

3. SPECIAL TOPICS

BOX 1. POST-PANDEMIC PRODUCTIVITY GROWTH: WHAT MAKES THE DIFFERENCE?

In recent years, economic growth has been strong, exceeding the pre-pandemic trend growth. Alongside high economic activity, inflation has remained below the target level over the past two years, and strong demand has not exerted upward pressure on prices. This, among other factors, has been driven by high productivity growth in the economy. During the pre-pandemic period, the potential growth rate of the economy was within the range of 4-5%, whereas in the post-pandemic period, it has fluctuated within the band of 7-8%. It is noteworthy that this reflects the consensus of three analytical models of the NBG (see Figure 3.1.1³). According to estimates of the production factors model, the contribution of the labor force to potential growth increased in 2023, which has led to an increase in the total potential output. At the same time, the model indicates that the contribution of productivity to potential growth has risen in the post-pandemic period, reflecting structural changes in the economy. Specifically, in recent years, the contribution of relatively high-productive sectors, such as information and communication, transportation, and construction, has increased in economic growth. Despite the high economic growth, a trend of stabilization in the potential growth has recently emerged, moving toward a long-term equilibrium level. As noted, the labor force made a significant contribution to potential growth in 2023, but this is expected to have a temporary effect, as the impact of labor force growth is limited in the long term perspective. Consequently, a trend of decreasing contribution from the labor force is already apparent in 2024.

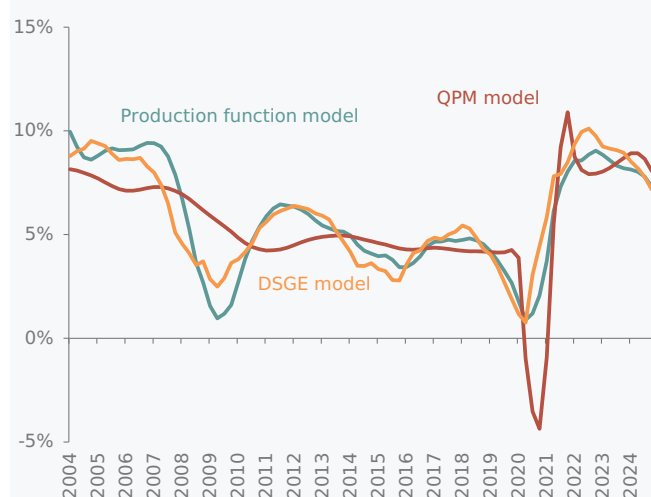


Figure 3.1.1: Estimates of Potential Growth Rate

Source: NBG.

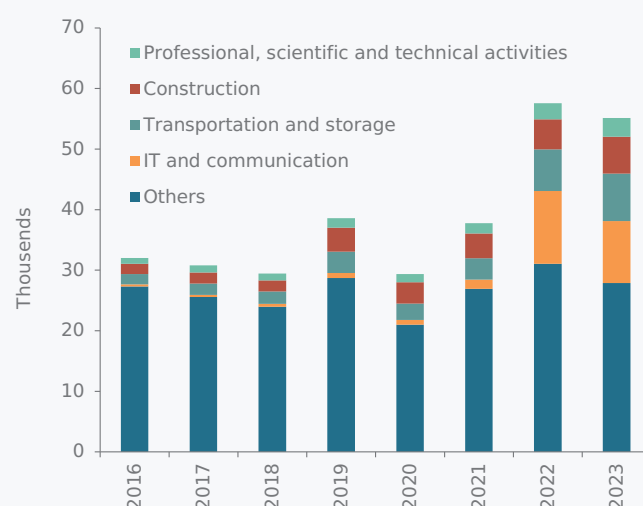


Figure 3.1.2: Composition of Newly Registered Firms

Source: Geostat.

Evaluating outlook of the economy's total potential for the upcoming period is crucial from a monetary policy perspective. The potential output is the combined outcome of production factors—labor, capital, and productivity. Regarding the dynamic of productivity growth, two scenarios can be considered: 1. Productivity returns to its pre-pandemic growth rate. 2. The high growth of productivity stabilizes at a higher level than in the pre-pandemic period, despite some moderation. In this context, it is important to assess the factors that differ today and could positively impact sustaining high productivity growth rates in the future. High economic activity in the transportation and information and communication sectors—both high-productive industries—has been a driving force in maintaining productivity growth at elevated levels in the post-pandemic period, provided that the development of these sectors continues. An additional noteworthy factor is the composition of newly registered enterprises. For example, during the pre-pandemic period, only 1 in 10 newly established enterprises belonged to these sectors, whereas in the post-pandemic period, 1 in 3 new enterprises is related to transportation or information technology. If this tendency continues, it could

³ The potential level of output is an unobservable variable and is estimated using macroeconomic models. These models have different characteristics, which may influence the estimation. To mitigate the impact of model specification on the assessment, it is important to rely on estimates from multiple alternative models to verify the consistency of the results.

positively influence the contribution of highly productive sectors to the economy and, consequently, the potential growth rate. Under such conditions, despite some moderation (as base effects dissipate), there is a possibility that the contribution of productivity to potential growth will remain higher than the pre-pandemic trend (in the range of 3-4 percentage points, compared to the pre-pandemic 2-3 percentage points, see Figure 3.1.4). The accelerated adoption of artificial intelligence globally and its positive impact on labor productivity could also be a contributing factor. Sustained activity in the productive sectors of the economy will depend on increasing the number and qualifications of local specialists in these fields. Although formal education indicators do not yet reflect this trend⁴, it is likely that skill enhancements (particularly in information technology) occur through informal education channels.

Assessing potential growth, and the contribution of productivity to it, is essential for analyzing the impact of economic activity on inflation. High productivity, on one hand, helps alleviate price pressures stemming from demand. On the other hand, even amid relatively high wage growth, productivity growth leads reduction in the unit labor costs, ultimately reflected in lower price pressures. In the previous monetary policy reports it was highlighted that despite a high-inflation episode and strong potential growth during the post-pandemic period (which should gradually be reflected in wages), the average nominal wage level still lags behind the price level (see Figure 3.1.3). It is worth noting that if the contribution of labor force growth to potential growth is significant, firms may face limited capacity to fully adjust wages to compensate for real economic growth without creating additional cost and price pressures. However, if real wages grow in line with productivity, additional inflationary pressures is not expected to emerge.

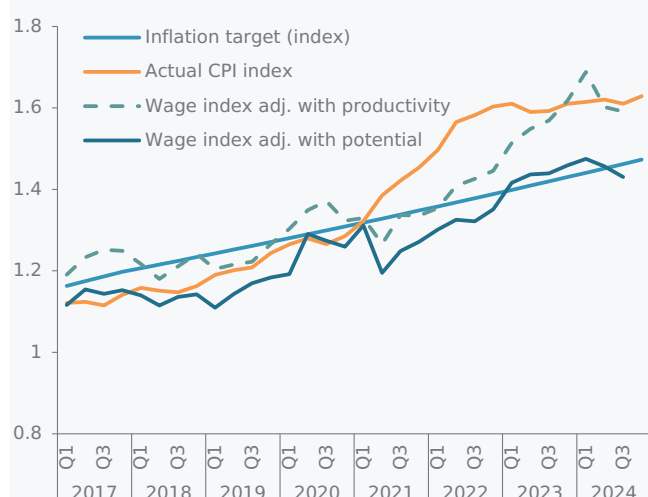


Figure 3.1.3: Wage "Catch-Up" (Index 2014Q1=1).

Source: NBG, Geostat.

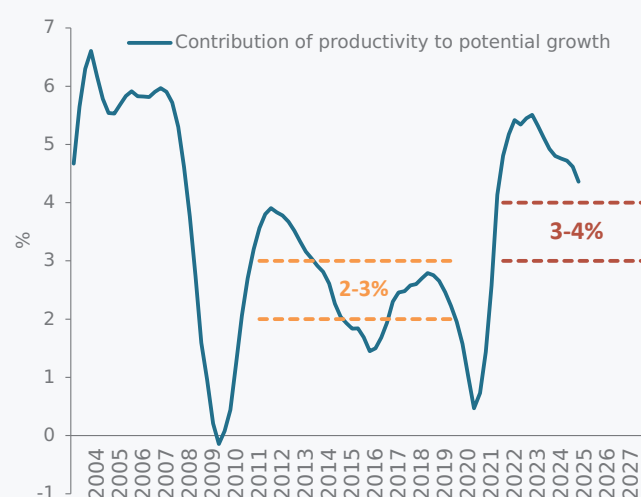


Figure 3.1.4: Contribution of Productivity to Potential Growth.

Source: NBG.

In 2023, labor force growth made a significant contribution to potential growth. Against this backdrop, the increase in productivity was slower than potential growth. As a result, the nominal wage level—excluding total potential growth—remained below the price level. However, when accounting for productivity alone, the wage gap relative to the price level was effectively closed. Conversely, in 2024, as the contribution of labor force growth on potential growth diminished, productivity grew at a faster pace. This acceleration in productivity significantly alleviated wage-induced pressures. As a result, by the beginning of the year, wages were no longer lagging behind the price level, suggesting that they had 'caught up' after the period of high inflation. Against the backdrop of accelerating productivity, wage growth showed signs of slowing, contributing to easing price pressures stemming from the labor market. In the event of productivity moderation, monitoring wage growth dynamics will be critical to analyzing potential inflationary pressures originating from the labor market.

⁴ In 2018, one out of every 16 undergraduate students enrolled in IT related programs, whereas in 2023, this number increased to one out of every 12.