interventions are necessary before things get worse. Various actions like the platform JOBmatch by DYPA[5] or the Labour Market Diagnosis Mechanism are moves in the right direction, but a) the results must be assessed in due time and necessary corrective actions must be implemented, and b) the results must be utilised by the beneficiaries, the employers, the employed and policy makers. Considering that Greece does not have adequate institutional structures to successfully address crisis management, it becomes clear how important it is to act swiftly.

Second, the situation is different across sectors of economic activity. For instance, in *Accommodation and food service activities* (i.e., tourism), the job vacancy ratio is close to 4.3%. This is 0.5 percentage points higher than the European average and more than double the national average for the business economy in general. Moreover, the job vacancy ratio equals 4.5% in *Water supply; sewerage, waste management and remediation activities*, 2.7 percentage points above the European average, and 4% in *Professional, scientific, and technical activities*, slightly above the European average. These differences across sectors should be investigated without prejudice to come up with solutions fast. The problematic mismatch between labour

3. The business economy includes all sectors of economic activity except for the agricultural sector, public administration and defense, education, health and social security, activities of households as employers, arts, entertainment and recreation, and other service activities.

4. See Press Release by ELSTAT in March 15th 2024 entitled "Job Vacancies 4th quarter 2023 (Provisional Data)".

5. See: <https://jobmatch.dypa.gov.gr/>.

demand and supply, skills mismatch, low remuneration, poor working conditions, etc., could be some of the reasons why specific sectors or certain firms are finding it harder to hire the best suited personnel. Even though steps in the right direction are being taken, for the time being, judging by the increasing job vacancy ratio, they do not seem to be enough.

Third, even in sectors that perform better than the European average, e.g., *Construction*, where the job vacancy ratio is 2.6%, i.e., 1.1 percentage points lower than the EU27 average, the problem should not be considered negligible. The Greek economy is characterised by many small and very small businesses which probably face more serious problems from job vacancies, since there is often no backup personnel and room for substituting between workers is limited.

Fourth, it is highly probable that job vacancies are being underreported since firms are not obliged to declare a vacancy. Moreover, if firms do not expect any support from the Public Employment Service (DYPA) in filling their vacancies, then their motivation to declare vacancies gets weaker. This means that the reality that was just described may be worse, as the numbers discussed could be heavily understated.

3.1.5. Annual earnings from work

The situation in the Greek labour market has been improving over the past few years, except for the coronavirus era, which is reflected in the increasing number of the employed and the decreasing number of the unemployed. Earnings from work constitute a key parameter when discussing employment. Therefore, it is interesting to see how earnings from work evolved over the past few years following employment, as the economic theory predicts, and how Greece compares to the European average. This section uses data from Eurostat and attempts to answer these questions.

To compare earnings from work between different countries, one should consider the different costs of living. Moreover, if one wishes to explore the evolution of earnings over time in a single country, one should consider the evolution of prices over time, i.e., inflation. Both requirements can be met by transforming net earnings from paid employment to comparable values using the Purchasing Power Standard (PPS). Another element that adds validity and should be considered is the type of household, which has to do with the number of household members, their employment status, and the level of their earnings. In this case, four types of households have been chosen, and their earnings from work are reported in Table 3.1.2. The analysis of this table leads to five central observations.

The first observation is that net earnings from work differ between different types of households. Household types C and D report much higher earnings because they have two adult members working instead of one, i.e., they are two-earner households. Moreover, one-earner couples with two children, i.e., only one member is working (type B), only have a small earnings differential compared to single person households without children (type A). This differential reached

TABLE 3.1.2 Annual net earnings from paid employment in PPS by type of household

	EU27		Greece			Greece/EU27		Greece	
	2013 (€)	2023 (€)	2009 (€)	2013 (€)	2023 (€)	2013 (%)	2023 (%)	2023/2013 (%)	2023/2009 (%)
Household A	20,608	27,530	19,413	17,143	20,066	83.2	72.9	117.0	103.4
Household B	24,681	33,138	23,193	19,093	22,575	77.4	68.1	118.2	97.3
Household C	43,884	59,042	45,869	36,802	43,626	83.9	73.9	118.5	95.1
Household D	41,257	55,118	42,090	36,802	43,347	89.2	78.6	117.8	103.0

Source: Eurostat, <https://ec.europa.eu/eurostat/databrowser/view/earn_nt_net/default/table?lang=en>.

Note: Household A= Single person without children earning 100% of the average earning; Household B = One-earner couple with two children earning 100% of the average earning; Household C = Two-earner couple with two children, both earning 100% of the average earning; Household D = Two-earner couple without children, both earning 100% of the average earning.

12.5% in 2023, when the European average marginally exceeded 20%. One plausible explanation could be that households with children enjoy more benefits in the EU27 compared to Greece, e.g., in terms of tax benefits. Moreover, the fact that in the EU27, two-earner couples with two children (type C) enjoy higher net earnings from work compared to two-earner couples without children (type D), while in Greece the earnings differential between the two types is negligible, seems to add additional strength to this argument.

The second observation is that net earnings from work in Greece increased over the past ten years (2013-2023) at almost the same rate for all types of households. The relevant index grew from 117 to 118.5 according to the specific type of household. Even though the numbers are not reported in Table 3.1.2, the respective index in the EU27 exceeded 133 for all households. However, even in the EU27, the rate of change is similar across households. Therefore, the evolution of net earnings from work has been similar across households both in Greece and the EU27, but it has been much faster in the latter.

The third observation is that, despite the increase in net earnings from work, the comparison with the situation before the crisis, i.e., with 2009[6], is revealing and, at the same time, disheartening. Over the past 14 years, earnings from work increased only marginally for households without children (types A and D). But for households with children (types B and C), earnings have been deteriorating over time. The biggest decrease is recorded for two-earner couples with two children (type C). The fact that not only did net earnings of households with children fail to increase over time, but they have actually decreased, is probably another reason why the population is declining.

The fourth observation is that net earnings from work in Greece are lower than the EU27 average for all types of households at both points in time (2013 and 2023). However, the differential is not steady between households of different types. In fact, the relevant ratio ranged from 68.1% for one-earner households with two children (type B) to 78.6% for two-earner households without children (type D) in 2023.

The fifth and last observation is that over the past few years, despite the improving labour market conditions and the earnings rise associated with it, net earnings from work in Greece diverged further away from those in the EU27, because the rate of change in Greece has been smaller than the European average. The differential for single-person households without children (type A) increased by 10.3 percentage points since 2013. Accordingly, for two-earner couples without children (type D), whose earnings are closer to the European average, the respective differential widened by approximately 10.6 percentage points.

The analysis so far reveals that the target of converging to the European average in terms of net earnings from work is far from accomplished. In the short term, job vacancies in the labour market could push earnings from work higher as firms will try to fill job posts by raising wages to attract workers. However, recent history suggests that wage increases that exceed increases in labour productivity harm cost competitiveness and cause serious economic problems. In this context, restructuring the production process, aiming at products that embody higher added value and increase labour productivity in the meantime, does not seem to be adequately promoted. Therefore, the need to introduce structural and institutional reforms and implement policies to encourage productive investments by attracting national and international capital aiming at restructuring the production process to this end is self-evident.

6. Note that contrary to employment, net earnings were the highest in 2009, not 2008.

KEPE, *Greek Economic Outlook,* issue 54, 2024, pp. 50-53

3.2. Comparing the average hourly wage between Greece and the EU27

Vlassis Missos

3.2.1. Introduction

A recently published article in the *Financial Times* highlights a contradictory aspect of the Greek economic recovery since 2009. On the one hand, strong GDP growth and a positive assessment by the S&P credit ratings agency suggest a more robust economy. On the other hand, as indicated by GDP per capita measured in purchasing power parity (PPP), the standards of living have not improved. Instead of focusing on GDP, the analysis below emphasizes on the average hourly wages adjusted for PPP.[1] PPP is a very helpful indicator used for cross-country comparative analysis. Combined with wages, it reveals how much a worker in each country earns in terms of a common basket of goods and services.

PPPs are increasingly used in comparative analysis of the divergences between EU countries.[2] They are "used as currency conversion rates to convert expenditures expressed in national currencies into a common currency, eliminating differences in price levels across countries. [They] are primarily designed for comparison between countries rather than for comparison over time."[3] It can therefore be used as a national currency conversion tool, expressing expenditure in a common unit and eliminating price level differences.

The latter is addressed by calculating quantities as deviations from a constant mean, typically set at 100. This approach allows country values to represent the distance from the average, indicating their degree of convergence or divergence. Therefore, to correctly interpret Figure 3.2.1, it is important to understand that PPP-adjusted hourly wages represent the purchasing power of an hour's work in each EU27 country relative to the European average (100) across the period 1995-2023. For clarity, all countries remain shaded in the figure, with a specific focus on Greece.

3.2.2. Hourly wages in PPP

Figure 3.2.1 shows the relative purchasing power of the wage per hour worked in Greece compared to the EU27 average from 1995 to 2023. While exceeding 60% of the EU27 average throughout 1995-2008, this figure alone does not necessarily translate to particularly high absolute earnings. A broader historical contextualization is crucial. Total disposable household income during the 2000-2006 period undoubtedly included contributions from other sources beyond wages, such as social benefits, pensions, dividends, rents, etc.[4] Moreover, the general institutional framework was very different, so the pre-2012 level of labor market flexibility in Greece differed significantly from the current setup.[5] Industrial relations quality was shaped not just by earnings levels but also by the protective institutional framework that regulated the job market.

Setting these important qualitative factors aside and focusing solely on the purchasing power of the hourly wage, a concerning trend becomes apparent. Greece consistently ranked between 8th and 9th from the last, with a slight convergence trend towards the EU27 average. This upward trend, however, shows signs of stagnation just before the financial crisis. The wage per hour worked in PPP remained stable from 2007-2008, followed by a downward trajectory from 2009 onwards. Notably, by 2020, coinciding with the significant impact the pandemic had on the global economy, the hourly wage in purchasing power in Greece converged with that of Bulgaria. This gap has since widened.

1. "Hourly wage" used here refers to the average wage earned per hour worked, not the specific hourly rates mandated by law or collective bargaining agreements for skilled or unskilled labor.

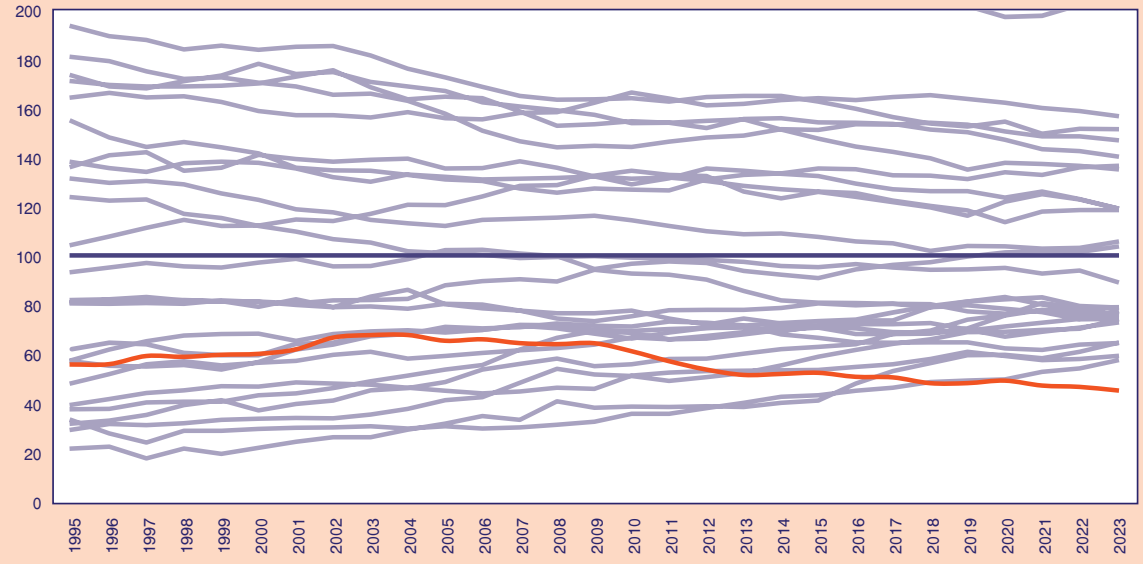
2. Missos V., Domenikos C. and Pontis N. (2024), Hardening the EU core-periphery lines 2009-2019: Dependency, neoliberalism, welfare reformation and poverty in Greece, *Structural Change and Economic Dynamics*, 69, 171-182, <https://doi.org/10.1016/j.strueco.2023.06.005>.

3. Eurostat (2008), *European price statistics: An overview*, European Commission, p. 49.

4. According to the published data of the GIS and the Hellenic Tax Administration, for the taxable income of individuals, from tax year 2013 (the lowest taxable income level in Greece) until 2022, total taxable wages increased by 21%.

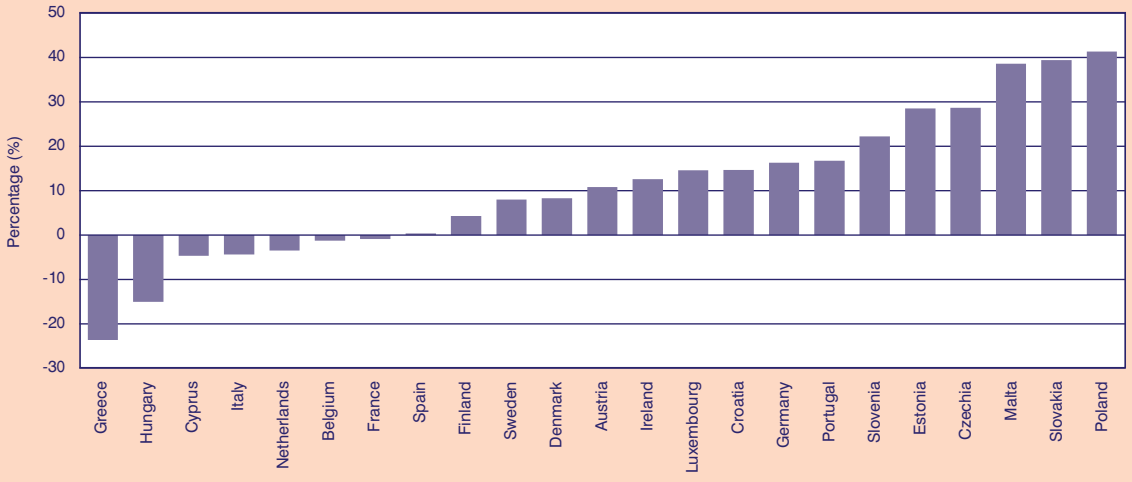
5. Livanos I. & Tzika E. (2022), *Precarious employment in Greece: Economic crisis, labour market flexibilization, and vulnerable workers,* LSE, Hellenic Observatory Discussion Papers on Greece and Southeast Europe, paper No. 171.

FIGURE 3.2.1
Wages per hour worked at PPP as a deviation from the EU27 average (100), with emphasis on Greece, 1995-2023



Source: Eurostat and author's own calculations.

FIGURE 3.2.2
Significant fall in real hourly wages in Greece, percentage (%) change 2009-2023



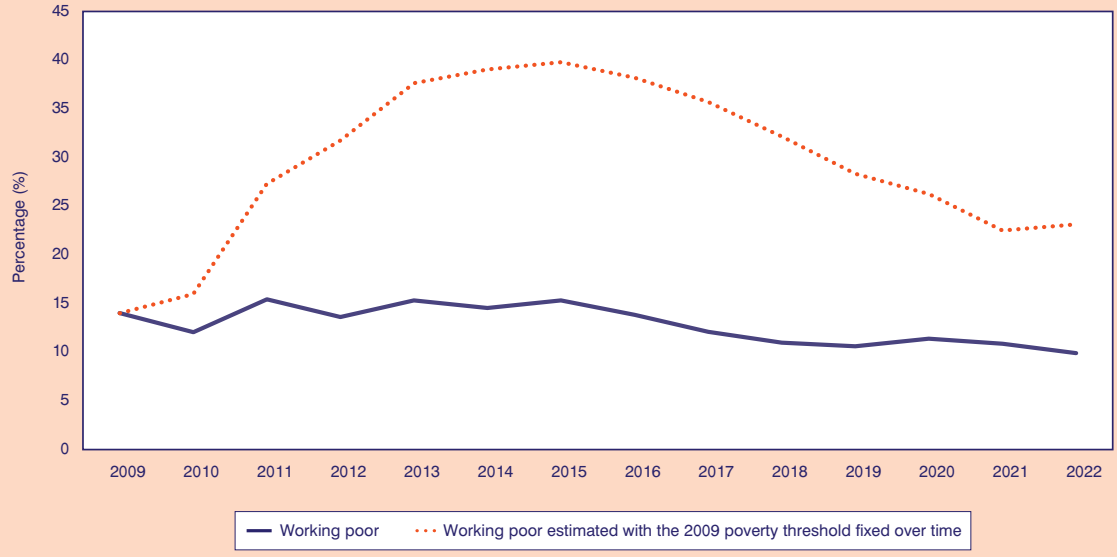
Source: Eurostat and author's own calculations.

This concerning development necessitates further investigation. A more comprehensive analysis should incorporate both changes in relative wage levels and total hours worked. The relationship between working hours and hourly wages requires careful examination. Notably, a decline in total hours worked across the EU27 was observed in 2020 due to pandemic restrictions. However, from 2020 to 2023, the average increase in hours worked per worker in the EU27 was estimated at 3.4%, compared to a much higher 9.25% in Greece – nearly three times the average. Interestingly, Greece also boasted the second-highest number of hours worked per worker among EU27 countries in 2023. This stands in stark contrast to the trend in real hourly wages. As depicted in Figure 3.2.2, Greece has experienced the largest decline in real hourly wages (-23.7%) over the past fifteen years since the 2009 crisis, followed by Hungary (-15%). This suggests that the significant increase in working hours in Greece may be a contributing factor to the substantial decline in real hourly wages.

3.2.3. Working poor in Greece

While unemployment soared during the Greek crisis, exceeding 25% at its peak, many employees faced stagnant wages or low pay. Under such circumstances, the possibility of being poor while employed may not be low. Eurostat defines in-work poverty as the proportion of the working population (employed or self-employed) whose disposable income falls below the poverty threshold. Hence, this measure may serve as an indication of whether employment guarantees an escape from income poverty. According to the official approach followed by Eurostat, the working poor excludes those employed for less than seven consecutive months.[6] However, in the data presented in Figure 3.2.3, this restriction is disregarded. The calculations presented below take the entire working population into account, regardless of employment duration. This choice stemmed from Greece's exceptionally high unemployment during 2012-2018, where the likelihood of finding new workers (employed for less than seven months) was significantly higher. Nonetheless, the results in Figure 3.2.3 closely

FIGURE 3.2.3
Percentage (%) of working poor with a changing poverty threshold and with the 2009 poverty threshold fixed over time



Source: Eurostat, SILC and author's own calculations.

6. <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=EU_statistics_on_income_-and_living_conditions_(EU-SILC)_methodology_-_in-work_poverty#Description>

mirror Eurostat's data, with the results being approximately 1 percentage point higher.

Several studies concerning the EU27 highlight factors beyond wages that influence income levels, such as household composition, institutional functions, and gender discrimination.[7] For instance, a part-time worker in a high-income household faces less risk of poverty compared to a part-time worker in a low-income household. Figure 3.2.3 utilizes two different approaches to measure in-work poverty. The first, aligned with the official relative poverty measure, examines the proportion of employed individuals whose disposable income falls below 60% of the median income. According to this indicator, the working poor ranged from 14% to 15% between 2009 and 2015, decreasing to less than 10% in 2022. This implies that less than 1 in 10 workers in Greece are estimated to be below the poverty line. However, the results of this method appear to contradict the declining wage trend shown in Figure 3.2.1.

Therefore, to acknowledge the relative decline in hourly wages and emphasize the 2009 financial crisis, an alternative modified index for measuring poverty is introduced. This fixed poverty line index represents the percentage of working poor whose disposable income falls below the 2009 level. Essentially, the real poverty threshold remains constant over time, and the index captures the percentage of the population living below that line. This differentiation arises because the poverty threshold, linked to the median income, can decrease significantly during periods of substantial income contraction, thereby underestimating in-work poverty. Based on this alternative definition, the difference in measuring poverty is substantial. Approximately 40% of workers across all categories were living below the 2009 poverty threshold in 2015. By 2022, worker incomes had still not fully recovered from the long recession's impact.

Greece has undoubtedly experienced a prolonged period of wage cuts and stagnation compared to other EU27 countries. Newly created jobs frequently entail lower wages and comparatively longer working hours. In 2022, nearly one-quarter of total employment (23.1%) was estimated to be living below the 2009 poverty line. The phenomenon of in-work poverty should receive significant attention from policymakers and be prioritized on the national development agenda. Consequently, emphasizing the creation of well-compensated, high-quality employment opportunities is crucial for enhancing living standards throughout Greece.

7. Halleröd, B., Ekbrand, H. & Bengtsson, M. (2015), In-work poverty and labour market trajectories: Poverty risks among the working population in 22 European countries, *Journal of European Social Policy,* 25(5), 473–488, <https://doi.org/10.1177/0958928715608794>.

3.3. Multidimensional child poverty in Greece: Empirical findings from the longitudinal implementation of a new multiple indicator during the period 2010–2023

Eirini Leriou

3.3.1. Introduction

This section presents the scientific findings from the longitudinal implementation of a new, multiple indicator measuring multidimensional child poverty in Attica (Greece) during the period 2010–2023 (Leriou, 2016, 2019, 2022, 2023a; Tasopoulos & Leriou, 2014). Attica is a large region that includes the capital city and is thus considered as a representative region of the whole country. The multiple index consists of six dimensions: home conditions (D.1), nutrition (D.2), unemployment of guardians (D.3), free healthcare (D.4), moral education (D.5), and leisure (D.6). The first three dimensions concern children's economic poverty, while the latter three dimensions determine children's non-economic poverty. The combination of economic and non-economic child poverty constitutes children's general (total) poverty. Each dimension consists of simple indicators. The sample consisted of 6,502 children, belonging to three distinct school categories: elementary, junior high and high school. The Municipalities of Attica were clustered in seven socio-economically homogeneous Clusters. Findings of the new indicator derive useful policies to build a more resilient society in terms of child well-being and, consequently, in terms of solving the demographic problem.

These policies are proposed to be based on artificial intelligence decision making tools, such as one composed of 2,985,984 fuzzy logic rules for child poverty.

Specifically, the theoretical and methodological framework of this section is the same as that developed in the multidimensional child well-being and poverty monitoring tool in Leriou (2016, pp. 55, 109 & 153; 2022, Sect. 2, p. 1970 & Sect. 3, Fig. 3), in which child poverty is defined as *"...the deviation from the chief end of a society, expressed as the (potential) sad feelings that children experience, originating from the deprivation of some economic or/and non-economic factors that determine this chief end, with the most important being an education that instills in children what kind of persons they ought to be."*

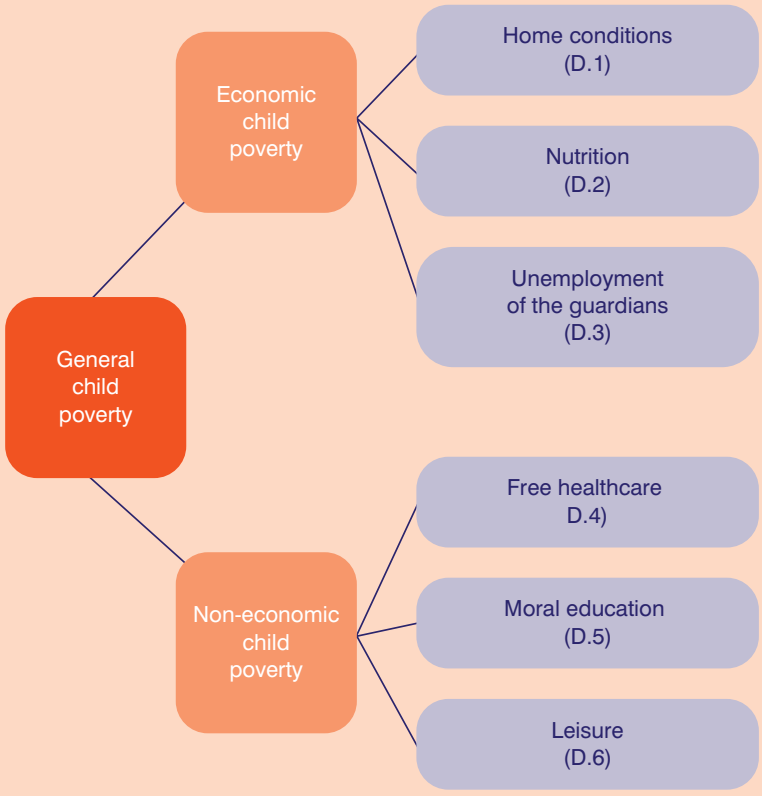
More specifically, the sum of economic and non-economic child poverty constitutes the general (total) child poverty. Economic child poverty consists of three dimensions: Home conditions (D.1), Nutrition (D.2), and Unemployment of the guardians (D.3). Non-economic child poverty also consists of three dimensions: Free healthcare (D.4), Moral education (D.5), and Leisure (D.6). Each of these dimensions consists of simple indicators (Leriou, 2016, 2019; Leriou et al., 2021; Tasopoulos & Leriou, 2014; Leriou, 2022, Sect. 2, p. 1970, Fig. 1 and 2; Leriou, 2023a, Sect. 2, p. 1938).

For conducting the quantitative survey in Attica, the Municipalities of Attica were clustered in seven socio-economically homogeneous Clusters. Regarding all the waves of the research, 6,502 students from the 6th grade of elementary school, the 3rd grade of junior high school, and the 3rd grade of high school participated, and in each wave, all Clusters and all school categories were fully covered.[1] The questionnaires and parental consent forms (Leriou et al., 2021) were validated by experts, approved by an Ethics and Conduct Committee and accepted by the Ministry of Education, which issued two licenses for carrying out the anonymous survey in schools: one for primary institutions and one for secondary institutions. The questionnaire is the same for the junior high and high school, while the elementary school questionnaire includes fewer questions to simplify it for younger children. In terms of statistical analysis, a threshold is set, and via this, it is possible to implement a measurement in order to determine a certain value of poverty. Thresholds/limits are established in order to measure the variables included in the model. Consequently, the statistical analysis in this section is similar to the 1st round of the research in which this new multiple index was implemented (Leriou et al., 2021).

The theoretical and methodological framework is summarised in Figure 3.3.1.

1. For more details see Leriou, 2022, 2023a.

FIGURE 3.3.1
Theoretical and methodological framework



Note: This figure was created with information retrieved by the following sources: Leriou, 2016 (p. 55 & 113); Leriou, 2019; Leriou, 2022, Fig. 1 and 3 (p. 1970 & 1985); Leriou, 2023a, Sect. 2 (p. 1938); Tasopoulos & Leriou, 2014.

3.3.2. Empirical evidence on multidimensional child poverty (2010–2023)

The processing of the data (through the SPSS statistical package), based on the multiple index of child poverty (Leriou, 2016, 2019, 2022, 2023a) for the school period 2010–2018, shows that 11.2 % of children (Leriou et al., 2021, Appendix 2, Table 13), in Attica, are below the economic poverty threshold (Leriou et al., 2021, Appendix 2, Table 13). More specifically, the Municipality Clusters 5 (Aegina, Lavreotiki, etc.) and 3 (Kallithea, Drapetsona, Ilion, Acharnes, Spata, Agii Anargyroi, Kropias, Egaleo, etc.) are marginally more severe in terms of economic child poverty .

According to Table 3.3.1, during the period 2018–2023, in Attica, the simple indicator "Existing internet connection" of the dimension "Home conditions" of economic child poverty depends on the school year ($\chi^2_{[4,\ N=6,286]} = 37.397$, $p < 0.001$). More specifically, a higher share of children below the threshold (5.8%) is found in the 2019–2020 school year (Table 3.3.1), while in the most recent school year (2022–2023) the share of children below the threshold decreased by 0.7% compared to the immediately preceding school year (2021–2022). In addition, the simple indicator "Humid or cold house" of the dimension "Home conditions" of economic child poverty depends on the school year ($\chi^2_{[4,\ N=5,640]} = 43.179$, $p < 0.001$). More specifically, a higher share of children (32.5%) resided in humid and cold homes in the 2020–2021 school year, while in the most recent school year, the share of children suffering from cold at home (27.7%) increased by 3.0% compared to the corresponding share (24.7%) in the immediately preceding school year. Also, the simple indicator "Heating method" of the dimension "Home conditions" of economic child poverty depends on the school year ($\chi^2_{[4,\ N=6,298]} = 21.799$, $p < 0.001$). More specifically, a higher share of children (10.5%) received inadequate or unsafe heating in the 2020–2021 school year, while in the most recent school year, the share of children (8.8%) increased by 1.9% compared to

TABLE 3.3.1 Percentage of children in general, economic and non-economic poverty by dimension, simple indicator and year, in Attica, during the period 2018–2023 (N= 6,502)

Dimensions	Simple indicators	School period 2018–2023					Total	Statistical significance
		2018–2019	2019–2020	2020–2021	2021–2022	2022–2023	2018–2023	P-value
D.1	10 (Existing internet connection)	5.634	5.797	4.887	2.562	1.876	4.295	<0,001
	4 (Humid or cold house)	21.212	30.754	32.531	24.698	27.724	28.191	<0,001
	2 (Heating method)	5.595	7.918	10.503	6.948	8.803	8.209	<0,001
	1 (Supply of electricity)	5.736	6.538	9.754	7.035	5.489	7.151	<0,001
	11 (Housing)	12.375	5.738	14.424	13.185	12.274	11.288	<0,001
	Total D.1	**10.369**	**7.960**	**12.917**	**8.523**	**9.414**	**9.861**	**<0,001**
D.2	5 (Three meals a day)	14.106	16.359	17.195	15.986	17.332	16.342	0,349
	7 (Fresh fruits and vegetables daily)	13.699	19.155	21.027	17.350	17.716	18.281	<0,001
	8 (Milk daily)	13.750	18.146	17.931	16.739	15.674	16.829	0,049
	6 (At least one meal weekly with meat or chicken or fish or pulses/ vegetables of equal nutritional value)	8.965	11.379	11.455	8.281	9.769	10.204	0,030
	Total D.2	**14.941**	**19.235**	**20.413**	**17.666**	**17.709**	**18.408**	**0,013**
D.3	**9 (Unemployment of the guardians)**	**-**	**11.372**	**15.269**	**8.714**	**5.232**	**10.724**	**<0,001**
D.4	**3 (Free healthcare)**	**11.047**	**6.202**	**7.047**	**2.769**	**4.920**	**6.177**	**<0,001**
D.5	12 (Empathy for all people)	43.630	50.807	45.925	43.022	50.629	46.999	0,001
	13 (Love of people)	26.781	33.623	33.617	26.347	34.262	31.395	<0,001
	14 (Love of animals)	46.229	50.891	51.621	49.537	51.616	50.308	0,103
	15 (Love of nature)	35.577	41.033	45.080	37.365	40.982	40.596	<0,001
	16 (Moral values/virtues)	57.298	58.501	55.290	59.278	59.267	57.807	0,174
	17 (Social solidarity)	30.420	40.110	40.741	42.247	43.629	39.982	<0,001
	Total D.5	**26.072**	**32.497**	**33.354**	**29.498**	**35.091**	**31.701**	**<0,001**

TABLE 3.3.1 (continued)

Dimensions	Simple indicators	School period 2018–2023					Total	Statistical significance
		2018–2019	2019–2020	2020–2021	2021–2022	2022–2023	2018–2023	P-value
D.6	18 (Spare time)	22.535	19.964	23.618	20.427	19.610	21.253	0.041
	19 (Playing outdoors)	43.801	42.174	45.107	44.217	51.914	45.069	<0.001
	20 (Vacation)	14.889	16.627	25.251	14.239	12.171	17.376	<0.001
	Total D.6	**16.992**	**15.122**	**23.428**	**15.478**	**15.340**	**17.549**	**<0.001**
	Economic child poverty	**8.400**	**11.594**	**14.603**	**8.185**	**6.999**	**10.533**	**<0.001**
	Non-economic child poverty	**9.874**	**9.243**	**10.783**	**4.943**	**6.520**	**8.459**	**<0.001**
	General child poverty	**5.281**	**5.893**	**9.427**	**3.485**	**3.068**	**5.783**	**<0.001**

Source: Original data/information retrieved from the following: Leriou, 2016, 2019, 2022, 2023a, b, c; Leriou et al., 2021, 2022a, b.

FIGURE 3.3.2
Percentage of children in poverty by dimension, in Attica, during the period 2018–2023 (N= 6,502)

Source: Original data retrieved from Table 3.3.1.

the corresponding share (6.9%) in the immediately preceding school year.

In addition, the simple indicator "Supply of electricity" of the dimension "Home conditions" of economic child poverty depends on the school year ($\chi^2_{[4,\ N=6,111]}$ = 22.905, $p < 0.001$). Specifically, a higher share of children (9.8%) experienced prolonged power cuts in their home, lasting more than a week, in the 2020–2021 school year, while in the most recent school year, the share of children (5.5%) reduced by 1.5% compared to the corresponding share (7.0%) in the immediately preceding school year. Moreover, the simple indicator "Housing" of the dimension "Home conditions" of economic child poverty depends on the school year ($\chi^2_{[4,\ N=5,962]}$ = 68.037, $p < 0.001$). More specifically, a higher share of children (14.4%) were placed in shelters or homelessness situations in the 2020–2021 school year, while in the most recent school year, the share of children (12.3%) decreased by 0.9% compared to the corresponding share (13.2%) in the immediately preceding school year. Furthermore, the total dimension "Home conditions" (D.1) of economic child poverty depends on the school year ($\chi^2_{[4,\ N=6,480]}$ = 26.963, $p < 0.001$). More specifically, a higher share of children below the threshold (12.9%) is found in the school year 2020–2021 (Figure 3.3.2), while in the most recent school year (2022–2023), the share of children below the threshold increased by 0.9% compared to the immediately preceding school year (2021–2022).

As depicted in Table 3.3.1, during the period 2018–2023, in Attica, the simple indicator "Fresh fruits and vegetables daily" of the dimension "Nutrition" of economic child poverty depends on the school year ($\chi^2_{[4,\ N=5,842]}$ = 20.200, $p < 0.001$). Specifically, a higher share of children (21.0%) were deprived of fresh fruits and vegetables on a daily basis in the school year 2020–2021, while in the most recent school year, the share of children (17.7%) increased by 0.4% compared to the corresponding share (17.3%) in the immediately preceding school year. Also, the simple indicator "Milk daily" of the dimension "Nutrition" of economic child poverty depends on the school year ($\chi^2_{[4,\ N=5,948]}$ = 9.544, p = 0.049). More specifically, a higher share of children (18.1%) were deprived of milk on a daily basis in the school year 2019–2020, while in the most recent school year, the share of children (15.7%) decreased by 1.1% compared to the corresponding share (16.7%) in the immediately preceding school year. In addition, the simple indicator "At least one meal weekly with meat or chicken or fish or pulses/vegetables of equal nutritional value" of the dimension "Nutrition" of economic child poverty depends on the school year ($\chi^2_{[4,\ N=5,743]}$ = 10.726, p = 0.030). More specifically, a higher share of children (11.5%) were deprived of meat, fish or pulses at least once a week in the 2020–2021 school year,

while in the most recent school year, the share of children (9.8%) increased by 1.5% compared to the corresponding share (8.3%) in the immediately preceding school year. Furthermore, regarding the total dimension "Nutrition" (D.2) of economic child poverty ($x^2_{[4,\ N=6,394]} = 12.630$, $p = 0.013$), a higher share of children below the threshold (20.4%) is found in the school year 2020–2021 (Figure 3.3.2), while in the most recent school year (2022–2023), the share of children below the threshold (17.7%) increased by 0.04% compared to the immediately preceding school year (2021–2022).

In the total dimension "Unemployment of the guardians" (D.3) of economic child poverty ($x^2_{[3,\ N=5,362]} = 70.633$, $p < 0.001$), a higher share of children below the threshold (15.3%) is found in the 2020–2021 school year (Figure 3.3.2), while in the most recent school year (2022–2023), the share of children below the threshold (5.2%) decreased by 3.5% compared to the immediately preceding school year (2021–2022).

Regarding the total dimension "Free healthcare" (D.4) of non-economic child poverty ($x^2_{[4,\ N=5,019]} = 51.632$, $p < 0.001$), a higher share of children (11.0%) reported feeling they were unable to enjoy undisturbed, cost-free, high-quality healthcare services in the 2018–2019 school year (Figure 3.3.2), while in the most recent school year the share of children increased by 2.2% compared to the corresponding share in the immediately preceding school year.

According to Table 3.3.1, during the period 2018–2023, in Attica, the simple indicator "Empathy for all people" of the dimension "Moral education" of non-economic child poverty depends on the school year ($x^2_{[4,\ N=4,349]} = 18.558$, $p = 0.001$). More specifically, a higher percentage of children (50.8%) reported feeling that school did not instill empathy in them during the 2019–2020 school year, while in the most recent school year, the percentage of children who felt that their school did not foster empathy (50.6%) increased by 7.6% compared to the percentage (43.0%) in the immediately preceding school year. Also, the simple indicator "Love of people" of the dimension "Moral education" of non-economic child poverty depends on the school year ($x^2_{[4,\ N=6,106]} = 33.007$, $p < 0.001$). More specifically, a higher share of children (34.3%) reported feeling that school did not teach them to love and protect all other people regardless of their ethnicity, culture, gender or any other differences in the recent school year 2022–2023, a percentage that increased by 7.9% compared to the corresponding percentage (26.3%) in the immediately preceding school year. Furthermore, the simple indicator "Love of nature" of the dimension "Moral education" of non-economic child poverty depends on the school year ($x^2_{[4,\ N=6,237]} = 27.074$, $p < 0.001$). More specifically, a higher share of children (45.1%) reported feeling that school did not teach them to love and protect nature in the 2020–2021 school year, while in the most recent school year, the share of children feeling that school did not teach them to love and protect nature (41.0%) increased by 3.6% compared to the corresponding percentage (37.4%) in the immediately preceding school year. In addition, the simple indicator "Social solidarity" of the dimension "Moral education" of non-economic child poverty depends on the school year ($x^2_{[4,\ N=4,487]} = 28.867$, $p < 0.001$). More specifically, a higher percentage of children (43.6%) reported feeling that school did not instill in them social solidarity in the recent school year 2022–2023, a percentage that increased by 1.4% compared to the corresponding percentage (42.2%) in the immediately preceding school year. Also, the total dimension "Moral education" (D.5) of non-economic child poverty depends on the school year ($x^2_{[4,\ N=6,473]} = 23.478$, $p < 0.001$). More specifically, a higher percentage of children (35.1%) reported feeling that school did not teach them to be good as persons in the recent school year 2022–2023, a percentage that increased by 5.6% compared to the corresponding percentage (29.5%) in the immediately preceding school year (Figure 3.3.2).

According to Table 3.3.1, during the period 2018–2023, in Attica, in the simple indicator "Spare time" of the dimension "Leisure" of non-economic child poverty ($x^2_{[4,\ N=6,371]} = 9.979$, $p = 0.041$), a higher percentage of children below the threshold (23.6%) is found in the school year 2020–2021, while in the most recent school year (2022–2023), the percentage of children below the threshold (19.6%) reduced by 0.8% compared to the immediately preceding school year (2021–2022). Also, the simple indicator "Playing outdoors" of the dimension "Leisure" of non-economic child poverty depends on the school year ($x^2_{[4,\ N=6,388]} = 25.935$, $p < 0.001$). More specifically, a higher share of children (51.9%) did not spend time outdoors with other children in the recent school year 2022–2023, a percentage that increased by 7.7% compared to the corresponding share (44.2%) in the immediately preceding school year. In addition, in the simple indicator "Vacation" of the dimension "Leisure" of non-economic child poverty ($x^2_{[4,\ N=6,388]} = 101.023$, $p < 0.001$), a higher share of children below the threshold (25.3%) is found in the 2020–2021 school year, while in the most recent school year (2022–2023), the share of children below the threshold (12.2%) reduced by 2.1% compared to the immediately preceding school year (2021–2022). Moreover, the total dimension "Leisure" (D.6) of non-economic child poverty depends on the school year ($x^2_{[4,\ N=6,496]} = 53.131$, $p < 0.001$). More

specifically, a higher share of children (23.4%) is found in the 2020–2021 school year (Figure 3.3.2), while in the most recent school year (2022–2023), the share of children below the threshold decreased by 0.1% compared to the immediately preceding school year (2021–2022).

According to Table 3.3.1, during the period 2018–2023, in Attica, economic child poverty depends on the school year ($x^2_{[4,\ N=6,494]} = 55.823$, $p < 0.001$). More specifically, a higher share of children (14.6%) experienced economic poverty in the school year 2020–2021, while in the most recent school year, the share of children in economic poverty (7.0%) decreased by 1.2% compared to the corresponding share (8.2%) in the immediately preceding school year.

Furthermore, according to Table 3.3.1, during the period 2018–2023, in Attica, non-economic child poverty depends on the school year ($x^2_{[4,\ N=6,502]} = 39.705$, $p < 0.001$). More specifically, a higher share of children (10.8%) experienced non-economic poverty in the school year 2020–2021, while in the most recent school year, the share of children in non-economic poverty (6.5%) increased by 1.6% compared to the corresponding share (4.9%) in the immediately preceding school year.

In conclusion, according to Table 3.3.1, during the period 2018–2023, in Attica, the total, multiple index representing general poverty depends on the school year ($x^2_{[4,\ N=6,502]} = 66.070$, $p < 0.001$). More specifically, a higher share of children (9.4%) experienced general poverty in the school year 2020–2021, while in the most recent school year, the share of children in general poverty (3.1%) decreased by 0.4% compared to the corresponding share (3.5%) in the immediately preceding school year.

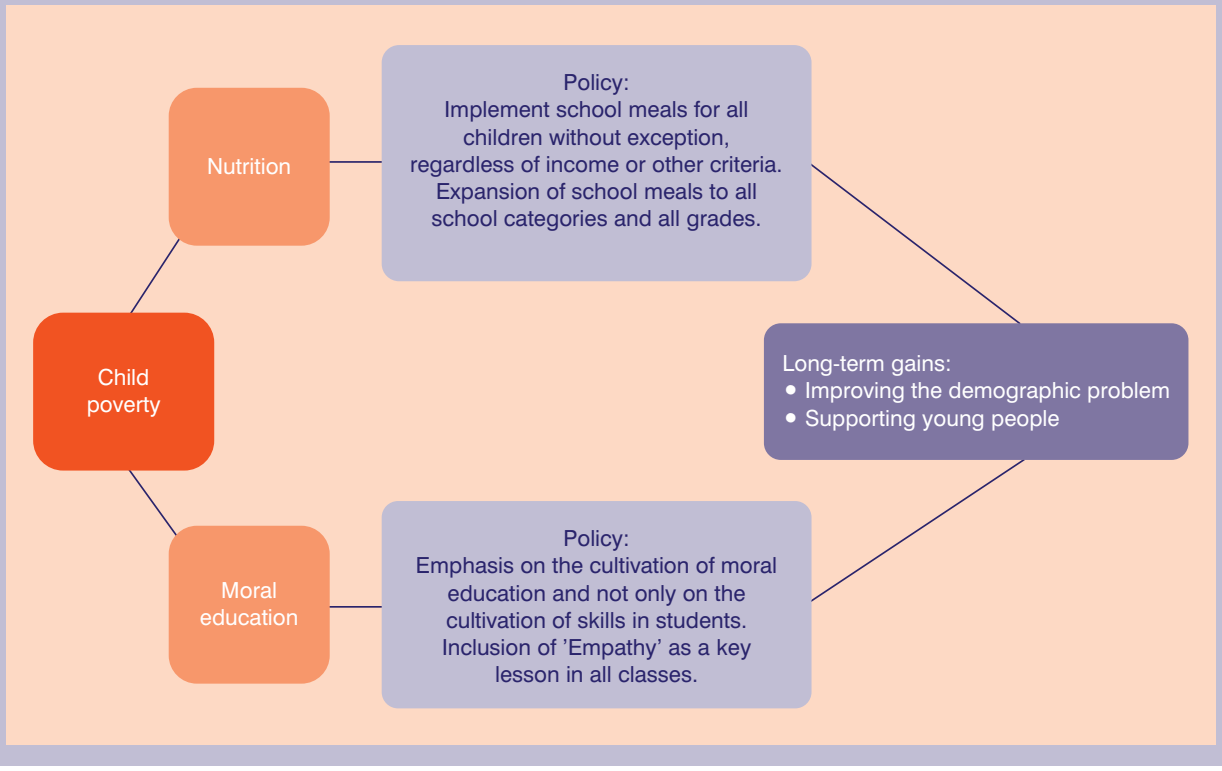
In conclusion, according to the multiple index of Leriou (2016, 2019, 2022, 2023a), multidimensional child poverty reduced by 0.4%.

3.3.3. Conclusions

General child poverty reduced by 0.4% from the 2021–2022 school year to the 2022–2023 school year.

However, a sharp increase of child poverty in terms of moral education is noted. More specifically, in the school year 2022–2023, it recorded the worst rate for the last five years in terms of moral education (Table 3.3.1). The first policy proposed is that school curricula should be reformed in all grades and for all school levels so that students are taught more about how to be good, as persons (Tasopoulos & Leriou, 2014). In this light, it is proposed that empathy be included, as a key course in all grades. Of course, both the

FIGURE 3.3.3
The main, alarming findings, proposed policies and expected gains



Ministry of Education and many teachers are already implementing targeted and invaluable efforts in this direction.

The total results regarding nutrition are also alarming, as in the school year 2022–2023, an increase in child poverty is recorded in terms of qualitatively and quantitatively appropriate nutrition (Table 3.3.1). This disappointing finding demonstrates that benefits have little impact on the nutrition component, and hence more measures are needed. Specifically, it is proposed that school meals should be expanded to all school levels, in all grades, for all children, regardless of income or other criteria, and no child should be without this important support (Figure 3.3.3). Furthermore, it is proposed to completely abolish the VAT on basic child nutrition items, as indirect taxes burden the weaker income categories disproportionately and increase child poverty inequalities in terms of nutrition.

The implementation of the above proposed policies for improving child well-being is expected to have a positive impact on the population in the long-term. Specifically, child poverty is an obstacle to solving the demographic problem. According to the European Commission, regarding demographic problems, it is necessary to support and empower younger generations to ensure their well-being (European Commission, 2023). More specifically, as the European Commission highlights in the context of proposed measures to address the demographic challenge: "*Empowering young people begins by creating a favorable environment for all children*". The immediate adoption of the above policies regarding school meals and moral education could result in more resilient societies regarding child well-being and in solving the demographic problem (Figure 3.3.3).

Child poverty should keep us constantly alert and aware of implementing more and effective policies, which require the cooperation of different parties and ministries. Public policies to address child poverty can be based on different artificial intelligence decision making tools, such as a ChoiCo Game (http://etl.ppp.uoa.gr/choico/?cwsmile) similar to the one developed by Leriou (2023a), which is framed by 2,985,984 fuzzy logic (Artificial Intelligence) rules related to child well-being/poverty, developed during the 1st round of research applying this new, complex indicator (Leriou et al, 2021). That is, it is proposed that policy makers use Artificial Intelligence in designing policies to address child poverty.

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4. Reforms-Economic development

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4.1. External trade of agri-food products

Athanasios Chymis

4.1.1. Greece's overall external trade

The total external trade of Greece during the last year (2023), in general, declined (Table 4.1.1). A greater decrease is observed in fossil fuels and lubricants (petroleum products), by 30% in imports and 18% in exports, which also affected total imports by 11% and total exports by 7%. The decrease in imports also resulted in a significant reduction of the trade deficit, by 17%, after the 58% hike during 2022.

It is customary to exclude petroleum products because their large percentage, comparatived to the rest of trade, distorts the picture of total trade. In 2023, petroleum products were 27.5% of total imports and 32.4% of total exports. So, excluding petroleum products, imports decreased by 1% and exports marginally decreased by 0.3%. As a result, the reduction of the trade balance (always excluding petro-products) is limited to 2%.

It should be emphasized that Greece needs a rapid increase in exports to reach the average per capita exports of its peers. Specifically, according to the data of the World Bank, Greece ranks last in per capita exports among European states with a similar or even smaller population (e.g., Portugal, Sweden, Czech Republic, Austria, Switzerland, Hungary) and Israel (World Bank, 2022). Another worrying aspect of Greek foreign trade is the significantly large deficit, which means that while imports are at high levels, exports remain at low levels.

The years 2008 and 2015 are presented in the table for the following reasons: 2008 is the year before the economic crisis, which significantly disrupted foreign trade, while 2015 is the year with the lowest amount of imports and, by extension, the lowest deficit. Despite the significant increase (more than doubling) in exports (excluding petro-products), the deficit continues to be determined more by the fluctuation of imports than the continued increases in exports, which, although significant, remain at lower-than-intended levels and far below the European average levels (World Bank, 2022).

4.1.2. Agri-food products trade

Contrary to the relatively gloomy picture described above, trade in agri-food products continues to surprise positively. After a short return to a trade deficit in 2022, where there was a sharp increase of 30% in imports, in 2023 the trade surplus returned (€460 million) since imports of agri-food products increased by only 1.8% while exports increased by 9.5 % (Table 4.1.1).

It is very positive for the agricultural sector and the food industry that in a year where the rest of the products had a slight decrease in exports, agri-food products continued the upward trend in exports and turned the trade deficit of 2022 into a trade surplus again. This illustrates the special attention policy makers have to pay to the sector so that it continues to have an increasing trade surplus, something that lies within the potential of the agricultural sector and the food industry.

Table 4.1.2 shows the evolution and structure of the imports of all main categories of agri-food products. The years 2008 and 2010 are included because they are milestones in terms of imports of agri-food products: 2008 is the year before the onset of the economic crisis, while 2010 is the year with the lowest imports of agri-food products due to the reduction in trade caused by the crisis. Of course, food products, as basic products, were not significantly affected compared to other (industrial) products.

Meat products had a further increase in import value of 11% (most of which is attributed to higher prices) and remained first in terms of their share (17%) of agri-food imports. Together with dairy products, which decreased by 5% (despite the increase in imported quantity showing the decrease in import prices), they make up 29% of total imports. Fruit and vegetable imports increased by 12% (which is partly due to the increase in the unit price), while a decrease was observed in the

TABLE 4.1.1 Total goods trade and agri-food products trade (in billion €)

	2008	2015	2020	2021	2022	2023	% change 2022-2023
Imports							
Total imports	60.72	42.60	48.69	64.24	93.05	82.75	-11.1
Petroleum products imports	12.12	11.36	9.71	16.96	32.47	22.76	-29.9
Total imports (except petroleum products)	48.60	31.24	38.99	47.28	60.58	59.98	- 1.0
Agri-food products	**7.05**	**6.31**	**6.65**	**7.86**	**10.20**	**10.39**	**1.8**
Agri-food %	*14.5*	*20.2*	*17.1*	*16.6*	*16.8*	*17.3*	
Exports							
Total exports	17.36	25.50	30.74	39.95	54.68	50.94	- 6.8
Petroleum products exports	1.90	7.60	6.73	11.27	20.11	16.48	-18.1
Total exports (except petroleum products)	15.46	17.90	24.01	28.69	34.57	34.47	- 0.3
Agri-food products	**4.01**	**5.72**	**7.18**	**8.35**	**9.91**	**10.85**	**9.5**
Agri-food %	*25.9*	*31.9*	*29.9*	*29.1*	*28.7*	*31.5*	
Trade balance							
Total balance	-43.36	-17.10	-17.96	-24.29	-38.37	-31.80	-17.1
Excluding petro-products	-33.14	-13.34	-14.98	-18.59	-26.01	-25.52	-1.9
Agri-food	**-3.04**	**-0.60**	**0.52**	**0.49**	**-0.30**	**0.46**	*

Source: Hellenic Statistical Authority (ELSTAT), own calculations.

* Due to changes in the sign, calculating the rate of change is not possible.

value of cereal imports (both quantity and unit price). A significant increase was noted in beverages, which is totally due to the price hikes given that imported quantities decreased. Tobacco's imported quantity also decreased but the import value increased due to prices; coffee, tea, etc. increased both quantity and prices, leading to an increase in import value.

Turning now to the structure of exports of agri-food products (Table 4.1.3), it should be noted that 2009 is included instead of 2008 as the year with the lowest amount of exports, which, of course, hardly differs from the total amount exported in 2008 (4.01 billion). The increase in exports is mainly due to the increase in exports of oils (mainly olive oil) by 37%, dairy by 21%, tobacco by 16% and fruits and vegetables by 13%.

It should be noted that the increase in the value of exports of oils and fruits and vegetables is partly due to the increase in exported quantities and partly due to the rise in their prices. In dairy products, most of the increase in value is due to the increase in their unit prices, while in tobacco, the exported quantity decreased, which means that the increase in value is solely attributed to the increase in prices. Cotton exports showed a significant decrease due to the storm Daniel last September, which caused severe damage to the produced cotton.

4.1.3. Concluding remarks

As this column has noted in the past, the agri-food sector has shown remarkable performance since the

TABLE 4.1.2 Imports of agri-food products categories in million € (M €)

	2008		2010		2020		2021		2022		2023	
	M €	%	M €	%	M €	%	M €	%	M €	%	M €	%
Meat products[a]	1,211	17.2	1,160	18.4	1,132	17.0	1,218	15.5	1,582	15.5	1,762	17.0
Dairy	808	11.5	770	12.2	819	12.3	934	11.9	1,297	12.7	1,233	11.9
Fruits-Vegetables	786	11.1	672	10.7	817	12.3	898	11.4	1,061	10.4	1,184	11.4
Cereals	681	9.7	541	8.6	664	10.0	831	10.6	1,081	10.6	979	9.4
Feeding stuff	406	5.8	371	5.9	548	8.2	659	8.4	811	7.9	810	7.8
Fish	428	6.1	384	6.1	423	6.4	544	6.9	706	6.9	684	6.6
Coffee, tea, etc.	365	5.2	376	6.0	436	6.6	502	6.4	617	6.0	683	6.6
Various foodstuff	344	4.9	356	5.7	376	5.7	423	5.4	503	4.9	502	4.8
Beverages	436	6.2	370	5.9	235	3.5	324	4.1	445	4.4	493	4.7
Oils and fats	290	4.1	232	3.7	224	3.4	367	4.7	568	5.6	488	4.7
Tobacco	335	4.7	310	4.9	286	4.3	340	4.3	398	3.9	458	4.4
Sugars	225	3.2	220	3.5	209	3.1	225	2.9	360	3.5	378	3.6
Oil seeds	224	3.2	173	2.7	186	2.8	220	2.8	302	3.0	305	2.9
Wood	262	3.7	148	2.3	132	2.0	157	2.0	221	2.2	196	1.9
Raw materials	130	1.8	111	1.8	134	2.0	167	2.1	182	1.8	188	1.8
Hides-skins	93	1.3	76	1.2	14	0.2	18	0.2	30	0.3	18	0.2
Total	**7,054**[b]		**6,299**		**6,653**		**7,855**		**10,204**		**10,390**	

Source: Hellenic Statistical Authority (ELSTAT), own calculations.

a. Includes live animals and meat products.
b. The sum of values for each product may not equal to 'Total' because some categories with insignificant values such as cotton, natural rubber, other natural textile fibers, wool and jute are not included.

TABLE 4.1.3 Exports of agri-food products categories in million € (M €)

	2009		2015		2020		2021		2022		2023	
	M €	%	M €	%	M €	%	M €	%	M €	%	M €	%
Fruits-Vegetables	1,264	31.6	1,846	32.3	2,425	33.8	2,514	30.1	2,868	28.9	3,226	29.7
Oils and fats	283	7.1	714	12.5	570	7.9	745	8.9	1,047	10.6	1,437	13.2
Dairy	278	7.0	561	9.8	805	11.2	920	11.0	1,117	11.3	1,347	12.4
Fish	477	11.9	590	10.3	728	10.1	807	9.7	940	9.5	956	8.8
Tobacco	421	10.5	450	7.9	550	7.7	629	7.5	798	8.1	929	8.6
Cereals	339	8.5	303	5.3	467	6.5	611	7.3	777	7.8	822	7.6
Various foodstuff	128	3.2	236	4.1	376	5.2	400	4.8	470	4.7	451	4.2
Cotton	305	7.6	299	5.2	397	5.5	685	8.2	638	6.4	420	3.9
Beverages	169	4.2	209	3.7	235	3.3	281	3.4	337	3.4	339	3.1
Meat products [a]	70	1.8	84	1.5	138	1.9	189	2.3	241	2.4	237	2.2
Feeding stuff	44	1.1	54	0.9	120	1.7	135	1.6	185	1.9	213	2.0
Coffee, tea, etc.	31	0.8	78	1.4	86	1.2	100	1.2	102	1.0	115	1.1
Oil seeds	59	1.5	96	1.7	101	1.4	97	1.2	137	1.4	114	1.1
Sugars	86	2.2	77	1.3	75	1.0	90	1.1	107	1.1	106	1.0
Raw materials	18	0.5	37	0.6	58	0.8	70	0.8	72	0.7	72	0.7
Hides-skins	18	0.5	73	1.3	30	0.4	57	0.7	55	0.6	49	0.5
Wood	7	0.2	8	0.1	12	0.2	14	0.2	15	0.2	16	0.1
Total	**3,998**[b]		**5,717**		**7,177**		**8,347**		**9,909**		**10,852**	

Source: Hellenic Statistical Authority (ELSTAT), own calculations.

a. Includes live animals and meat products.

b. The sum of values for each product may not equal to 'Total' because some categories with insignificant values such as wool, natural rubber, other natural textile fibers and jute are not included.

outbreak of the crisis. While imports have cumulatively increased by €3.4 billion (from €7 billion in 2008 to €10.4 billion in 2023, that is, an increase of 49%), the sector's exports have increased by €6.85 billion (from €4 billion in 2008-2009 to €10.85 billion in 2023, that is, a rise by 171%), eliminating the pre-crisis (2008) deficit of €3 billion and turning it into a surplus in 2020, 2021 and 2023 of around €0.5 billion This achievement is unique among all of Greece's external trade and deserves particular attention.

It could be said that the crisis had a positive impact on the agri-food sector by giving the production boost it needed to improve its export performance. Unfortunately, the same cannot be said for most, if not all, other (industrial) products, which have not increased their exports as much as to balance the increase of their imports, thus contributing significantly to an increasing trade deficit. This does not mean that the agri-food sector does not have room for further improvements. As this column repeatedly emphasizes, as long as some chronic structural problems of the agri-food sector remain unsolved, the trade surplus will continue to be non-viable and heavily dependent on current circumstances.

Take for instance the high export value of olive oil. The rise in olive oil prices helped the agri-food trade balance become surplus again in 2023, but a sustainable surplus requires significant improvements and reforms along the olive oil processing chain so that it is exported standardized and bottled with a much higher added value than exporting in bulk as raw material. Likewise, the management of cotton requires reforms, changes and, mostly, collaborations between all involved so that it can be exported as a high-quality product that the markets require to ensure its high added export value.

The livestock sector, which participates in the trade deficit with €1.5 billion, can, with the appropriate policies, increase production for domestic consumption or for a high-quality export-oriented product. If the gap between imports and exports of meat products (€1.76 billion and €0.24 billion, respectively) is reduced, the surplus in the agri-food trade balance will be able to become sustainable and independent of the circumstances of good-production years or the temporary rise in their prices.

Finally, a reference to the rest of external trade is needed. The evolution of total exports (except petroleum products) shows that the production model of the country after the crisis, has not changed as much as necessary to shield the Greek economy from future crises. Foreign direct investments (FDI) have increased but remain at very low levels to be able to boost the production and export of goods (Enterprise Greece, 2024). FDI goes mostly to real estate or tourism-oriented businesses and much less to productive businesses of the primary and, especially, the secondary sector, which remains the weak link of the Greek economy. The creation of a suitable business environment for attracting productive FDI is key in changing the country's production model. This change, i.e., the stimulation of production and exports (and therefore the reduction of the deficit) is necessary so that the Greek economy does not once again find itself in a similar crisis to the one that afflicted it for a decade.

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4.2. Global trade and the Greek Current Account

Ioanna Konstantakopoulou

4.2.1. Global trade developments

The global economy is called upon to face the challenge of inflation. At the same time, economic issues such as disruptions in global trade, climate change, lack of investments, inequalities, armed conflicts, and low economic growth rates are intensifying.

In the previous year, global trade witnessed a contraction. While the global economy grew at 2.7% in 2023, global trade shrank by 1%. The divergent directions of these indicators and the contraction of global trade are unusual. Since World War II, global trade has shrunk only twice: during the 2009 financial crisis and in 2020 during the COVID-19 crisis. This contraction is attributed to shifts in global trade trends and changes in consumption preferences during the period from 2020 to 2022.

International merchandise trade has been adversely affected by issues plaguing shipping in key maritime routes connecting major markets and producers: the Panama Canal and the Red Sea. The problem with the Panama Canal stems from climate change, as prolonged drought has reduced the water levels that feed the channel, resulting in fewer transits and increased waiting times. In economic terms, this has escalated toll fees ships pay for passage through the canal up to eight times as of mid-March 2024. Additionally, attacks on ships in the Red Sea following the Gaza conflict forced significant international carriers to suspend passages through the Suez Canal and reroute via the Cape of Good Hope, adding 12 to 20 days to transit times.

The outlook for global trade is expected to be moderate this year. Beyond adverse developments in shipping, exports from China and Europe showed some improvements in the first months of 2024. Decreased prices of oil and natural gas contributed to a one-third reduction in energy imports for the Eurozone through January 2024, significantly improving Europe's trade balance.

Services trade, on the other hand, has shown greater dynamism. Tourism continues to exhibit an upward trend among its main components, while transportation has also recently strengthened. Although complete data are delayed, other components of services trade have shown resilience in recent months. Specifically, the strong performance of the telecommunications, computer, and information categories is expected to continue. As a result, services trade overall is anticipated to continue growing faster than goods trade in 2024, although slowdowns in certain components cannot be ruled out (for example, in construction services) as the negative impacts of higher global interest rates begin to be felt.

In conclusion, recent developments indicate a slight improvement in 2024 for the trade of goods and services. At the same time, the outlook for trade remains surrounded by significant risks and uncertainties, which are primarily skewed towards the negative side due to calls for protectionism, ongoing trade tensions, and increasing political uncertainty. A recent manifestation of these risks is the European Union's announcement to increase tariffs on electric cars from China due to allegations of illegal export subsidies.

4.2.2. Development of the Greek Current Account Deficit

Over time, the Current Account (CA) has been characterized by continuous and significant deficits. During the period from 2000 to 2011, the CA deficit reached historically high levels. From 2012 to 2019, the CA deficit shrank significantly, with the average annual level amounting to 1.18% of GDP and in absolute terms, standing at 3.3 billion euros. However, in the three years from 2020 to 2023, the CA deficit doubled, reaching 7.79% of GDP and in absolute terms, 14.6 billion euros (see Figure 4.2.1). The main cause of this negative CA outlook is the Goods Balance excluding fuel and ships, which represents a structural problem of the Greek CA. Similarly contributing to the negative results, but with a much smaller impact on the CA, was the Primary Income Balance due to the increase in net payments for interest, dividends, and wages. Conversely, the Services Balance constitutes a positive component, which improves the overall CA picture.

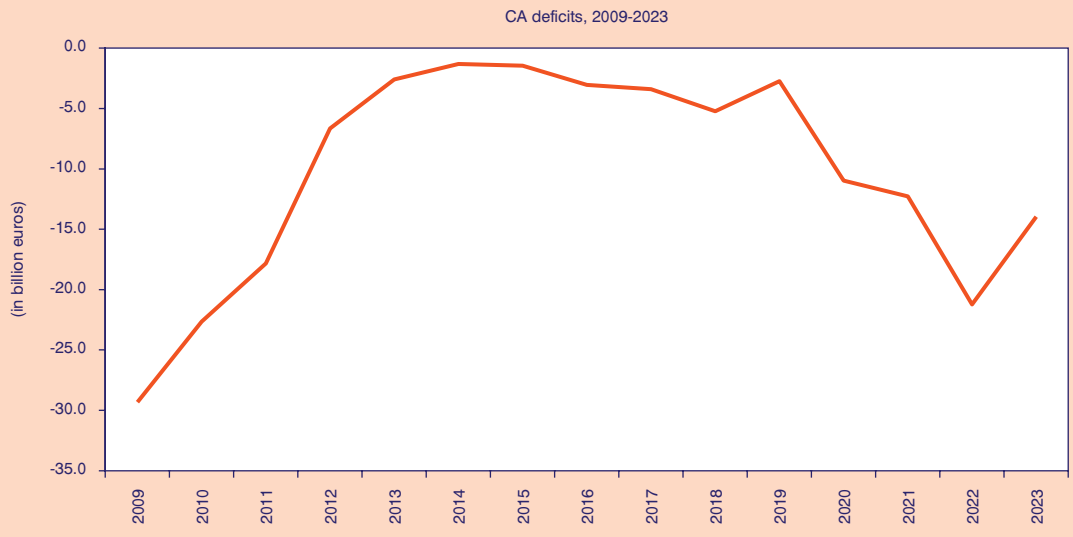
Last year, the deficit of the CA as a percentage of GDP reached 6.63%, marking a significant reduction compared to 2022, when the corresponding percentage was 11.08% of GDP. In absolute terms, the CA deficit for 2023 amounted to 14 billion euros, while in 2022, it was 21.2 billion euros (see Table 4.2.1 and Figure

TABLE 4.2.1 Current Account Balance (as % of GDP)

Years	CA	Goods Balance	Goods Exports	Goods Imports	Services Balance	Primary Income Balance	Secondary Income Balance
2009	-12.66	-14.31	7.65	21.96	4.97	-2.91	-0.41
2010	-10.09	-12.15	9.01	21.15	5.39	-2.54	-0.79
2011	-8.85	-11.62	11.43	23.05	6.75	-3.24	-0.75
2012	-3.52	-10.77	13.99	24.76	7.33	0.43	-0.51
2013	-1.41	-10.71	14.26	24.97	8.57	-0.25	0.98
2014	-0.73	-11.41	14.47	25.88	10.09	0.78	-0.19
2015	-0.81	-9.99	14.02	24.01	9.37	0.09	-0.29
2016	-1.74	-10.23	14.02	24.26	9.29	-0.46	-0.34
2017	-1.93	-11.24	15.90	27.14	10.23	-0.60	-0.32
2018	-2.91	-12.50	18.00	30.50	10.73	-0.96	-0.18
2019	-1.49	-12.48	17.73	30.21	11.54	-0.87	0.32
2020	-6.59	-11.14	17.38	28.53	4.38	-0.17	0.34
2021	-6.86	-14.94	21.99	36.93	7.18	0.21	0.69
2022	-11.08	-20.65	28.06	48.71	10.12	-0.40	-0.16
2023	-6.63	-15.37	23.46	38.83	10.38	-2.27	0.63

Sources: Bank of Greece and ELSTAT.

FIGURE 4.2.1
The evolution of CA



Source: Bank of Greece.

4.2.1). This positive change in the CA is attributed, firstly, to the reduction of the fuel balance deficit due to the stabilization of fuel prices and, secondly, to the increase in the Services Balance surplus driven by travel services.

4.2.2.1. Goods Balance

The Goods Balance is the most significant component of the CA, reflecting the performance of an economy. Unfortunately, despite the deep economic recession and numerous upheavals faced by the Greek economy, and despite the implementation of numerous policies, there has been no improvement in the result of the Goods Balance (Konstantakopoulou, 2015; Konstantakopoulou, 2016). As shown in Figure 4.2.2, the deficit increased significantly during the biennium 2021-22, while in 2023, a reduction of the deficit by 2.2% was observed compared to the biennium 2021-22.

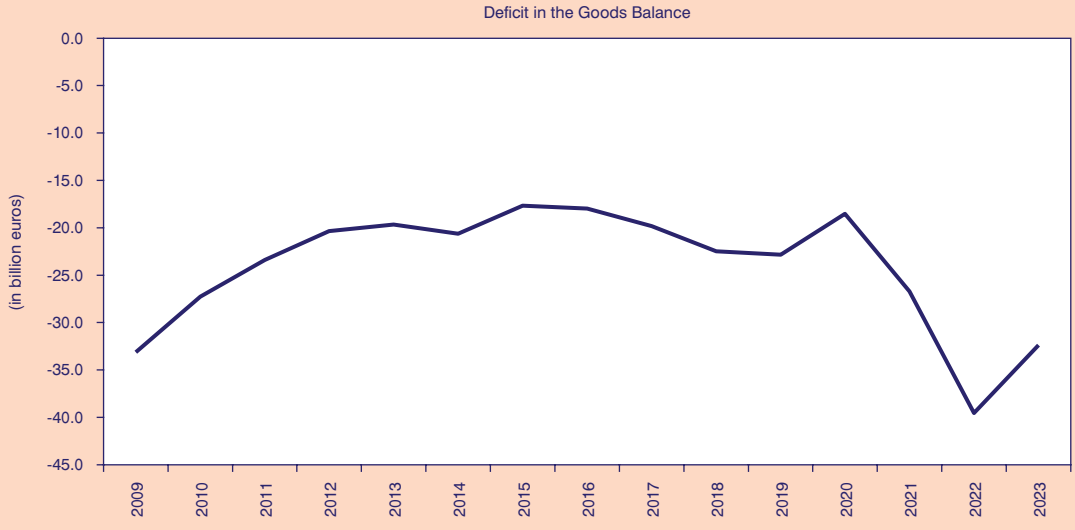
According to data from the Bank of Greece, the average deficit level of the Goods Balance between 2006-2009 was 38.87 billion euros, or 17.5% of GDP, which represents the highest recorded deficit level. In 2023, the Goods Balance deficit returned to pre-crisis levels, amounting to 32.40 billion euros and 15.4% of GDP.

The main component of the Goods Balance, the Balance excluding fuel and ships, experienced a setback, recording a deficit of 25.41 billion euros or 12.2% of GDP in 2023, similar to the period 2006-2009, when the corresponding deficit was 27.33 billion euros or 12.1% of GDP. Regarding the evolution of exports and imports of goods excluding fuel and ships, as observed in the Figure 4.2.3, the variables have been rising throughout the examined period, recording the highest growth rates in the biennium 2021-22 (26.2% for exports and 28% for imports). A worrying aspect for the Greek economy is the fact that imports of goods excluding fuel and ships are also returning to pre-crisis levels. Notably, in 2008, which serves as a temporal milestone, imports of goods excluding fuel and ships were 66.28 billion euros, while in 2022, they amounted to 60.4 billion euros.

As we observe, the main source of the problems in the Greek economy comes from the deficit in the Balance of Goods, which essentially outlines the productive structure of our country. The lack of investments in high-tech sectors, the brain drain of highly skilled labor abroad, the absence of a national plan to support technology and innovation, the lack of financing for export-oriented businesses, the inadequate support for Greek agricultural products through appropriate commercial policies, and the absence of a clear national export plan are some of the factors that are holding back the Greek economy.

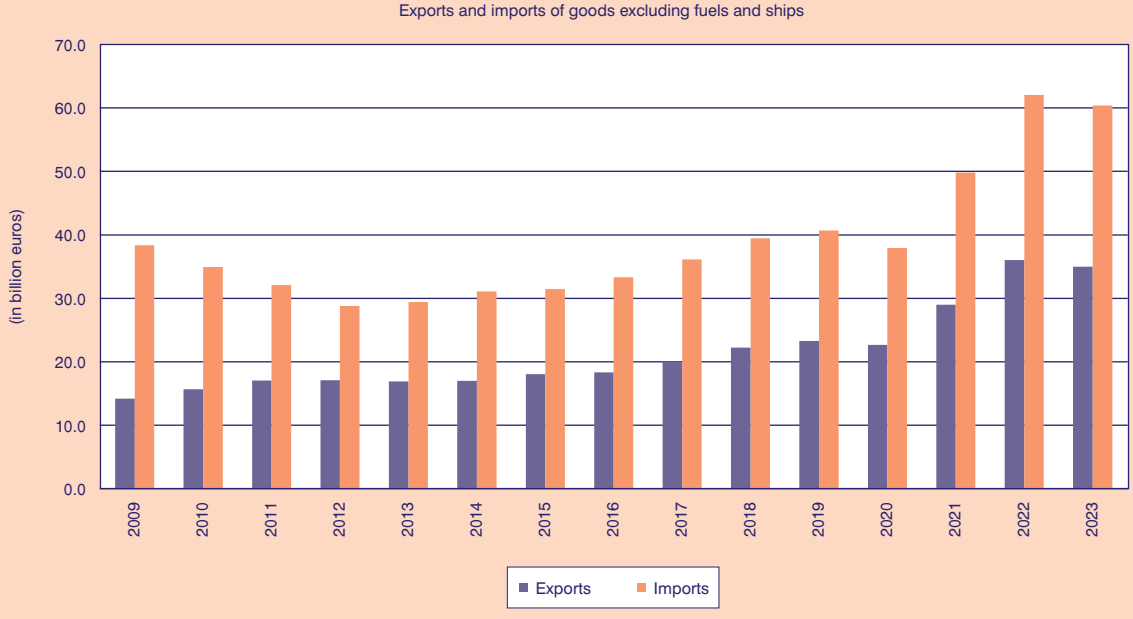
Regarding the competitiveness of Greek exports, as measured by the Revealed Comparative Advantage

FIGURE 4.2.2
The evolution of Balance of Goods



Source: Bank of Greece.

FIGURE 4.2.3
Exports and Imports of goods excluding fuel and ships (in billion euros)



Source: Bank of Greece.

(RCA) index, the study by Konstantakopoulou et al. (2019) reaches interesting conclusions. In their work, the authors follow a methodology and analysis similar to that of Balassa (1965), Balassa and Noland (1989), and Konstantakopoulou and Tsionas (2017, 2019, 2024). The empirical evidence indicates that the two-digit sectors of Greek production with identified comparative advantages exceed those that are purely export-oriented, which is a particularly positive sign for the prospects of Greek exports. Therefore, there are strong empirical indications for high future export performance. Achieving this will depend on appropriate trade policies, targeted actions to promote exports, and the strengthening and support of sectors with comparative advantages.

4.2.2.2. Balance of Services

The result of the Balance of Services was positive during the period 2009-2023, and its contribution was crucial in limiting the deficit of the CA. The average annual surplus of the Balance of Services as a percentage of GDP was 8.42%, while in absolute terms, it reached 14.16 billion euros. The highest surplus was recorded in 2014, approaching 11.08% of GDP (see Table 4.2.1) or alternatively 15.9 billion euros (see Figure 4.2.4). The surplus of the Balance of Services reached 10.38% of GDP for 2023, showing a marginal increase of 2.57% compared to 2022. In absolute terms, the surplus reached 21.88 billion euros in 2023, recording the best performance over time (see Figure 4.2.4).

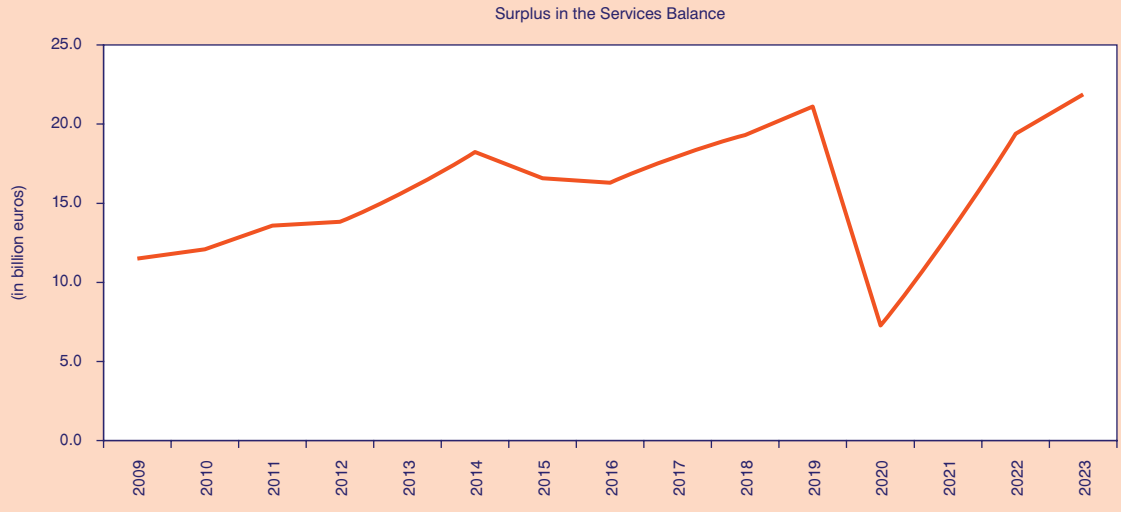
The surplus in the Balance of Services historically comes mainly from travel and transportation services. Travel services primarily drive the improvement of the balance, and in the period 2022-23, net travel services have returned to pre-pandemic levels (see Table 4.2.2). Specifically, as a percentage of GDP, net travel services for 2023 amounted to 8.62% of GDP, while for 2022, they were at 8.22% of GDP. In absolute terms, the surplus in the balance of travel services in 2023 saw an increase of 15.30% compared to 2022, reaching 18.16 billion euros.

Regarding revenue from transportation services, there was a marginal decrease due to disruptions in maritime freight transport routes. Specifically, as we see in Table 4.2.2, net receipts from transportation services as a percentage of GDP were 1.54% for 2023, compared to 2% in 2022. In absolute terms, for 2023, they amounted to 3.25 billion euros, whereas in 2022, they were 3.82 billion euros.

4.2.3. Conclusions

- Recent developments indicate a slight improvement in the global trade of goods and services for 2024. However, the outlook for trade remains surrounded by significant risks and uncertainties, which tend to lean negatively due to calls for pro-

FIGURE 4.2.4
The evolution of Services Balance



Source: Bank of Greece.

TABLE 4.2.2 Balance of Services: Net Receipts

	Travel Services		Transportation Services	
Years	in billion euros	as % of GDP	in billion euros	as % of GDP
2009	7.98	3.44	5.56	2.40
2010	7.46	3.32	6.32	2.82
2011	8.24	4.09	6.04	3.00
2012	8.60	4.55	5.90	3.12
2013	10.32	5.62	5.56	3.03
2014	11.32	6.26	6.85	3.79
2015	12.09	6.83	4.29	2.42
2016	11.20	6.38	4.59	2.61
2017	12.73	7.21	4.95	2.81
2018	13.89	7.73	5.59	3.11
2019	15.43	8.44	5.93	3.24
2020	3.53	2.12	3.94	2.37
2021	9.39	5.25	3.65	2.04
2022	15.75	8.22	3.82	2.00
2023	18.16	8.62	3.25	1.54

Sources: Bank of Greece and ELSTAT.

tectionism, ongoing trade tensions, and increasing political uncertainty.

- The long-term trend of the Current Account is characterized by continuous and significant deficits. The main cause of this negative CA picture is the Balance of Goods excluding fuel and ships, which represents a structural problem for the CA. In contrast, the Balance of Services is a positive component that improves the CA's overall picture.
- It is concerning for the Greek economy that the CA's picture is similar to that of the period before the deep recession, especially regarding imports of goods excluding fuel and ships, which are now at pre-crisis levels.

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