The competitiveness of the European Union in the light of human capital – what the Draghi report leaves out

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ABSTRACT: Research on the competitiveness nexus has long underpinned economic policy theory and practice. It has focused on finding technical solutions to questions about economic growth, welfare, sustainability, and many other equally pressing issues. One might think it is challenging to make new waves in an issue that has been so actively researched. However, former European Central Bank President Mario Draghi has managed to attract the attention of economists and governmental organizations in many countries with his recently published Draghi Report on competitiveness problems in the European Union and how they can be addressed, even such experts who had not previously looked at the issue in depth joined the discussion.

We begin our presentation of the main findings of the Draghi report with some of the key takeaways from the US response. The report itself, dealing with the facts indicating that the European Union is falling behind the United States and China in terms of competitiveness, stresses that European countries need new measures and substantial investment to maintain and improve their competitiveness. The US authors we quote raise questions about the growth advantage of the US economy. They show that industrial production growth in the US has also slowed considerably, and that the EU's lag is not dramatic. They argue that the lag is primarily explained by the strengthening of the dollar and demographic factors. There are also very different trends depending on the indicators used to measure it. In terms of

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productivity per hours worked, measured in terms of purchasing power parity, many European countries are ahead of the US growth rate. On average, European workers have shorter working hours and take longer holidays.

The Draghi report touches on the quality and quantity of human capital, skills, and competencies in the context of the EU-US innovation gap. However, the report does not address potential workers' physical and mental health. Absences from work due to physical and mental illness affect workplace efficiency and productivity. In the second part of our paper, we will explore how research on this topic paints a worrying picture. We present the actions that are necessary in this area.

In another paper published in the Financial Time on November 1, 2024, Draghi (2024a) highlights the issue of his proposed significant public investment needs and EU fiscal rules. We conclude with a discussion of taxation and changes to fiscal rules.

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Introduction

The economic competitiveness of the European Union (EU) is once again the subject of much attention. The editorial foreword of the Financial Review 2024/3 (Lukács, 2024) encouraged readers to share their thoughts and opinions on the Draghi report. We start our paper with some comments on the Draghi Report, as they help shed light on the economics of the concepts central to the report and the measurement and interpretation issues that arise. However, before we go any further, it is important to note that the multifaceted and complex concept of competitiveness and its economic context has been well documented in the Hungarian literature, and the work of the researchers involved over the decades is evidenced by some notable publications. It is sufficient to mention the works of Chikán and colleagues (2018, 2019) and Chikán and Czakó (2009). Based on the results of this research, Czakó (2024)[5] Provides an up-to-date overview of the evaluation of the EU's concept

5 It is worth quoting a part of Czakó's (2024) paper that gives a significant indication of the concept of competitiveness as it is interpreted in the context of the EU's efforts to achieve it: 'One of the four pillars of sustainable competitiveness is productivity, its formation, and development, as adopted from economics. The second pillar is wellbeing for all (fairness). This pillar can also be seen as one that seeks to go beyond the traditional notion of welfare in economics and adapt it to developed countries' increasingly sophisticated social needs. The inclusion of fairness in earlier conceptions of competitiveness can also be seen as a continuation of the concept of inclusive economic growth and is now accepted by consensus. The third pillar emphasizes environmental sustainability, which first appeared with the prioritization of sustainable energy sources. The fourth pillar, resilience, and stability were highlighted in the wake of the Covid-19 health crisis and the uncertainties of

and practice of competitiveness. The Draghi Report has thus found a well-prepared medium in our country, and the papers in recent issues of the Financial Review, such as Csath (2024) and Juhász (2024), prove that the very complex and multifaceted problem of competitiveness has found an understanding medium.

A significant development in the application of competitiveness research results to economic policy is that the MNB has also taken up this issue and, since 2017, has published a high-quality and detailed annual report that can serve as a basis for assisting the application of economic policy (MNB, 2017-2023). However, the application of economic policy raises many problems, which were further highlighted in the Draghi report in the European Commission's (2024c) paper. One might think that the root of these problems is that the concept of competitiveness itself is too complex. Juhász (2024) illustrates the multifaceted aspects of the concept. One would think that it might be practical to focus on productivity instead, as this is one of the most important elements in improving competitiveness. Boda and colleagues (2024), a recent review of competitiveness research in Hungary, provide a convincing view of the Hungarian economy by quantifying the various aspects of productivity. However, a browse through the book will quickly convince you that the concept of productivity is no less complex, and its quantification raises just as many questions to be clarified as the concept of competitiveness. It is, therefore, not proven that it can provide economic policy guidance that is easier to apply. The book by Boda et al. (2024) is subtitled "Knowledge-based Competitiveness," and it is to this concept that we try to relate in the second half of our paper when we examine the Draghi Report (European Commission, 2024a,b,c), its views on human capital, the areas covered by its proposals and the areas that are missing from the report.

After human capital issues, we turn to another issue that is also missing, namely taxation. This section is linked to our theme that measures to improve competitiveness require significant community investment, which brings into play the fiscal aspects of the proposals. We do not claim that this is entirely absent from the proposal since we take as our starting point here too that Draghi's article in the Financial Times of November 1, 2024, deals with this, but in our paper, we attempt to provide a more detailed contextualized discussion of the taxation issues.

Slowing productivity growth in the EU and the US

About the report

Tackling the competitiveness problems of the European Union has been in the spotlight recently. A 300-page report by Mario Draghi, former President of the ECB, which proposes significant reforms to increase investment rates to alleviate the EU's competitiveness problem, has attracted much attention (European Commission, 2024a,b,c.)

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the Ukrainian-Russian war" Czakó (2024, pp. 50-51).

The European Union's forward-looking approach to avoiding a competitiveness gap has been bundled into three documents, the third of which is Draghi's briefing to the European Parliament on September 17, 2024 (European Commission, 2024c), and the second contains background analysis compiled by experts from the European Central Bank in two volumes. The first volume (European Commission, 2024a) presents the Competitiveness Strategy on 73 pages, while the second volume (European Commission, 2024b) contains a more detailed presentation of the background analysis on 328 pages.

Blanchard and Ubide's comments

Before turning to the report on the competitiveness problem and the proposals to address it, we present the comments of Blanchard and Ubide (2024), which may help to put the Draghi report in context.

Blanchard and Ubide (2024) published interesting comments in the US Peterson Institute for International Economy publication[6] on October 8, 2024, which is basically supportive but also makes corrections to the Draghi report that help to assess the strategic issues of the economy

Draghi's report deals with the future of *competitiveness*, but the Blanchards say *that it is actually on productivity that* Draghi's assessments *can be interpreted*. Indeed, the flexible adjustment of the exchange rate can help to preserve competitiveness[7]. Productivity determines the evolution of living standards. Competitiveness is a different category. A country can be competitive even if productivity is low; for example, the depreciation of the currency helps. According to Blanchard and Udibe (2024), the EU does not have a competitiveness problem, as indicated by its export surplus. The EU may have a problem with productivity.

Is the productivity gap in Europe really exploding?

Draghi refers to the EU's lagging behind the US as an existential challenge. Indeed, since 2000, the EU has been 0.5 percent worse than the US in GDP growth. However, the gap is largely explained by demographic factors and not by productivity developments. The EU lags behind the US in real per capita income growth by 0.1 percent per year. This is a tiny gap, although over 25 years, it is already 2.5 percent (Blanchard & Ubide, 2024).

However, there is no doubt that the EU's catch-up with US productivity levels has stalled and is a problem worth addressing.

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6 Essential issues raised but not fully answered by the Draghi report | PIIE

7 This observation of Blanchard and Ubide has somewhat simplified the matter to reduce the issue to the most basic factors, but many experts disagree with it. They believe that an undervalued exchange rate may help exporters on the short run but does not encourage innovation on the longer run.

Do we need to lead in innovation to grow?
The Draghi report rightly highlights the lag of the EU's technology sector behind the US. The top five technology companies are all American. Among the 50 most prominent technology companies, only 4 are EU technology companies – ASML, SAP, Siemens, and Schneider Electronic (European Commission 2024b, p. 73). Blanchard and Ubide (2024) also raise questions about this gap. Does this really mean that the EU is falling behind? If this has not happened, is it likely to happen soon? Not necessarily, they say. There are a number of countries that are not at the forefront of technological development, yet they are growing at a rate that rivals that of the US. They are integrating and copying innovations from other countries. In innovation, the EU is following the same practice. Productivity growth in the EU, other than in the information and communication sector, matches or even exceeds that of the US in similar sectors[8].

Growth or more security-seeking?
The Draghi Report (European Commission, 2024b) deals in detail with sustainability and the pursuit of security. Blanchard and Ubide (2024) note that it is perhaps not the growth problem but the security concern that explains the need for change in the EU, as the development of the technology sector is a key issue for the defense industry. Moreover, the development of self-sufficiency in semiconductors and chip production would also provide a more secure framework for the development of the automotive industry.

The green transition and growth?
The Draghi report argues that the energy transformation achieved by the green transition will help growth. According to Blanchard and Ubide (2024), this is a somewhat optimistic interpretation. By imposing a cost or price on what has been free pollutants, the effect will be a negative supply shock that will hold back production. Technological progress may help to overcome this and reduce the transition costs. However, in formulating our expectations, we must take reality as a basis (Blanchard & Ubide, 2024), and this reality indicates that the green transition would cause cost increases at least in the transition phase.

Can reducing fragmentation and improving regulation be the key to accelerating growth?
The Draghi report focuses on the acceleration of growth that can be achieved through better regulation. Blanchard and Ubide (2024) note that if this works, it would be relatively easy to achieve improvements. However, doubts are raised by the fact that the report does not address many of the factors currently causing productivity underperformance. Blanchard and Ubide (2024) point out that such factors include

8 Several analysts take the EU's competitiveness problems as facts and disagree with the argument presented in Blanchard and Ubide (2024). We still wanted to present their noteworthy views, but we have no intention to give the final word in this argument.

the extent of the social care system and the backwardness of the education system.[9], problems with vocational training, and many others. These problems will not solve themselves. Draghi stresses the obstacles of national divisions but questions the extent to which differences in political systems would prevent the dividend from improvements in these areas being reflected in production. Moreover, there can be significant differences between sectors[10]. According to Blanchard, it is sometimes the case that the aim after an acquisition is not to achieve higher volumes but to unlock productivity and value.

What can we hope for from the Capital Markets Union?
The share of investment in GDP in the EU is roughly the same as in the US, at 22%[11]. The savings rate is higher in the EU, and this is reflected in the surplus of the balance of payments. Thus, the emphasis on "mobilizing savings" needs further explanation. In the EU, both savings and investment are high. The problem – and this is rightly emphasized in the report – is that savings may not be channeled into the right investment and may reflect insufficient risk-taking. This is a fundamental feature of the *bank-based financing system*, which is also segmented between countries. Capital market integration is unlikely to provide a quick solution to this issue. Blanchard and Ubide (2024) also argue that financial integration is important but question how much improvement can be expected from it.

Can EU investments be financed by issuing debt?
The Draghi report suggests that the investment rate should be increased by 5 percent per year, of which the growth in Community investment would amount to 1.5 percent in the EU (European Commission, 2024a, p. 63). To achieve this, it proposes a substantial increase in subsidies. Blanchard and Ubide (2024) argue that such decisions should indeed be taken at the EU level, just as regulatory changes, reducing fragmentation, and unifying capital markets should be addressed at the EU level. However, it does not necessarily follow that this should be financed by debt and not by taxes. Blanchard and Ubide (2024) mention two important issues in this respect. EU debt is cheaper than national debt, but it is still debt. Growth also increases revenues. Other macroeconomic effects of very significant reform measures must also be considered. Thus, their inflationary effects and the ECB's response to them also need to be taken into account in the analysis of the likely evolution of financing costs.

9 The report (European Commission 2024b, p. 67) mentions the problems of education and public health in relation to the EU social model, but not as a constraint on productivity growth, but that digitalization will help to consolidate and make the social model more equitable in these areas

10 Among these factors several experts mentioned scale efficiency but the impact of innovation in knowledge often is not related to the scale of the activity.

11 There might be significant differences in the structure of investments, for example the knowledge-based investments might represent significantly higher share in the US investments than in the EU.

EU growth is lagging behind US growth

The Draghi report puts a strong emphasis on the growth gap in European countries. The comments of Blanchard and Ubide (2024) challenge this lag in many respects, pointing out that after 2000, US manufacturing growth has also lagged behind GDP growth. This issue is discussed in more detail below.

Also, in the Financial Times article of September 17, 2024, on the Draghi report, Martin Wolf (2024) starts his article with the EU lagging behind the US and shows that looking at labor productivity, the EU countries have had difficult periods of catching up from 1890 to the present day. First, between 1890 and 1910, it stagnated at around 75 percent of the US productivity index. Between 1910 and 1920, it fell sharply as a result of the war, then between 1920 and 1939, it again showed a fluctuating performance, with some catching-up being achieved at around 60 percent of the US productivity index, but from 1940 to 1945, the war caused another significant fall. After this period, however, there was a significant catching-up, from a level of almost 20 percent in the mid-1940s to more than 90 percent of the US level by the end of the 1990s.

Since the 2000s, productivity in EU countries has fallen again to around 80 percent of that in the US (Wolf, 2024).

Although neither the Draghi report nor Wolf (2024) mentions that the US has also experienced a slowdown in productivity growth over the past two decades. US productivity trends have been analyzed in detail by two analysts at the New York Fed, Lashkari and Pearce (2024), and their paper is discussed below to provide a background for comparison with the EU.

Lashkari and Pearce (2024) show that labor productivity in the US grew at an average annual rate of 2 percent in the twentieth century, driven by technological progress, organizational innovation, and increases in productive capital. However, growth has stagnated and then declined over the last two decades. Labor productivity, measured either by value added per hours worked or by output per hours worked by sector, has stagnated and then declined since 2010 (Lashkari and Pearce, 2024, Table 1)

Surprisingly, the slowdown in productivity growth in the manufacturing sector has been significant, even though this sector had previously been the main driver of productivity growth in the US economy. The slowdown is all the more surprising given the exceptionally high level of R&D spending in manufacturing, which has not declined over this period.

Between 1987 and 2007, labor productivity grew by an average of 3.4 percent per year, while from 2010 to 2022, the overall change (deceleration) was -0.5 percent, a deceleration of 3.9 percentage points per year (3.4-3.9=-0.5)

Lashkari and Pearce (2024) also examined the fact that the slowdown may not have affected all firms, and perhaps productivity growth has remained high for fast-growing firms. However, the slowdown in productivity growth affected faster-growing firms in the same way. In the four fastest-growing industries (computers and electronics, textiles, transport equipment, and electronic equipment), productivity growth averaged 6.5 percent per year between 1987 and 2007, while from 2010 to 2022, the slowdown was -0.6 percent.

An important factor in increasing labor productivity is the increase in productive capital, i.e., the increase in the machinery and equipment used in production. The question arises as to whether the decline in the rate of productivity growth might be related to a lack of such investment. If the lack of investment explains the slowdown in labor productivity growth, then productivity growth of other factors, i.e., total factor productivity, may remain unabated. However, here, too, we see a slowdown. TFP grew by 1.4 percent per year between 1987 and 2007, while growth from 2010 to 2022 was -0.1 percent (minus) (Lashkari & Pearce, 2024).

In a more recent study (Lashkari & Pearce, 2025), the authors go on to look for the cause or explanation of the productivity decline and examine whether there has been a trend change in R&D expenditure that could have led to a decline in the intensity of investment in mechanization and other productivity-enhancing investments. After analyzing the question from many sites, they found that there was no such change. R&D expenditure continued to show an increasing trend in US manufacturing.

Productivity growth in US industry has slowed since 2000, but GDP growth does not appear to be slowing as much. This particular decoupling of industrial production growth rates from GDP growth rates is examined from several angles by Tito (2025).

Tito (2025) found that in the United States, since the beginning of 2000, the growth trend of industrial production and GDP, which measures the production of goods excluding services, have diverged. Until then, these two indicators had moved relatively closely together since the 1960s (Figure 1 of Tito 2025). Industrial production growth fluctuated but stagnated from 2000 onwards, while GDP growth followed its previous growth trend. The industrial production indicator used by Tito (2025) measures the actual output of manufacturing, mining, electricity, and gas utilities. The GDP indicator for the production of goods captures the expenditure of the population, businesses and the government on the purchase of goods. It covers 35 percent of GDP. The content of the two indicators used here is discussed in detail in Steindel (2004). Income from retail and wholesale trade is part of the GDP indicator used here but is not included in the industrial production indicator. Spending on imported goods is included in the GDP indicator used here, but imports are not included in the industrial production indicator; they are only produced for export.

The divergence between the two indicators, which started to widen from 2000 onwards, may have been caused by the increase in income from retail and wholesale trade, the increase in the weight of imports in expenditure, and developments in producer price indices. Looking at these factors separately, Tito (2025) found that while trade income fluctuated significantly over the period 1980 to 2020, it tended to stagnate in the years after 2000. The profit rate fluctuated around 50 percent in wholesale trade and around 10 percent in retail trade. The increase in imports within expenditure has slightly reduced the divergence between industrial production and GDP growth trends, with the really significant divergence being explained by the increase in the weight of services. After the 1990s, services became increasingly important in expenditure and thus contributed to the growth of the GDP indicator,

while industrial production growth lagged behind. If the increase in the weight of imports and services in the contribution of these two indicators to growth is removed from the GDP calculation, an adjusted indicator is obtained that closely follows the growth trends of industrial production. The lag between the growth rate of industrial production and the growth rate of GDP is thus explained by the increase in the weight and role of services in the US.

On the issues of GDP-based comparisons

A remarkable assessment of the comparison between the EU and the US can be found in the Economist (October 4, 2023). GDP in dollar terms in the EU is 65% of US GDP, which is indeed down from 90% ten years ago. Productivity growth has also been slower, with EU productivity up 1.6% since 2012 compared to 6.1% in the US (Economist, 2023).

However, comparing GDP per capita does not capture the differences in wealth between countries. In part, this is because prices differ, meaning that goods and services cost more in some countries than in others and that if people work more, this does not necessarily make them better off. Differences between countries are substantial for non-commercial goods such as housing or personal services. These differences are somewhat corrected if we look at GDP in purchasing power parities rather than GDP in dollars.

If these differences are taken into account, Norway, Luxembourg and Switzerland will bear ahead of the US in terms of purchasing power parity. However, if we look at GDP output per hours worked rather than per capita, even Denmark, Austria, Belgium, and Sweden have higher productivity than the US (Economist, 2023).

Germany and France were also lagging behind the US in terms of GDP in dollar terms due to the strengthening of the dollar. However, when *GDP per hours worked is measured in terms of purchasing power parity, both countries are ahead of the US.*

Europe's economic performance is also better in terms of purchasing power parity. In 2012, US GDP per capita was 5.4% higher than Europe's; now, the gap is 46%, mainly due to the strengthening dollar. *In terms of purchasing power parity, the* European GDP is 95% of that of the US, which is the same as in 2012.

Measured in terms of hours worked, it tips the scales in Europe's favor. This is because Europe has more days off, better pensions, and unemployment benefits. Europeans work less than Americans.

Measuring in purchasing power parity also raises a number of problems. For example, it does not reflect quality differences.

We perhaps devoted too much attention to the views expressed by respected authors on the US developments who questioned some of the consequences of the EU's problems. We do not intend to bridge the divergence in views and do not assess the methodology and data on which their observations are based. The details offered above were intended to indicate that there are several open questions about competitiveness and that measurement is a high priority. This has also been addressed

in the EU for some time, and considerable results have been reported in subsequent publications, which are mentioned here as good examples. Benczur and colleagues (2024) review the sustainability and welfare aspects of European competitiveness in the context of innovation. Such a grasp of the concept of competitiveness also requires new approaches in measurement, on which Vladimirov et al. (2023), Charveriat et al. (2024), and the European Commission (2023b) provide a thorough account.

Evaluation of the European Union's human capital in the Draghi report

The Draghi report focuses on Europe's competitiveness, which is facing new challenges such as geopolitical changes, the shift in global trade patterns, technological transformation, the loss of a key energy supplier, and the declining population trend. The report focuses on the productivity and innovation gap and warns that it threatens the achievement and safeguarding of Europe's core values. The report calls for radical change (European Commission, 2024a).

One of the cornerstones of the report is innovation, the quality and quantity of which are essential for a competitive Europe. Human capital is a key factor in achieving the innovation goals. The logic of the report's structure means that there is no specific chapter on human capital since the report analyses the issue of skills and the quantity of labor, i.e., the quality and quantity of human capital, in the context of the innovation gap (European Commission,2024a,b).

The report points out that across Europe, the problem is that potential workers do not possess the skills and competencies expected by employers. The report concludes that, in terms of skills, education should aim to equip the future workforce with the right skills to meet the needs of the labor market. The report stresses that beyond basic skills (communication, mathematical numeracy, reasoning skills, fundamental reading and writing skills, the capacity to acquire new knowledge) there is a need for additional competencies and skills such as digital skills, green skills, expert-level skills, and leadership skills. The document also underlines that the role of adult learning must be even more prominent in the future and that lifelong learning is essential.

The reasons identified by the report

The Draghi report (European Commission,2024b) categorizes five groups of factors that play a role in employers' inability to hire workers with the right skills and qualifications. The following led to a shortage:

1) the progressively deteriorating performance of the education system;
2) a declining labor force population;
3) gaps in adult learning;
4) low labor mobility;
5) unsuitable working conditions.

The Draghi Report (European Commission, 2024b) presents 12 recommendations to address the identified issues and urge for change in a number of areas. It proposes the development of a comprehensive and effective EU-wide skills policy, covering areas such as skills needs assessment and planning, the establishment of a European skills and competencies framework, and a reconsideration of financing mechanisms. It also makes proposals to identify and address skills gaps in the supply chains of strategic industries.

Furthermore, the report (European Commission, 2024b) proposes measures to strengthen adult learning and reform vocational education and training. A new program (Tech Skills Acquisition Program) is to be set up to facilitate the inflow of talent from outside the EU and the employment of students already studying here (e.g., through tax incentives and housing subsidies). The program would offer scholarships for university students studying abroad, particularly in the fields of science, technology, engineering, and mathematics. At the same time, the report aims to encourage talented, disadvantaged children from Member States in these fields. On the one hand, it proposes to implement programs to help these children to receive a high-quality education (mentoring, financial support). It also aims to ensure that gifted children do not crumble for financial reasons.

The report (European Commission 2024b) stresses the need to ensure that teachers have adequate, competitive salaries, benefits, and professional development opportunities. The provision of support staff, administrative staff, and high-quality teaching materials and technological equipment are all desirable to improve teachers' working conditions.

The report also proposes to improve the management skills of SME managers, including through the development of an EU-accredited training scheme. Finally, the last proposed measure aims at to increase labor market participation, with a particular focus on eliminating barriers to woman's employment (e.g., ensuring adequate childcare provision) (European Commission,2024b).

The education landscape

The PISA (Program for International Student Assessment) survey, conducted by the Organization for Economic Co-operation and Development (OECD), is carried out every three years among 15-year-old students. assessment allows countries to be compared on the basis of measurements in three subject areas: reading literacy (measured since 2000), mathematics (since 2003), and science (since 2006). The assessment places greater emphasis on a particular science area, with a greater focus on mathematics in 2022 (OECD, 2007; OECD 2010; OECD 2014; OECD 2016; OECD 2019; OECD 2023b).

Table 1 shows which countries are ranked in the top ten in each knowledge subject area in the 2022 measurements

Table 1. Top 10 Countries by Performance in Pisa 2022

Ranking	Natural sciences	Reading comprehension	Mathematics
1	Singapore	Singapore	Singapore
2	Japan	Ireland	Macau (China)
3	Macau (China)	Japan	Chinese Taipei
4	Chinese Taipei	Korea	Hong Kong (China)
5	Korea	Chinese Taipei	Japan
6	Estonia	Estonia	Korea
7	Hong Kong (China)	Macau (China)	Estonia
8	Canada	Canada	Switzerland
9	Finland	United States	Canada
10	Australia	New Zealand	Netherlands

Source: OECD, 2023b

It is evident that Singapore leads in all three subject areas, and the top three are almost entirely dominated by Asian countries, with one country excelling in more than one subject area. In total, European countries are ranked 7 out of a possible 30, with three of these places being occupied by a single country, Estonia (sixth in science, sixth in reading and seventh in mathematics). Ireland's students came second in reading. Three other European countries are in the top ten: Finland, Switzerland, and the Netherlands. The United States ranked ninth in reading literacy, 34th in mathematics, and 16th in science (OECD, 2023b).

It is also important to examine how the results evolved over the course of each measurement. Finland scored highly in the 2006 measurement, but its score has been steadily declining since, indicating a deterioration in the country's situation. Poland's performance has been uneven and, although it showed a significant improvement by 2012, it has subsequently declined. Germany, France and Italy showed improving results up to 2012, but then continued to show a steady decline. Hungary's overall score has been declining virtually continuously since 2009, reaching a low in 2015, with a slight improvement since then. Bulgaria is ranked last among EU Member States in 2022 in all fields of knowledge. Its scores improved until 2012 and then stagnated before declining (OECD 2007; OECD 2010; OECD 2014; OECD 2016; OECD 2019; OECD 2023b).

The most vulnerable group of students identified by the PISA survey are the so-called low performing students, who have little chance of going on to higher education and are unlikely to find well-paid jobs. According to the 2022 measurement, a quarter of learners in OECD countries fall into this category in the three subject areas, raising the problem of how this group of learners can perform adequately when they enter the labor market (OECD, 2023b).

While the pandemic has ended, and education has returned to normal, but the effects will be felt in the long term. A study by De la Maisonneuve, Égert and Turner

(2022) looks at the human capital impacts in the affected age groups. They assume that people in the affected age group enter the labor market at age 19 and remain active participants for 47 years. Thus, the oldest affected group are those who were 18 years old in 2020, i.e. started working in 2021, while the youngest are those who were three years old in 2020. It can be seen that, as not enough time has passed in public education, there are still many students who were affected by the closure of kindergartens and schools due to the pandemic. The study distinguishes three cases: quantifying the impact of school closures of 12 weeks, 1 year and 2 years respectively. The impact on human capital between 2036 and 2067 could result in a loss of human capital ranging from 0.2% (in the case of a 12-week school closure) to 0.9% (in the case of a 2-year school closure) when all affected age groups enter the labor market. In terms of productivity, the expected negative impact ranges from 0.4% to 2.1%, reaching a maximum negative impact by 2067. Productivity gradually declines as the affected generations enter the labor market, and then starts to improve after 2067 as the affected age groups retire gradually.

We believe that assessing the causes of these problems and the surveys conducted in the EU member states to evaluate the results of the performance of education is crucial. The report did not devote sufficient attention to the education sector and the deterioration in its results. These are sporadically mentioned though, including the remuneration and working conditions of teachers and the support of talented students, but these proposals are not comprehensive enough to tackle the potential consequences of the observed deterioration. It is important to mention these shortcomings, because the proposed changes in investments to enhance innovation would not provide a comprehensive solution to the problems of preparing future generations to effectively face the challenges. In these areas there are significant differences among member states and to cope with the challenges would require a coordinated approach in order to enhance the effectiveness of competitiveness initiatives.

Moreover, what is left out...quality is only part of the story?

Surprisingly the Draghi report (European Commission 2024a,) does not address the physical and mental health of EU citizens, the potential workers. It does so despite the fact that research on the subject has produced alarming data and results. In the second volume of the background material of the report (European Commission 2024b, p. 195) Draghi discusses in detail the potential competitive advantages of medical research[12] Moreover, by implication, this can be linked to physical and mental health, but we will elaborate on this in more detail in our paper below.

12 Hungarian health projects have also been certified under the EU's IPCEI program. For example, the creation of GDPR-compliant "data mining" technology for the healthcare industry will lead to better-targeted research, more effective medicine, and ultimately better health for citizens, and is exportable to other countries around the world.

The OECD/European Commission report (2024d), for example, provides a comprehensive overview of the health status of EU citizens, and the picture painted is concerning. The proportion of people aged 65 and older is projected to rise from 21 percent in 2023 to 29 percent in 2050, which means that a significant health-care capacity will be needed to care for them. Although average life expectancy is increasing in EU Member States, men over 65 spend on average 15.5 years with a chronic disease, while women spend 20.5 years. The proportion of people aged 65 with at least one chronic disease was 60 percent in 2023. In some EU Member States, such as Austria, Estonia, Italy, Poland, and Slovenia, this rate has fallen slightly compared to the 2010 rate, while in other countries, such as the Czech Republic, Denmark, Lithuania, and Sweden, it has improved (OECD/European Commission, 2024).

Csath (2023) demonstrated that the observed differences in life expectancy in EU member states are explained by the differences in the quality of life, influenced by such factors like the quality of workplace, the possibility for creative work, or the level of social trust.

Although physical activity is the key to avoid or slow down the negative consequences of ageing, 65% of EU citizens aged 18-64 years spend less than 150 minutes a week in physical activity, while 43% do not exercise once a week. The proportion of obese people is 15%. In the over-65 age group, these percentages are worse, with 78 percent moving less than 150 minutes, 52 percent not exercising weekly and 18 percent being obese (OECD/European Commission, 2024).

The statistics on eating habits are equally concerning. 35% of people aged 18-64 do not eat vegetables and/or fruit daily, compared to 25% of older people. It is calculated that more than a fifth (22%) of 18–64-year-olds smoke, compared to "only" 9% of older people. Alcohol consumption is 21 per cent among people under 65, compared to 11 per cent among older people (OECD/European Commission, 2024).

When analyzing the state of health, we must not forget the fact that the pandemic has led to some health services being rescheduled, resulting in increased waiting lists and unattended patients. There were disruptions in the functioning of some screening programs, which made it difficult to detect diseases in time and to start the necessary treatments. This was also true for cancer screening programs, with cancer diagnoses being delayed and possibly diagnosed at a different stage (OECD/European Union, 2022).

Looking at the statistics on mental health, the situation is also worrying. Prior to COVID-19, one in six people, or around 84 million people, were already struggling with mental health problems (OECD/EU, 2018).

However, the pandemic has worsened the situation, especially among young people. In some EU countries (Belgium, Estonia, France and Sweden), the number of young people experiencing depressive symptoms has doubled. While the prevalence of mental health problems has risen significantly, 50% of young people have experienced a lack of treatment or access to appropriate care for the problems they have experienced (OECD/EU, 2022).

The importance of mental illness is of course already recognized by the European Union. On June 7, 2023, the Commission adopted a Communication that treats

physical and mental health as equal. The EU will allocate €1.23 billion to the 20 priority initiatives set out in the Communication, including initiatives on the prevention and treatment of mental illness, suicide prevention and mental health of young people.

According to the October 2023 Eurobarometer survey on mental health, 46% of EU citizens had experienced an emotional or psychosocial problem, depression or anxiety in the 12 months prior to completing the questionnaire (European Commission, 2023a).

Although statistics on physical and mental health indicate significant problems, a study by the OECD and the European Commission (2024d) shows that the number of health workers is already far below the need. 20 EU countries face a shortage of doctors and 15 of nurses, which will mean a shortage of 1.2 million professionals by 2022. There is a combination of two factors: an ageing population is placing an increasing burden on health systems and at the same time there is a need to replace ageing health staff. The study points out that the health system is also burdened by a number of diseases among the elderly that could be prevented, and their incidence significantly reduced, through good lifestyle, diet and other means, thus relieving the burden on care systems.

While the Draghi report notes the need for adequate quantity and quality of facilities for young children to enable the mother to return to work and become an active labor market participant, it does not mention that care for the elderly (or even younger) who are permanently ill also requires adequate quantity and quality of facilities, because without them, the care falls entirely on the family, which can obviously lead to a family member remaining permanently absent from the labor market (European Commission, 2024b).

One way to ensure an adequate care system is to employ foreign workers as nurses or even doctors. In Norway and Ireland, more than 40 percent of doctors are already foreigners. In the longer term, however, it would be a good thing if more and more people in the EU were to want to work in the health sector (OECD/European Commission, 2024).

Sick leave due to physical and/or mental illness impacts workplace efficiency and productivity. The average number of sick leave days taken in Hungary was 6.3 days, far behind the average of Finland (26.6 days) and Portugal (23.7 days), which took the most sick leave in the EU (Erdélyi, 2025). According to the KSH data, 122.65 billion HUF was paid for sick leave in Hungary (Hungarian Central Statistical Office, 2025)

According to the OECD/European Union (2018) report, the total cost of mental illness is estimated to have exceeded €600 billion, representing 4% of GDP in EU countries and the UK.

Reviewing the reasons and proposals identified in the report and the results of educational performance surveys and literature in the EU Member States, we believe that the report's proposals do not pay sufficient attention to the deterioration of performance in the education system and ignore entirely mental and physical health factors.

While the proposals include suggestions for measures such as a proposal on teachers' pay and working conditions, and proposals to support gifted students, these alone are not sufficient to address the underlying causes of underperformance.

In this paper, we cannot attempt to cover all aspects of health in the European Union (for example, we have not looked at the availability of basic health care, nor at the evolution of the number of doctors). We have tried to point out that ignoring the health of human capital when analyzing competitiveness leaves a gap in the analysis, as the health of human capital affects the availability and efficiency of the workforce and thus the competitiveness of the economy. The exploration of the main factors influencing the health indicators offers valuable insight into the design of interventions that could effectively improve the conditions for the implementation of the reforms proposed by the Draghi's report

A similar opinion is expressed by McKee, de Ruijter and Hervey (2024), who describe the examination of the health status of human capital and the related recommendations as a missing chapter. They point out that spending on improving overall health and running health systems improves overall worker efficiency and productivity and thus contributes to the goals of the Draghi report.

Fiscal considerations in the Draghi report

Draghi's economic policy proposal (2024b), published in CEPR, and his article in the Financial Times of November 1, 2024 (Draghi, 2024a), highlight fiscal considerations.

Draghi's speech, CEPR Europe: Back To Domestic Growth, mentions that the cyclically adjusted fiscal balance of the euro area per GDP was 0.3 percent (sufficient) from 2009 to 2019, while the US balance was -3.9 percent (deficit) over the same period. Moreover, if we take the primary balance measured at 2023-euro exchange rates, the US invested 14 times as much in the economy, €7.8 trillion, while the euro area invested €566 billion.

The euro area has been performing below potential growth for more extended periods and therefore a pick-up in demand could help sustain growth without the fear of inflationary side effects. A pick-up in demand could eventually translate into productivity growth. Draghi, writing in the Financial Times of November 1, 2024, underlines that there is scope for a significant increase in investment in the EU, as the introduction of new fiscal rules will allow this by giving member states a seven-year period for deficit corrections. Draghi estimates this opportunity at €700 billion, and after the consolidation period, countries could continue to run structural deficits of up to 1.5% of GDP

The Draghi report (European Commission,2024b) sets out several tax proposals, some of which require coordinated action and cooperation among Member States – such as the harmonization of energy taxes – while the others remain within sovereign decisions by Member States, such as the introduction of certain tax breaks, such as tax credits for students.

The year 2024 was a significant milestone in the field of corporate taxation, as the fight against harmful tax competition and aggressive tax planning has been ongoing for more than a decade. The Organization for Economic Co-operation and Development (OECD) has previously put forward two pillar proposals to address the

problem of lost corporate tax revenues and to address the anomalies associated with the taxation of the digital economy. It has been a long, politically tricky road to the current state of affairs, and the issues and problems have not been fully resolved.

The first pillar, contrary to the OECD's original intention, no longer exclusively focused on taxing the digital economy, but extends to large and highly profitable groups of companies and aiming to constraint reallocation of corporate tax bases that allow tax avoidance. The draft convention (OECD, 2023a) was completed in October 2023 and was scheduled to be signed by June 2024, but this did not happen. According to the draft convention provisions, the majority of countries in which the companies concerned operate must ratify the convention. In practical terms, this means that without US approval, this multilateral convention will not be able to enter into force. In the absence of consensus, a few states – Canada and India – have developed their own regulations and it is expected that other states will follow suit (Dentons, 2024).

The OECD approved the rules for the second pillar on December 14, 2021, and published them on December 20, 2021 (OECD, 2021). This pillar provides for a minimum tax rate of 15 percent for multinational groups with consolidated revenues of EUR 750 million or more. A supplementary tax is required if the effective rate, determined on the basis of the specific tax base calculated at the country level, is below 15 percent.

It is the sovereign right of Member States to determine the rate of corporate tax and to establish certain tax advantages, but EU law prohibits selective advantages and exemptions in the form of tax legislation and other tax provisions (TFEU, 2012). Corporate tax rates in EU Member States vary widely, with the lowest in Hungary being 9 percent and in Malta, for example, 35 percent (**Tax Foundation,** 2025). Hungary's low corporate tax rate provides a significant competitive advantage in the race for investment, although the local business tax system somewhat overshadows this favorable picture. It is important to note that under the global minimum tax regime, the local business tax is a covered tax, i.e. it can be taken into account in the calculation of the global minimum tax when calculating the effective tax burden, which improves the situation in Hungary, as it does not put the country at a competitive disadvantage (Act LXXXIV of 2023).

Work on the second pillar continues, with most of the rules on the global minimum tax to be applied for financial years starting from December 31, 2023. The remaining rules will apply from the following year, i.e. the financial years starting on December 31, 2024 (Act LXXXIV of 2023).

In order to map the expected macroeconomic effects, Dyrda, Hong and Steinberg (2023) have carried out calculations to assess the effects of applying the two pillars together and separately. Their results suggest that the combination of the two pillars can be an effective tool to curb profit shifting, but that it may lead to a decline in global GDP due to a fall in capital investment and business investment. The research shows that the second pillar has less adverse macroeconomic effects, and the authors suggest that it would be more appropriate to focus on this pillar. As mentioned earlier, the implementation of the first pillar has not gone as planned. Currently,

efforts are being made by Member States to introduce a global minimum tax. It can be seen that the second pillar, which will be introduced, will mean an additional tax burden for the companies concerned, a higher effective corporate tax rate, which will logically lead to a drop in investment and lower capital investment.

The situation has been analyzed in detail by de Wilde (2024), who concludes that a two-pillar system is unlikely to live up to previous expectations and will not be able to deliver a sustainable tax system.

As we write, there are new developments. In a memorandum issued on January 20, 2025, the United States of America declared that any commitments made by the previous administration to the Global Tax Convention no longer apply in the country (White House, 2025).

The Draghi report calls for a more competitive Europe, while the EU wants to weaken tax competition and raise effective tax rates through tax rules. Increasing taxes, however, may divert funds away from investments in R@D and innovation, so potentially may conflict with the reports aim to improve competitiveness.

Summary and conclusions

Competitiveness is a general characteristic of the economy that is perhaps one of the most challenging concepts to define or grasp. It depends on many factors and affects many characteristics. However, its concrete treatment is essential because it is on the basis of its impact on competitiveness that the measurement of economic performance and the desirable economic policy action can be assessed. There are many approaches to competitiveness that are considered to be accepted and effective in economics. In this paper, we have sought to indicate this diversity, but not with a critical purpose, nor have we sought to compare or contrast the trends, nor have we attempted to provide an overview of the most important trends in a broad framework. Our aim was more modest, namely, to take the Draghi report, which has put the spotlight on EU economic policy debates, as a starting point and to make proposals in relation to three areas that were not sufficiently addressed in the report. These are education, health and some of the priority issues in taxation. The preparation, skills, and health of the workforce are all important features of human capital. As such, it is no less important to the adequate performance of the economy than the quality of machinery and technology. The Draghi report makes a dramatic point that European countries are lagging behind the cutting-edge US economy and that, in order to prevent this, they need to increase the amount of money they spend on innovation and technological development. The trends in the educational performance of European countries and the health of the workforce indicate a number of problems that are not addressed in the Draghi report. In this report, we wanted to draw attention to the need to avert this danger.

Reforms to fiscal resources will also be needed to increase public investment, which is a significant focus of the Draghi report. An efficient implementation of the reforms suggested by the report also requires thorough assessment of the potential

consequences of the ongoing tax reforms. One important aspect of this is related to the corporate tax system. We discussed the attempts to change one of these elements in the final section of the paper. ■

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