

1. Recent (macro-)economic developments

KEPE, *Greek Economic Outlook*, issue 49, 2022, pp. 6-13

1.1. The evolution of the aggregate demand components during a period of energy and geopolitical uncertainty

1.1.1. Introduction – The domestic & foreign demand for the 1st half of 2022

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In this section, utilizing the existing macroeconomic data, we proceed to the analysis of the current developments of the 1st half of 2022. Based on the figures of Table 1.1.1, after the 1st quarter of 2021, we observe the end of negative percentage changes in all macroeconomic aggregates, which can be also interpreted as the end of the negative effects of the Covid-19 pandemic. Thus, according to this change we observe, the economic growth of the 1st half of 2022 was 7.85%, which is somewhat bigger than the analogous change in the 1st half of 2021 (6.60%). The difference for these two semesters is the recession of 1.8% at the 1st quarter of 2021, while in the corresponding quarter of 2022 we had 7.85% growth.

Regarding the factors that contributed to the GDP growth in the 1st half of 2022 (7.85%), we should point out the existence of positive rates of change in all individual macroeconomic factors. More specifically, the biggest positive percentage change was presented by exports of goods & services (15.3%), followed, in order of magnitude, by private consumption (11.45%), gross fixed capital formation (10.85%) and public consumption (0.35%). Special reference should be made to the high percentage, at the same time, for imports of goods & services, which, as it is known, has a negative contribution to GDP (16.8%).

On a quarterly basis –see the 2nd quarter of 2022– we have approximately the same picture. Specifically, exports of goods & services (20.8%), *private consumption* (11.0%), gross fixed capital formation (8.70%), and public consumption (0.8%) contributed, in order of magnitude, in this quarter, to the recorded GDP growth (7.7%) (Table 1.1.1.).

Additionally, for the 2nd quarter of 2022, domestic demand also records a similar trend (see Figure 1.1.1.a). Thus, based on the existing components of the recorded GDP growth (using seasonally adjusted data), *private consumption* looks to be the most positive component, with a percentage much higher than those of fixed capital investment and public consumption (7.66 versus 1.12 and 0.16, respectively).

On the issue of the participation of the domestic and foreign demand sector (i.e., the balance of goods and services) to the GDP growth, for the 2nd quarter of 2022, numbers are also positive (see Figure 1.1.1.b). Specifically, except for *the Change in Inventories* (-0.46), the contribution of the rest of the macroeconomic factors were all positive. Thus, the contribution of the balance of goods and services was positive (0.69), but mainly the domestic demand (7.66) had the biggest positive contribution of the GDP growth.

Regarding now the Economic Sentiment Index (ESI), as a future “proxy” of the demand, the expectations of households and businesses for the period 10/2021-8/2022 are recorded in Figure 1.1.2. It is obvious that the recorded trend of the ESI is relatively downward. This Index declined from 113.3 points in October 2021 to 101.5 points in August 2022. In conclusion, although the GDP growth has a clearly positive trend, the expectations of households and businesses do not fully share this optimism. In its relative pessimism, two main events play a decisive role: the continuation of the Russian invasion of Ukraine and the upward trend of energy prices internationally.

Below a more detailed discussion on the contribution of the country’s balance of goods and services to the GDP growth is analyzed.

Balance of trade

The contribution of the foreign sector (exports minus imports) to GDP growth for the 1st half of 2022, as already mentioned above, is generally considered as positive. In more detail, we will refer here separately to the rate of change of goods and separately to the rate of change of services. Starting from the exports, it should be noted that *services*, which constitute the relatively smaller part of exports, showed a very large half-year-

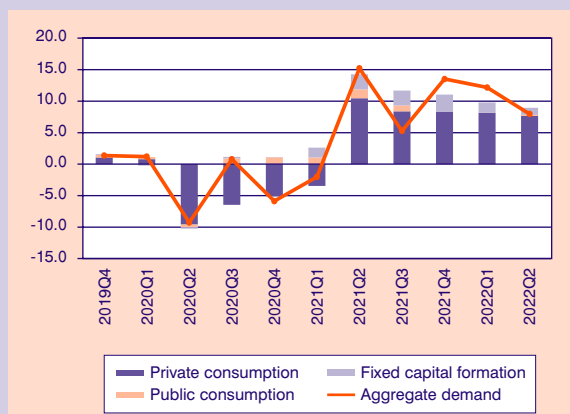
TABLE 1.1.1 Basic macroeconomic figures
(%, seasonally adjusted data, volumes)

	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	6months 2021	6months 2022
Private consumption	1.2	-14	-9.4	-7.3	-4.9	15.0	12.0	12.0	11.9	11.0	5.05	11.45
Public consumption	1.7	-2.1	4.8	5.7	5.4	6.2	4.2	-0.2	-0.1	0.8	5.80	0.35
Fixed capital formation	-2.10	-2.20	2.40	0.50	14.20	19.40	19.40	24.20	13.00	8.70	16.80	10.85
Aggregate demand*	0.34	-10.40	-3.73	-4.86	-0.89	13.87	9.47	11.64	10.59	8.22	6.49	9.41
Exports of goods and services	-2.80	-32.50	-36.80	-12.60	-2.00	26.10	49.60	24.00	9.80	20.80	12.05	15.30
Goods	2.49	-3.25	4.08	13.40	9.02	16.93	9.59	4.09	2.93	3.30	12.98	3.11
Services	-12.63	-57.80	-58.29	-39.95	-15.27	50.01	97.91	63.22	22.80	47.39	17.37	35.09
Imports of goods and services	0.3	-14.1	-6.9	-11	-5.2	20.9	19.5	33.3	18.1	15.5	7.85	16.80
Goods	-0.70	-11.66	-1.69	-3.20	-3.07	17.63	12.15	29.83	18.41	17.53	7.28	17.97
Services	4.60	-20.36	-20.38	-30.21	-12.55	30.14	41.67	43.55	15.97	9.34	8.79	12.65
ΔGDP	-1.4	-15.5	-10.8	-6.9	-1.8	15	11.7	8.3	8	7.7	6.60	7.85

Source: National Accounts (ELSTAT).

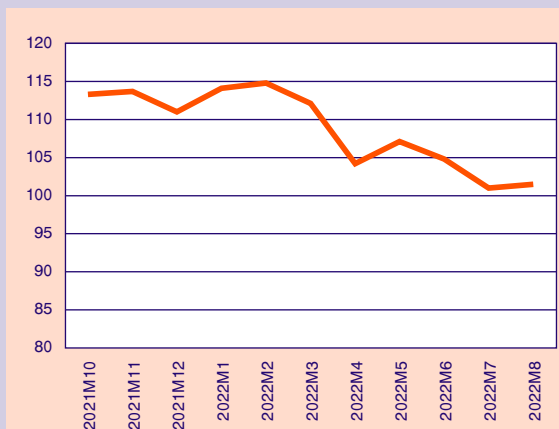
* Excluding change of inventories.

FIGURE 1.1.1a
Components of domestic demand



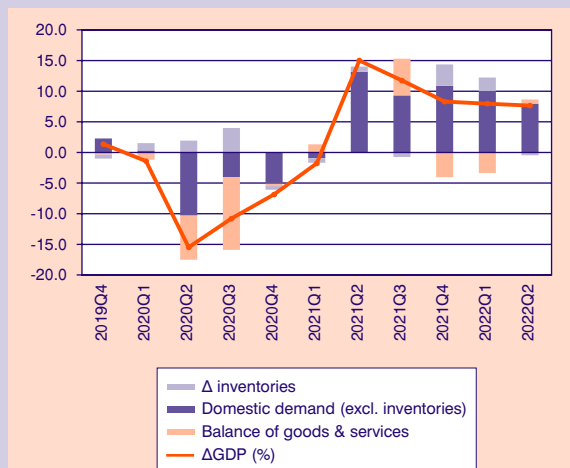
Source: National Accounts, ELSTAT, data processing by the author.

FIGURE 1.1.2
Index of Economic Sentiment (2021/10-2022/8)



Source: EUROSTAT.

FIGURE 1.1.1b
Domestic and net external demand (components)*



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

(*) The change of Inventories in 2020Q3 is an estimate by the author.

FIGURE 1.1.3
Components of external demand



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

ly increase of 35.09%, while *goods*, which were the largest part of exports, showed a much smaller annual growth of 3.11%. On the other hand, the imported *services* had a first half-yearly increase of 12.65%, while the imported *goods* had a smaller half-yearly increase of 17.97%.

As far as the contribution of the balance of goods and services to the GDP growth rate is concerned, we restate that for the 2nd quarter of 2022, it is 0.69 points,

in contrast to -0.08 points for the 2nd quarter of 2021. More analytically, we observe that the significant positive contribution of exports to GDP is estimated at 7.08 points, while on the other hand, the (negative) contribution of imports to GDP is 6.39 points. The return to “normality”, after the anomaly of the Covid-19 pandemic of 2020-21, is presented in Figure 1.1.3 with the recording of exports on the positive and imports on the negative contribution side of GDP. In other words, the change of trend and the return to “normality” is clearly visible in the corresponding histograms of imports and exports after the 1st quarter of 2021.

1.1.2. Private consumption and investment

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1.1.2.1. Private consumption

Rising trend but decreasing rates of change in private consumption

According to the quarterly seasonally adjusted National Accounts,¹ private consumption of households and NPISH² increased to 36,627 million euros in current prices in the second quarter of 2022 from 35,658 million euros during the first quarter and 33,889 million euros in the fourth quarter of 2021. Correspondingly, in terms of chain-linked volumes (reference year 2015) private consumption rose to 34,638 million euros in the second quarter from 33,907 million euros in the first quarter of 2022 and 33,027 million euros in the fourth quarter of 2021. In addition, percentage chang-

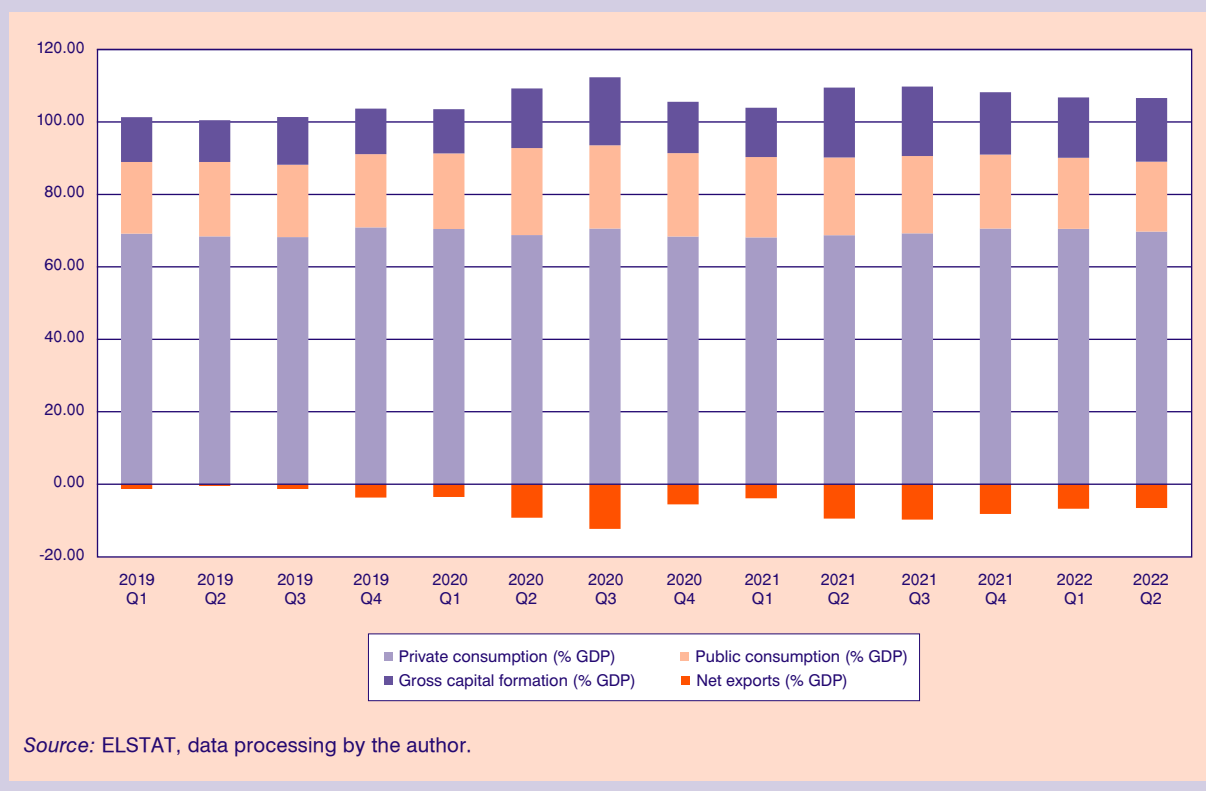
es³ with respect to the previous quarter, based on seasonally adjusted chain-linked volumes, were positive in all quarters under examination, though decreasing, namely, 3% in the fourth quarter of 2021, 2.7% in the first quarter of 2022 and 2.2% in the second quarter of the same year. The same pattern holds in the evolution of percentage changes with respect to the corresponding quarter of the preceding year. In this case, percentage changes in private consumption take a value of 12% in the fourth quarter of 2021, 11.9% in the first quarter of 2022 and 11% in the second quarter of 2022. Those positive but decreasing percentage changes indicate a transitional period for the Greek economy, which has not fully suffered the consequences of the energy and geopolitical crises despite its ostensibly quick recovery from the long period of the pandemic at the beginning of the tourist season.

Private consumption, as a percentage of GDP, fluctuated around 70.27% on average during the three quar-

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)



1. Quarterly National Accounts, Press release, ELSTAT, September 7, 2022.

2. Non-profit institutions serving households.

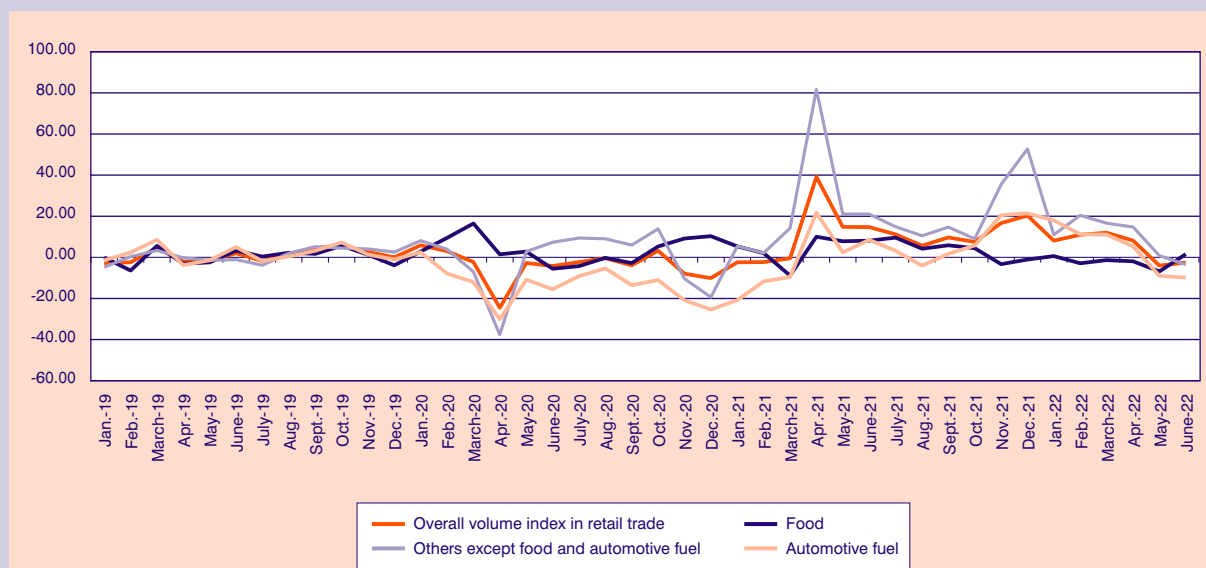
3. Percentage changes are calculated using the formula $\frac{X_t - X_{t-1}}{X_{t-1}}$.

ters under examination, being 70.57% of GDP in the last quarter of 2021, 70.50% of GDP in the first quarter of 2022 and 69.74% of GDP in the second quarter of the same year (See Figure 1.1.4). Public consumption, registering an average value of 19.79% over the three quarters, gradually decreased its share, amounting to 20.42% of GDP in the last quarter of 2021, 19.63% of GDP in the first quarter of 2022 and 19.31% of GDP in the second quarter of 2022. On the contrary, gross capital formation (fixed capital and changes in inventories) as a percentage of GDP fluctuated from 17.23% in the fourth quarter of 2021 to 16.65% in the first quarter of 2022 and 17.55% in the second quarter of 2022, with an average over the three quarters of 17.14% of GDP. Furthermore, net exports improved as a percentage of GDP from -8.22% in the fourth quarter of 2021 to -6.78% of GDP in the first quarter and -6.60% of GDP in the second quarter of 2022, with an average of -7.20% of GDP, taking into account all three quarters. Consequently, the rise in private consumption during the last three quarters was accompanied by decreasing rates of change along with a slight fall in its share in total expenditure, together with public consumption. To the contrary, the share of gross investment as a percentage of GDP showed a rising trend only during the second quarter of 2022, while the improvement in net exports as a percentage of GDP characterized all quarters under examination.

Declining trend in retail trade driven by automotive fuel

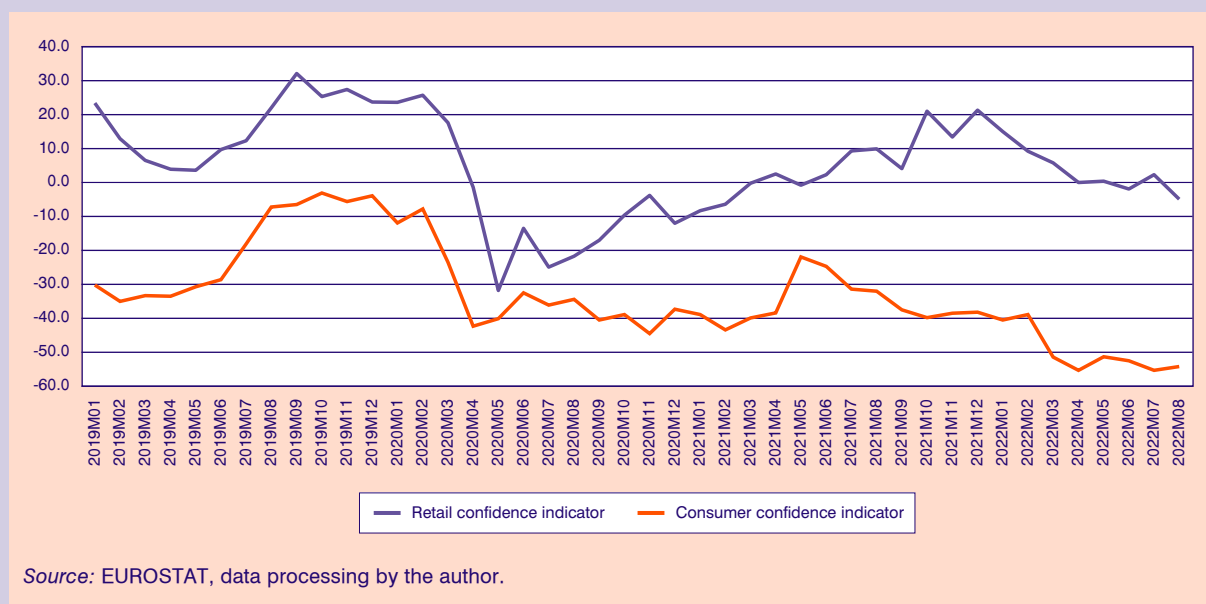
The evolution of retail trade in terms of percentage changes of the overall volume index was positive on average in the first semester of 2022 with respect to the corresponding months of the preceding year, based on ELSTAT monthly data (See Figure 1.1.5). However, despite positive percentage changes during the first four months of 2022 (8.12% in January, 10.96% in February, 11.98% in March and 8.17% in April), the overall volume index in retail trade showed negative percentage changes in May (-4.05%) and June (-2.55%). Food items exhibited a negative percentage change of -1.81% on average, with positive percentage changes only in January and June of 2022 (0.61% and 1.54%, respectively). On the contrary, automotive fuel showed the same pattern as the overall index, since significant positive percentage changes in the first four months of 2022, 11.40% on average, were followed by negative ones in May and June, -9.44% on average. Nevertheless, even in the first four months, those positive percentage changes decreased from 17.95% in January to 11.24% in February, 11.07% in March and 5.33% in April. Finally, in other items except food and automotive fuel, positive percentage changes are recorded, except in June, with an average of 10.01%. The general impression from this data is that retail trade, despite its general positive trend until April

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.

2022, followed a downward trend in May and June. The main influence for this change in trend was the situation in the market for automotive fuel without food items and other items except food and automotive fuel being able to reverse this development. To the extent that the economy will be increasingly affected by the energy crisis, this finding does not come as a surprise.

Persistent pessimism in retail trade expectations

Published by EUROSTAT, confidence indicators (Figure 1.1.6) show the prevalence of pessimism in retail trade, which pertains both to consumers and businesses. Indeed, the retail confidence indicator follows a falling trend during the first eight months of 2022 with a small correction in May and July of 2022. Likewise, the consumer confidence indicator decreases significantly from February 2022 and thereafter, which does not reverse itself despite observed fluctuations in the three months of summer. This declining trend in consumers' expectations is confirmed as we observe the data from June 2021 when this significant trend reversal is first spotted.

1.1.2.2. Investment

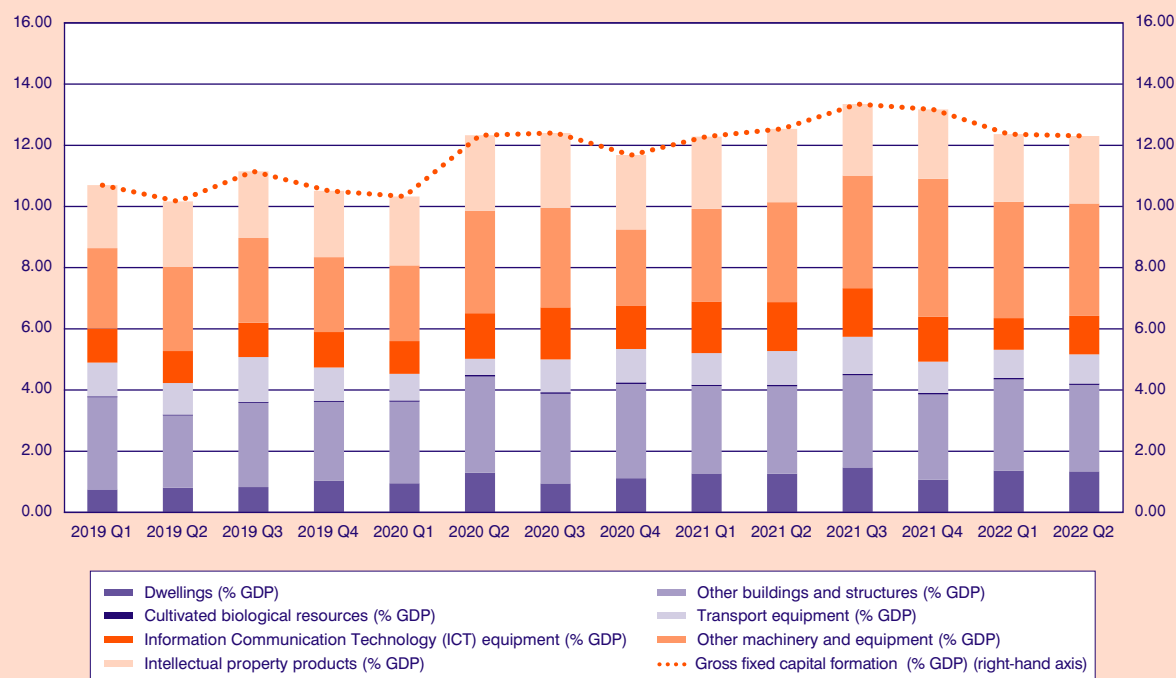
Fluctuations in gross investment without a clear trend

Gross fixed capital formation decreased from 6,325 million euros in current prices in the fourth quarter of 2021

to 6,253 million euros in the first quarter of 2022, while it increased to 6,463 million euros in the second quarter of the same year. On the contrary, in terms of chain-linked volumes, gross fixed capital formation increased from 6,059 million euros in the fourth quarter of 2021 to 6,285 million euros in the first quarter of 2022, while it decreased to 6,225 million euros in the second quarter of this year. As regarding percentage changes with respect to the corresponding quarter of the previous year, there is a rising trend, though at a decreasing rate, since positive percentage changes were 24.2% in the fourth quarter of 2021, 13% in the first quarter of 2022 and 8.7% in the second quarter, of 2022. In contrast, concerning percentage changes with respect to the preceding quarter we observe a fluctuation with values of 1.7% in the fourth quarter of 2021, 3.7% in the first quarter of 2022 and -1% in the second quarter of 2022, according to seasonally adjusted chain-linked volumes.

The evolution of investment (gross fixed capital formation) as a percentage of GDP (Figure 1.1.7) seems to have followed a downward trend in the last quarter of 2021 and the first two quarters of 2022, though this trend was less intense during the second quarter. The corresponding observed percentage changes with respect to the previous quarter were -1.32% in the fourth quarter of 2021, -6.13% in the first quarter of 2022, and -0.48% in the second quarter of 2022. However, in terms of the main components of gross investment, fluctuations rather than clear trends are the observed norm. Machinery and transport equipment as a percentage of GDP showed a positive percentage change of 8.12%

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.

in the fourth quarter of 2021, a negative -17.69% in the first quarter of 2022 and again a positive one of 2.14% in the second quarter of the same year. To the contrary, percentage changes in buildings in general as a percentage of GDP showed the opposite signs in the corresponding quarters, namely, -13.96% in the fourth quarter of 2021, 12.73% in the first quarter of 2022 and -4.19% in the second quarter of 2022.

Machinery and transport equipment maintain their lead over buildings, with fluctuations

As it is evident from Figure 1.1.8, the share of machinery and transport equipment in total gross fixed capital formation remained high and fluctuated around 49.21% on average in the last quarter of 2021 and the first two quarters of 2022, as opposed to 32.77% for the buildings. However, an inspection of Figure 1.1.8 confirms our observation in the previous section concerning the fluctuations in the two main components of gross investment. In the first quarter of 2022, buildings increased their share in total gross investment from 29.28% in the last quarter of 2021 to 35.17%, while machinery and transport equipment lost in share from 53.17% to 46.62%, correspondingly. Nevertheless, in the second quarter,

machinery and transport equipment recovered, increasing its share to 47.85%, as opposed to a decreasing share for buildings of 33.86%. However, despite these fluctuations, machinery and transport equipment remained the main component of gross investment during the period under examination.

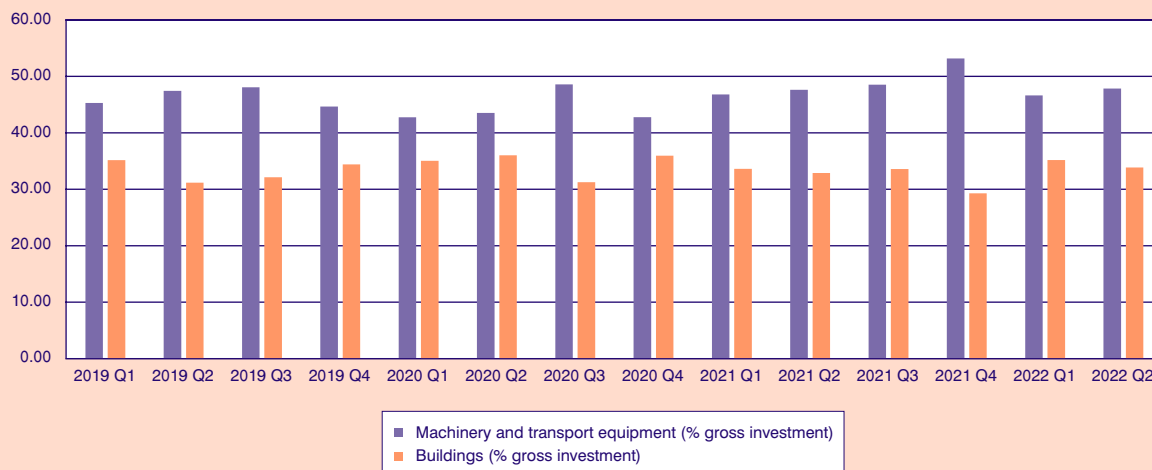
Pessimism in construction sector continues

The evolution of business expectations in the construction sector, despite fluctuations, indicates a downward trend, having as a starting point September of 2021. Indeed, even if the fluctuation of the construction confidence indicator, which returns to positive values in March 2022, could be characterized as “cautious optimism with uncertainty”, as we have noted in the previous issue of *Greek Economic Outlook*, the evolution of the indicator thereafter rather confirms pessimism in the construction sector.

1.1.2.3. Conclusions

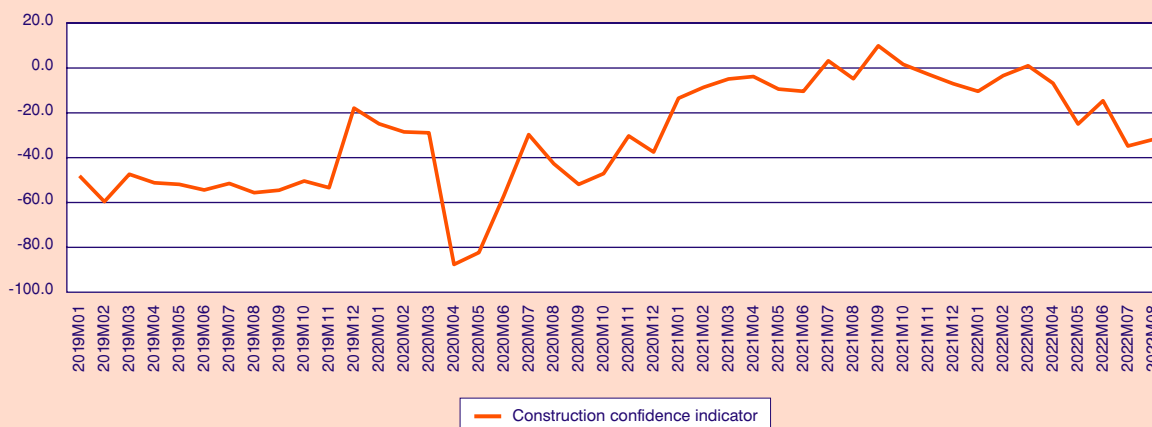
The above analysis indicates that the Greek economy as of the end of 2021 and especially during the first

FIGURE 1.1.8
Machinery, 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.

semester of 2022 came across the first repercussions of the energy and geopolitical crises. Indeed, while private consumption showed a rising trend because of the recovery from the pandemic and pending the tourist summer season, the rates of change in consumer expenditure were falling. The above are confirmed by the falling trends in retail trade with an emphasis in automotive fuel along with the retreat in expectations in retail trade, concerning both consumers and retailers. During this interval, we also observed fluctuations in gross investment without any clear trend,

while business expectations in the construction sector remain depressed. In conclusion, the Greek economy seems to be experiencing the first perturbations of a difficult imminent period marked by the energy crisis. It is notable that expectations, as depicted in the corresponding confidence indicators, despite covering the summer tourist season, did not show a reversal, as temporary as it might be, of this depressing climate. This is so despite the fact that the energy crisis is expected to affect the economy in a more profound way from autumn and thereafter.