

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

*Factor Model Economic Forecasting Unit
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The current section presents the updated short-term forecasts of KEPE concerning the evolution of the rate of change of real GDP in Greece for 2019.¹ The forecasts are produced by implementing a dynamic structural factor model, a detailed description of which can be found in Issue 15 (June 2011, pp. 19-20) of the *Greek Economic Outlook*. The underlying time series database used to estimate the model and produce the forecasts includes 126 variables, covering the main aspects of economic activity in the country on a quarterly basis, spanning the time period from January 2000 up to December 2018. Specifically, the database incorporates both real economy variables (such as the main components of GDP from the expenditure side, general and individual indices concerning industrial production, retail sales, travel receipts and

the labor market) and nominal variables (such as the general and individual consumer price indices, monetary variables, bond yields, interest rates, exchange rates and housing price indices). In addition, the data sample includes a considerable number of variables reflecting expectations and assessments of economic agents (such as economic sentiment and business expectations indicators). It is noted that the seasonal adjustment of all time series is carried out by use of the Demetra+ software, which is freely available from Eurostat.²

According to the econometric estimates presented in Table 1.3.1, and having incorporated published (provisional) GDP data up to the end of 2018, the mean annual rate of change of real GDP for 2019 is predicted at 1.8%. This forecast reflects a marginal weakening in growth as compared to the previous year, since the respective real GDP rate of change for 2018 was 1.9%.³ The corresponding mean rates of change for the first and second half of 2019, as compared to the same periods of 2018, are estimated at 1.9% and 1.6%, respectively, indicating: first, a downward revision of the preceding factor model forecast for the first half of 2019 (2.2%) and, second, a trend towards a moderate fading of the growth process in the country during the second half of 2019. This trend is further mirrored in the estimated quarterly growth rates for the four quar-

TABLE 1.3.1 Real GDP rate of change for 2019 (% , y-o-y)

Quarters	2019			
	2019Q1	2019Q2	2019Q3	2019Q4
Quarterly rate of change	1.97 [1.91 , 2.03]	1.87 [1.75 , 1.98]	1.24 [1.07 , 1.40]	1.98 [1.76 , 2.20]
Mean rate of change, 1 st & 2 nd half of 2019	1.92 [1.83 , 2.00]		1.61 [1.41 , 1.80]	
Mean annual rate of change	1.76 [1.62 , 1.90]			

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

1. The date of the forecast is the 15th of May 2019.

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

3. According to statistics by ELSTAT, based on the first estimation of the *Annual National Accounts* for 2018.

ters of 2019, at 2%, 1.9%, 1.2% and 2%,⁴ as compared to the corresponding quarters of 2018.

According to the above presented estimates of the rate of change of real GDP, it follows that growth in 2019 will settle at levels similar to the ones recorded in 2018, demonstrating a fairly stable economic outlook, but also a lack of additional growth dynamics. More specifically, restrained growth dynamics in the last quarter of 2018 (1.6%, as compared to the last quarter of 2017, following the rate of 2.1% in the third quarter) are expected to be carried over to 2019, leading to a gradual slowdown in growth rates up to the third quarter and to a significant rebound at the end of the year. As a result, recovery and stability conditions are anticipated to continue to prevail in the Greek economy, alongside a more contained growth path, mainly due to the course of domestic demand. The observed absence of indications on a further enhancement of growth within 2019 could mirror delays in the progress made with reference to the completion and implementation of major projects and investments, as well as additional key structural reforms. Moreover, it could reveal a reluctance and wait-and-see stance by economic agents related to the two election periods taking place in 2019. In addition, it may reflect the recently downward revised economic prospects at the European and international levels, in combination with the conditions of escalating uncertainty which appear to prevail globally, affecting the growth outlook in major economies worldwide, with potential effects on the domestic economic environment.

The above findings and assessments seem to be in line with the recent course of the major GDP components and of a number of other economic variables, as indicated by the non-seasonally adjusted economic data for the last quarter of 2018, as compared to the same quarter of 2017. In particular, with respect to favourable developments in GDP components, private consumption expenditure recorded an increase, even though it remained relatively weak (positive rate of change below unity), accompanied by the remarkably positive course of goods and services exports. In parallel, economic activity in industry was characterized by rising trends, according to: (a) the general industrial production index and the indices of the individual categories, with the exception of those for durable consumption goods and capital goods, which decreased,

(b) the general turnover index and the sub-indices in industry for the overall as well as for the internal and external markets, with the exception of the sub-index for durable consumption goods, which recorded a fall (in the case of the external market, the sub-index for capital goods decreased as well) and (c) the index for new orders in recent months. A rising course further characterized: (a) travel and transport receipts, (b) passenger cars, according to passenger car licenses issued and the turnover index for motor trade (wholesale, retail trade and repair of motor vehicles, etc.), (c) building activity, in terms of volume, on the basis of permits issued, (d) wholesale trade, on the basis of the turnover index and (e) the general production index in construction, on the basis of the increase in the sub-index of production of building construction (in contrast to the downward course of the sub-index of production of civil engineering). At the same time, positive developments were recorded with regard to spreads (the difference between Greek and German 10-year bonds), which declined compared to the respective quarter of 2017. Encouraging signs were also provided by: (a) a number of indicators reflecting business expectations on a sectoral level, namely for retail trade and construction, (b) the indicator for export expectations and (c) the economic sentiment indicator for Greece. Moderate improvements were also recorded for a number of competitiveness indicators.

On the positive side and of great importance for domestic economic conditions, was the continuation of the gradual reduction in unemployment (on an aggregate level, as well as for the long-term and the newly unemployed), alongside the preservation of the increasing trend in employment (on an aggregate level, and in the primary, secondary and tertiary sectors as well), despite the overall adverse situation still characterizing the domestic labour market.

On the negative side,⁵ the heavy setback in the major macroeconomic component of investment played a central role, driven by the particularly adverse developments in the categories of *other buildings and structures* and *transport equipment and weapon systems*. In parallel, a downward course characterized public investment, the general volume index in retail trade and all the indices of the corresponding individual categories, and the General Index of the Athens Stock Exchange, while the assessments on anticipated or-

4. It is noted that, due to the structure of the employed model, no assessment can be made on any potential impact arising from the recent implementation of policy measures, such as the ones concerning the increase in the minimum wage, the pension bonus and the changes in tax rates.

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

ders in industry and exports, as well as business expectations in manufacturing, worsened. Finally, there was a significant deterioration of the economic climate indicator for the European Union (EU).

Greek real GDP and the overall domestic economic environment may evolve according to a more or less favourable scenario –than indicated by the above presented forecasts– depending on certain critical and decisive developments concerning a wide range of factors. These are associated with the course of the major GDP components: the strengthening of private consumption, the absolutely necessary recovery in investment and the preservation of a favourable environment with regard to exports. Such conditions are necessary in order to safeguard the viability of the growth process and the reinforcement of production capacity in crucial sectors of the Greek economy,

with the aim to create new and sustainable jobs. The referred factors also concern the compliance with the commitment to preserve balanced fiscal aggregates and to continue with the implementation of all necessary structural reforms. At the same time, in the current conjuncture, these factors are linked to the duration and any potential positive and/or negative impact of the electoral cycle and the related expected political developments, creating an environment of uncertainty or, at least, a reluctance and wait-and-see attitude. Clearly, both the dynamics of the growth process at the global and European level and the overall international developments are crucial to the evolution of domestic economic conditions towards a more or less favourable direction, whereas issues concerning, for example, world trade, immigration and Brexit negotiations are expected to acquire great significance.