

Euro area economic growth between 2010 and 2019 in the light of secular stagnation theory

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Abstract

Achieving economic growth remains an important issue for economic policy today. Growth in developed economies has slowed considerably in recent decades. In our study, we examine economic growth in the euro area between 2010 and 2019 in the light of secular stagnation theory. The concept of secular stagnation was developed by Hansen after the Great Depression of 1929-33. According to this theory, the causes of secular stagnation are low population growth and weak technological development. The concept was brought back into the economic discourse after 2010 by Summers.

Following the 2008 crisis, euro area economies should have adjusted to a higher growth rate. Instead, growth remained below 2% for all but one year, below potential output for most of the decade. Investment rates have barely risen despite euro interest rates falling to near zero. The euro areas population barely grew despite a net migration surplus, putting a brake on employment growth. The available data suggest that neither employment growth nor productivity growth have boosted economic growth. The low level of economic growth and the evolution of the underlying factors are consistent with the theoretical assumptions described by Hansen and his followers.

KEYWORDS: secular stagnation, economic growth, euro area

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Introduction

Achieving economic growth remains an important issue for economic policy even today. The growth of developed world economies has slowed considerably in recent decades. Japan has been cited as an example of this since the 1990s, but a significant slowdown in growth has also become a feature of the US and Western European economies. This is despite considerable efforts by governments to achieve a higher growth path. In recent decades, there has also been much talk about technological progress. In principle, the acceleration of technical progress also has the effect of raising economic growth through productivity improvements.

Of course, economic growth is not only the focus of interest in today's economic thinking, but has also been a concern for theorists and practitioners in the past. Some theories have been temporarily relegated to the background, and then their formulations are used again when the problems and economic processes they focus on reappear. The theory of secular stagnation is such a theory. It was developed almost a hundred years ago, after the Great Depression of 1929-33. After the Second World War, the theory fell into disuse. The theory was brought back into the mainstream of economic thought after the global financial crisis of 2008. In our understanding, the theoretical formulations can be used to explain the fundamental causes of certain economic processes.

We review the main points of the theoretical framework of secular stagnation. The theoretical assumptions of secular stagnation are used to examine economic developments in the euro area. Factors in the theoretical framework are examined by exploring and evaluating factual data. The problems and reasons raised by the theory are compared with economic data from 2010 to 2019 and conclusions are drawn about economic growth in the euro area.

Theoretical implications of secular stagnation

The concept of secular stagnation was introduced by Alvin H. Hansen, who concluded in his 1934 paper that if market participants are unable to channel accumulated savings into profitable investment, the economy will enter a state of "business secular stagnation" (Hansen, 1934). The Great Depression was the starting point for Hansen's work, in which he saw the causes of possible long-term stagnation in the 1930s in the declining population growth rate and poor technological development. In addition to these two factors, looking back at the territorial expansion of the United States in the 19th century, he identified the lack of expansion of natural resources as the third cause of secular stagnation. Nevertheless, in the period under study, these phenomena were linked to the level of development of the economy (Hansen,

1934, 1938, 1939),³ hence the concept of a “mature” economy was introduced. Based on the above reasons, Hansen (1939) foresaw the possibility that, coupled with high unemployment and economic stagnation, the Great Depression could have marked the beginning of a new era in the United States.

Hansen referred to Keynes’ studies in several of his analyses (see, for example, Hansen, 1939, 1946a). As he pointed out, there was little economic work after 1936 that was not influenced by Keynes’ work, or that did not evaluate Keynes’ theory (Hansen, 1939). It can also be concluded that Hansen himself was no exception to this statement. Related to the problem of secular stagnation, Keynes also pointed out that declining population growth has an impact on the demand for capital, fails to eliminate any oversupply and generates pessimistic business expectations. Based on this, if population growth turns into decline, the consequences for development could be “catastrophic” (Keynes, 1937, 14).

On the other hand, evaluating the work of Keynes, Hansen (1946a) pointed out that the marginal benefit function of capital is not necessarily inelastic. Moving “down” the curve cannot generate steady income and employment growth. To significantly increase investment, the marginal benefit rate should be increased. This shift can be caused by technological progress, the discovery of a new factor of production, population growth or government policies that open up investment opportunities. In other words, Hansen concludes that the effect of lowering interest rates is quickly exhausted if it is not accompanied by an upward shift in marginal interest rates. This suggests that, while a low interest rate is beneficial because it supports a shift towards “total investment” (Hansen, 1946a, p. 185)- thus increasing productivity - if this is not coupled with innovation and dynamic growth, it leads to a net investment close to zero (Hansen, 1946a). So Hansen did not think it was effective to keep interest rates low in the long run if it was not accompanied by innovation or population growth. Finally, insufficient investment demand plays a key role in secular stagnation theory (Novák & Tatay, 2021).

Although there was much overlap between Hansen’s and Keynes’s approaches, the former economist did not classify himself as a Keynesian. Nevertheless, the representatives of secular stagnation, including many of Hansen’s students, were typically classified as belonging to the Keynesian school. Moreover, the findings of Hansen and Keynes were typically analysed together.⁴ It was only in the 1960s that Hansen wrote that secular stagnation is essentially equivalent to Keynesian “under-employment equilibrium”, since their bases are compatible. Notably, both stem from the relationship between investment and savings, influenced by long-term population growth, technological progress, and the discovery of natural resources (Backhouse & Boianovsky, 2016).

3 Based on these studies, Miklós Kaldor called Hansen the “leading business cycle authority” in the United States (Kaldor, 1939, p. 91) He pointed out that, following Keynes, Hansen also drew attention to the danger of “chronic stagnation”, which he attributed mainly to insufficient investment opportunities.

4 See for example Sweezy (1972).

Hansen's theory of secular stagnation has been the subject of much criticism. Knight (1944) rejected both the theoretical possibility of a "stationary" economy and the idea that the rate of return on investment would fall to zero. On the one hand, Simons (1942) - a prominent representative of the so-called "Chicago" school - named Hansen as one of the most important economists of the era. On the other hand, his paper provides a detailed critique of his theorems and challenges Hansen's conclusions from a monetarist perspective. Pigou (1943) also criticised Hansen's conclusions. He argues that an economy can achieve a "steady state" even at full employment, provided that wages are flexible Hansen contrasted the derivation of this with the economic stagnation accompanied by unemployment. Fellner (1941) also discussed the need for price and wage flexibility and the impact of technological and institutional developments. By examining these conditions, he proposed to solve the problem of secular stagnation, that "chronic" unemployment entails a reduction of "investment opportunities"(Fellner, 1941, 639). Fellner disputed the validity of secular stagnation and focused on the importance of innovation.

Schumpeter also disagreed with the concept of secular stagnation and stressed, among other things, the importance of price adjustment. In his view, the theory was weakly based, as it did not take into account the impact of events such as the Second World War. Schumpeter also wrote that economists who studied the trend of a stagnating or mature economy typically came to similar conclusions, while most of them used their own unique approach. At the same time, Schumpeter did not dispute Hansen's importance in economic history (Schumpeter, 1954).

As a critique of Hansen, Terborgh (1945) tried to show with empirical research that there is no detectable link between declining population growth and economic stagnation. To confirm this, several countries, including Germany, France and the United States, have analysed statistics from the years before the First World War. In response to this, Hansen (1946b) wrote in his critique of Terborgh's book that the decline in American population growth was negligible before the First World War. It also acknowledged that before the First World War, the variation in the percentage change in population growth in different countries showed no relationship with the value of real per capita income. In his opinion, this fact is "true but proves nothing (Hansen, 1946b, 14), since Terborgh did not take into account the international embeddedness of countries and thus the investment of net savings abroad. In addition, Hansen agreed with Terborgh on several points. The latter also confirmed that population growth has a major impact on capital formation. Furthermore, both specialists supported institutional reforms and fiscal incentives that, for example, extended social security or introduced progressive taxation, thereby increasing the propensity to consume (Hansen, 1946b).⁵

In addition to critical voices, a number of economists have used secular stagnation theory or elements of it in their studies. Notable among others is Domar, who, while not using the term secular stagnation, referred to Hansen's work while iden-

5 For a comparison of Hansen's and Terborgh's positions, see. Wright (1946).

tifying labour force growth, natural resource accumulation and technological progress as three factors that can counteract insufficient marginal propensity to save, thus supporting full employment (Domar, 1947).

Hansen's most famous student, Paul Samuelson, often referred to the theme of secular stagnation and praised the work of his former teacher.⁶ In the 1960s, he used this concept to explain the phenomenon of rising unemployment in the light of cyclical movements. His book *Economics*, which has gone through several editions, also included a discussion of secular stagnation until the 1985 edition, when he was co-authored with William Nordhaus (Backhouse & Boianovsky, 2016).

From the 1950s onwards, the analysis of secular stagnation in the economic literature became predominantly theoretical and was relegated to the background. In particular, the outbreak of the Second World War generated waves of government spending on a scale that eliminated the main challenges of insufficient demand. In his review of Fellner's book, Hansen himself (1957) acknowledges that the post-war growth was fuelled by "enormous" (Hansen, 1957, 114) fiscal spending, thus masking structural problems. Higgins (1950) has already defended the relevance of secular stagnation in an earlier paper. According to his interpretation, stagnation is a situation where the trend line of (potential) gross national product with full employment and actual gross national product diverge. In his study, the real trend line reflected growth under so-called neutral fiscal policy. On this basis, Higgins also argued that the problem of secular stagnation highlighted real challenges that were only masked by government interventions at the time. Moreover, in addition to underinvestment, the other pillar of secular stagnation - namely the problem of an ageing society - has been redrawn by the "baby boom" period (Eggertsson & Mehrotra, 2014).

In the 1970s and early 1980s, the problem of so-called stagflation received more attention. Discussions of secular stagnation have typically only received attention from an economic history perspective. According to Johnson's (1971) assessment, the Keynesian school saw unemployment as an inherent feature of capitalism in the 1930s. The Keynesian toolkit was used to remedy this. In Johnson's formulation, this basic assumption was raised by Hansen to the level of "dogma" (Johnson, 1971, 6) with his theory of secular stagnation. In the early 1970s, Johnson argued that the concept of secular stagnation had been marginalised in economic discourse, or modified to examine developing countries. However, in his view, its elements persisted among American Keynesian thinkers (Johnson, 1971). Among others, we can also mention the book by Sweezy and Magdoff (1987) or the study by Rothbard (1987), who also mentioned Hansen and the concept of secular stagnation, mainly from the point of view of economic history.

As Backhouse and Boianovsky (2016) have shown, secular stagnation received renewed attention in the 2000s because of two economic problems. The first was embodied in Japan's decades-long economic challenges, some of which could be paralleled with phenomena last seen in the developed world during the Great Depres-

6 See. Samuelson (1976).

sion. This included declining population growth, near-zero nominal interest rates or low levels of GDP growth (Tatay & Tatay, 2020). Nevertheless, in the early 2000s, the thesis of secular stagnation had not yet come into focus in the Japanese economy. However, a number of economists have already directly examined the link between declining population growth and economic consequences. Among them, Rostow has analysed this problem both at the global level (Rostow, 2000a), and focusing on Japan (Rostow, 2000b). In the latter paper, he does not mention the theory of secular stagnation, but he does mention Hansen and the issues he examines, namely the problem of declining population and the consequences of shrinking investment opportunities.

The notion of secular stagnation was only rediscovered in the academic literature in the context of the second related economic event of the era, namely the global crisis of 2008. This is because, following the first wave of panic, US economic growth remained low with high unemployment. In other words, the economy faced challenges that were examined by the secular stagnation hypothesis (Eggertsson & Mehrotra, 2014).

The re-introduction of the concept into the economic discourse is attributed to Lawrence Summers. In 2013, he spoke at a conference on the relevance of the concept to Japan and the United States (Summers, 2013a). Several economists have reflected on the speech, including Paul Krugman (Krugman, 2013). Summers then (2013b) argued that the US may not be able to return to a path of full employment and high economic growth without the use of “unconventional” economic policy instruments. Summers attributed the problem to several causes. First, he found that economic growth in the United States has only kept pace with population growth and normal productivity growth, while other industrialised countries have not even kept pace. Second, despite the inflation of bubbles and loose lending policies, the economy managed to achieve low growth even in the pre-crisis period. The third phenomenon mentioned was low interest rates, which have failed to stimulate investment, and hence employment, at levels close to zero. The fourth reason was low or negative price and wage growth, which contributed to postponing consumption and investment and to changing the positions of debtors and creditors (Summers, 2013b).

Summers (2016a) illustrated the difference between actual and estimated potential emissions for the US from 2004 to 2014. The graphs show that actual emissions were already below potential in 2008. In addition, the trend function of potential output has shown a gradual decline over the ten years under study. Hence, in Summers’ view, the primary macroeconomic test is the fluctuations in output and employment relative to their normal values. Summers explained that, based on the events of 2008, the “new secular stagnation hypothesis” calls into question whether “full employment, satisfactory economic growth and financial stability can be achieved simultaneously through conventional monetary policy instruments. It thus provides a possible explanation for the weak recovery in the industrialised world and the growing concerns about emerging financial stability problems” (Summers, 2016b, p. 29–30). Summers notes that even before 2008, the US and eurozone econo-

mies were weak, but this was masked by a low interest rate environment that undermined financial stability. It concludes that falling or negative neutral interest rates can hamper economic growth at full employment. “Abnormally”(Summers, 2016b, 3) low interest rates have been examined in several studies (Novák & Tatay, 2021). On this basis, Summers (2016b) highlights declining population growth, rising income inequality, declining capital needs in certain sectors, notably information technology, or rising savings and declining investment rates in the developed world.

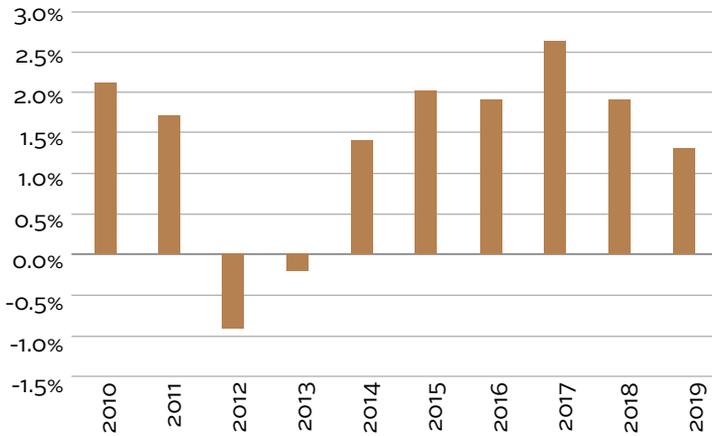
As Summers brought the notion of secular stagnation back into the economic discourse, a number of critical treatises have been written on the subject. Rogoff (Rogoff, 2016) rejected the idea of secular stagnation and explained the economic stagnation in terms of a “financial crisis/debt super-cycle viewpoint” (Rogoff, 2016, 16), while emphasising the global asymmetry of the recovery. Stiglitz (2018) was also a critic of the secular stagnation theory. He attributed the slow recovery of the US economy to misguided economic policies. In addition to the critics, a number of prominent economists have used the concept of secular stagnation to support their views. For example, Gordon (2015) approached the problem from the supply side. He concludes that slower productivity growth and population growth, as well as declining labour market participation, generate lower capital demand, which hampers productivity growth and hence potential output. In contrast, Bernanke (2015) sees secular stagnation theory as the problem of insufficient aggregate demand. Summers’ reasoning lacks the use of international context.

The state of the euro area between 2010 and 2020

In the interpretation of the theory of secular stagnation, economic variables can be identified that indicate the emergence of secular stagnation in the economy. Factors that can be identified as the cause of secular stagnation according to the theory can also be identified. In what follows, we look at the factors indicating secular stagnation for euro area economies in the decade following the 2008 global financial crisis. Our analysis covers the euro area as an economic area. The euro area can be seen as an economic area in which the most important economies of the European Union - such as Germany, France and Italy - are located. The time frame is the period between 2010 and 2020. From 2010 onwards, the majority of economies should have gradually responded to the problems of the 2008 global financial crisis and returned to a higher growth and development path. 2020 marks a new frontier in economic development due to the emergence of the coronavirus.

Based on the theoretical assumptions discussed in the previous chapter, economic output growth is low. The evolution of real GDP data for the euro area over the period analysed in this study is shown in Figure 1.

Figure 1 Change in euro area real GDP over the period between 2010-2019.
(The change expressed as a percentage of the previous year's real GDP data)

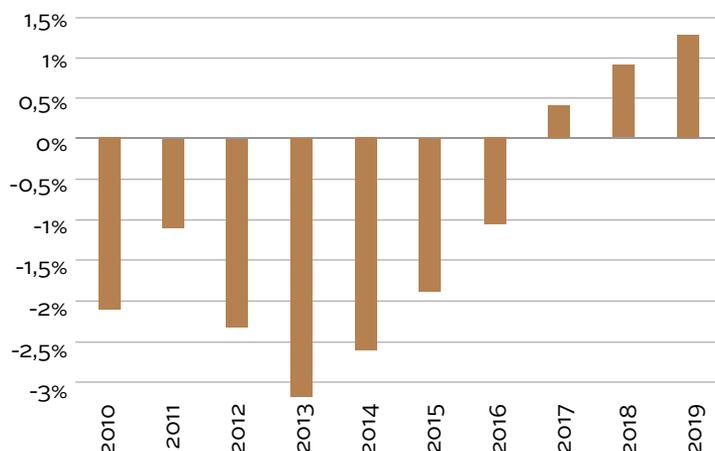


Source: Own editing based on Eurostat data

Over the period under review, real GDP growth did not exceed 2% in all but one year. Growth, which had risen to 2% at the beginning of the decade, quickly fell back into negative territory. The reason for this was the budget problems of the southern European countries, especially Greece. The change in GDP has been positive since 2014, but growth only exceeded 2% in 2017. Real GDP growth has therefore remained low over the decade as a whole. Secular stagnation is theorised to manifest itself in persistent low growth.

Higgins (1950) interprets secular stagnation as when actual output diverges from potential output. The monitoring of the output gap is still relevant for the design of fiscal and monetary policy today (Oksanen, 2019). It is therefore worth looking at the output gap in the euro area. The output gap between actual and potential output is illustrated in Figure 2.

2. The gap between actual and potential output (output gap) for the period between 2010-2019 (The difference between actual and potential output as a percentage of potential output, calculated using the 2015 baseline.)



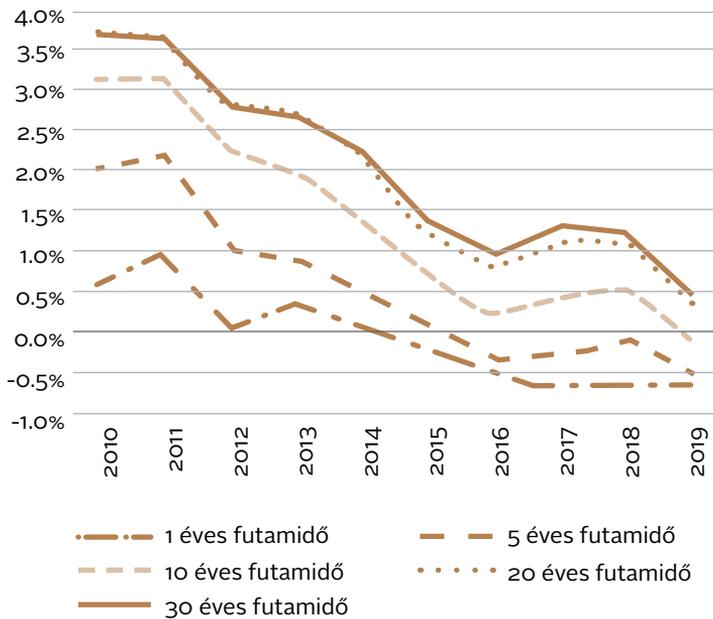
Source: Own editing based on AMECO Database data

In the first seven years of the period under review, actual output was consistently below potential output, with the output gap reaching negative values. The largest deviation in the negative direction was in 2013 with -3.19%. The output gap only became positive from 2017. The highest positive value was calculated in 2019 with a value of 1.25%. Data suggest that the situation in the decade is consistent with the picture of secular stagnation as defined by Higgins (1950).

Summers (2016b) identifies low interest rates as a symptom of secular stagnation, with no increase in investment despite these levels. The evolution of interest rates in the euro area is illustrated in Figure 3.

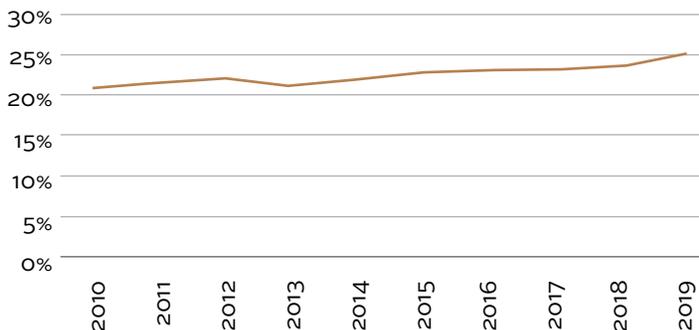
During the period under review, interest rates have remained low. The 1-year interest rate was already close to zero at the beginning of the period and has been in negative territory since 2015. Longer-term interest rates also showed a steady decline. By 2019, both the 5-year and 10-year interest rates were in negative territory. In 2019, even the interest rate for the longest maturity fell below 0.5% to 0.44%. The quantitative easing used by the European Central Bank as a tool to implement its monetary policy has contributed to this fall in interest rates. The question is whether low interest rates have boosted investment over the decade. The evolution of investments is shown in Figure 4.

Figure 3 Evolution of euro area interest rates with different maturities over the period between 2010-2019 (“A” rated central government bond rates - Euro yield curves - annual data [IRT_EURYLD_A_custom_722971])



Source: Own editing based on European Central Bank data

Figure 4 Investment trends in the euro area, between 2010 and 2019 (Gross investment as a percentage of current GDP)

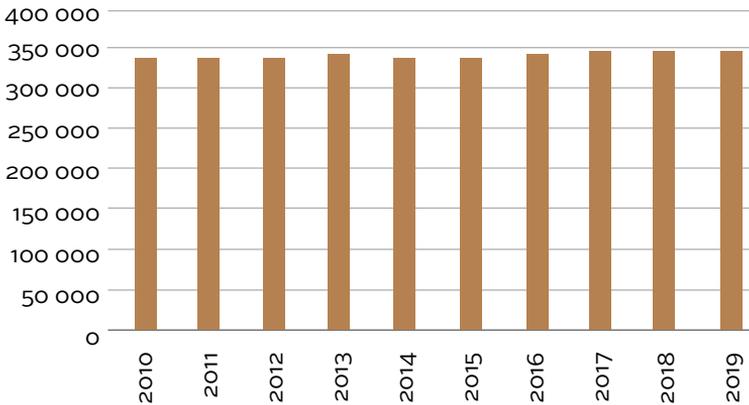


Source: Own editing based on AMECO Database data

Over the period under review, the investment rate has shown relative stability. The sharp fall in interest rates shown in Figure 3 was accompanied by only a slight increase in the gross investment-to-GDP ratio.

Hansen (1946a) and Summers (2013b) identify the problem of population growth as the cause of secular stagnation. They argue that declining population growth leads to low economic growth. It is therefore worth looking at the demographic characteristics of the euro area. Figure 5 shows the evolution of the euro area population.

Figure 5 Population trends in the euro area, between 2010-2019 (in thousands)

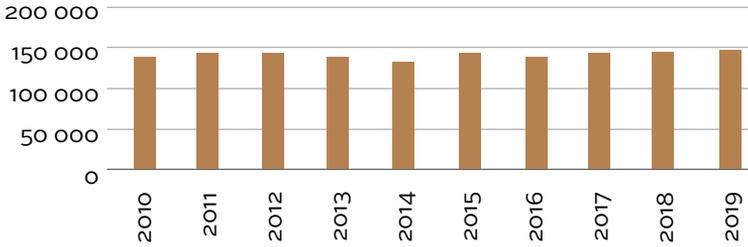


Source: Own editing based on Eurostat data

The population of the euro area has barely changed over the period. Compared to 2010, the increase in 2019 was 0.98%, with the population growing from 335,659 thousand to 342,105 thousand (Eurostat). This weak rise could be due to several factors. The total birth rate remained below 2.1 throughout the decade, below 1.6. The number of births remained below the number of deaths. The slight increase in population was the result of immigration into the euro area. The net migration surplus was 475,415 in 2010, reaching 1,261,181 in 2019. Net migration was positive throughout the period between 2010-2019 (Eurostat).

The population barely grew during the decade, so there was no significant surplus in the labour market. In the light of these demographic trends, it is worth reviewing the evolution of the number of people in employment. This is illustrated in Figure 6.

Figure 6 Evolution of employment in the euro area, between 2010 and 2019 (in thousands)



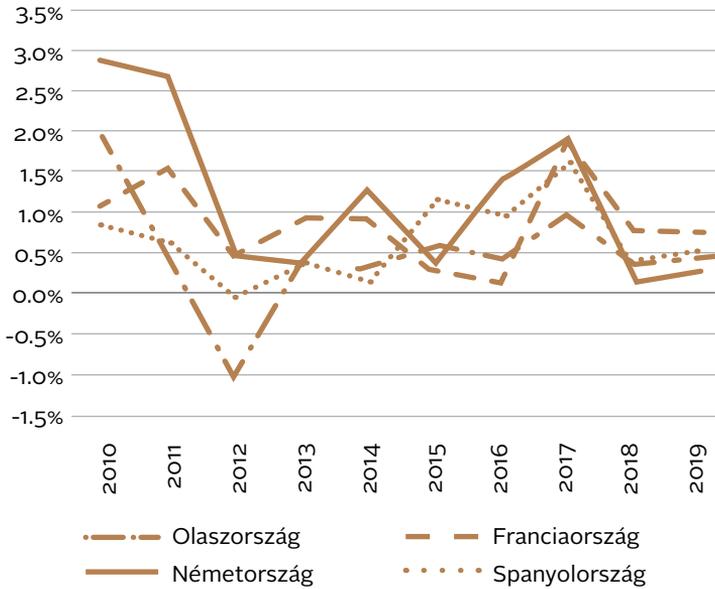
Source: Own editing based on Eurostat data

The number of people employed appears to have changed little over the period. There was only a slight increase. The number of people employed in 2019 was only 0.95% higher than in 2010. Changes in the number and composition of the population, and hence in the number of people in employment, were not the driving force behind economic growth in the period under study.

Hansen (1946a) and Summers (2013b) identify low productivity growth as the cause of secular stagnation. Productivity is the ratio of the resources used for production to the quantity of output. At the microeconomic level, productivity is defined as the ratio of labour and capital input to product output. Since economic growth at the macroeconomic level must be understood as a temporal phenomenon, we can consider the change over time in the determinants of productivity as the basis for calculating productivity. Thus, the relationship between the change over time in the quantity of resources used as input and the change over time in the quantity of output should be examined (Hüttl, 2017). This method can be used to assess changes in productivity. The Multi-Factor Productivity (MFP) is a productivity measure that relates the size of output to the size of the combined resource input that are produced by the goods and services output. By examining the evolution of MFP over time, it is possible to assess how economic performance changes as a result of more efficient use of resources. Higher efficiency may reflect the use of more advanced technologies, sectoral restructuring, changes in the exploitation of economies of scale, the use of better organisational procedures, etc. (Eurostat). The evolution of productivity indicators can also be affected by economic cycles. In a crisis, a fall in demand can lead to the emergence of unused capacity, which can lead to a deterioration in productivity measures. The phenomenon can be reversed as the cycle moves upwards.

Statistical data are available on the evolution of the multi-factor productivity index by euro area Member State. Changes in MFP values for four Member States are shown in Figure 7. The selected Member States - Germany, France, Italy, Spain - the four large economies of the euro area, are fundamentally important for the economic performance of the euro area as a whole.

Figure 7 Percentage contribution of the change in multivariate productivity ("raw" MFP) to output growth in a given year for individual euro area economies over the period 2010-2019



Source: Own editing based onEurostat data

The contribution of productivity to growth has been volatile in each of the countries examined over the period. In 2010, following the 2008 crisis, productivity growth contributed to economic growth mainly in Germany, but even there it did not reach 3%. Thereafter, the contribution of MFP to growth fell in all countries, reaching a low in 2012. After that, there was a trend upwards in essentially all countries until 2017, followed by a further decline after the peaks in 2017. Of the four countries, only Germany had a contribution of MFP change to economic growth above 2% in the period under review. However, it did not reach 3%. The values for the other countries were consistently below 2%. After 2012, the strongest economy in the euro area did not exceed 2%. Productivity growth did not contribute significantly to economic growth in the euro area's largest economies over the period between 2010-2019. The small contribution of productivity growth to economic growth is also consistent with the theory of secular stagnation.

Evaluation in the light of theoretical assumptions and factual data

The theory of secular stagnation, in our view, highlights processes that are fundamental to the economic development of the euro area. In the years after 2010, euro area economies should have been on a higher growth path. At the beginning of the

decade, the sovereign debt financing problems of the southern member countries were still affecting the economic performance of the euro area as a whole, but once these tensions had been resolved, a significant pick-up in activity could have been expected. However, the data show that real GDP growth has not jumped. Actual output has been below potential output on average over the decade, and the output gap has been negative for most of the decade. The level of investment has remained broadly unchanged, despite low or even close to zero interest rates.

We have tried to capture the population dynamics underlying the secular stagnation by looking at the evolution of the number of people in employment. The number of people employed remained essentially stagnant over the period. The change in the number of people in employment could not be a driver of growth. Excluding migration, the population showed a decline, with births below deaths during the decade. The fall in the local working-age labour force was not offset by net migration to the euro area, which led to an increase in the number of people in employment.

Another major driver of economic growth could have been productivity growth, according to the secular stagnation theory. Increasing productivity has been an important objective for European countries between 2010 and 2019. These efforts were represented by keywords such as precision farming, robotics, the use of “big data”, industry 4.0, etc. Despite these efforts, these intended improvements have not had a significant impact on productivity over the decade. We wanted to examine the impact of productivity change on economic growth through the impact of complex productivity on economic growth. Data on productivity change and its impact on economic growth were available for euro area countries. We have assessed the impacts of four large economies. The data showed that productivity growth did not have a significant upward effect on economic growth. The modest contribution to growth also supports the hypothesis of secular stagnation theory that low productivity growth may be one of the causes of low economic growth.

The effects of the coronavirus epidemic are not analysed in this paper, as this crisis has also significantly changed the analytical framework. It is true that certain processes can also be assessed from the perspective of secular stagnation theory. Hardi and Szapáry (2020), among others, have pointed out that the epidemic further increases the importance of the problems addressed by secular stagnation.

The outbreak of the Russian-Ukrainian war in 2022 has created a whole new set of problems for European economies recovering from the shocks of the epidemic. The war dealt another blow to the value chains that had not yet recovered. Rising commodity prices have put inflationary pressure on economies. The European Central Bank has also responded to soaring inflation by raising interest rates and reducing its previous liquidity facilities. The successive crises from 2020 onwards will also have a natural negative impact on economic growth in the euro area.

In our view, however, the epidemic and the war crisis should not obscure the fundamental reasons for the negative impact on growth that we have identified in our analysis for the decade from 2010 onwards. ■

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