Analysis

Productivity and energy costs are weaknesses in euro area competitiveness

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Economic growth in the euro area has been undermined in recent years by the erosion of competitiveness in relation to the United States and China. This has been mainly attributable to the subdued growth in labour productivity and the fact that energy has remained significantly more expensive than in competitor countries. Wage growth, on the other hand, has not been higher than in key competitor countries. The challenges are compounded by the euro area's structural weaknesses and the geopolitical tensions in the operating environment, which highlights the need to strengthen both cost and non-cost competitiveness.



Weak competitiveness has long been a key concern in the euro area. Even before the exceptional crises of the current decade, economic growth in the euro area was subdued and the growth in productivity and investment was slow compared to key competitors, notably the United States and China.[1] Euro area competitiveness is often assessed in relation to these countries, as, together with the euro area, they form the three largest economies in the world. In recent years, their economic growth, investment dynamics and technological development have diverged from the euro area. The US and China also have many major competitor companies.

Competitiveness can be examined from several complementary perspectives. A cost competitive economy is one where the cost of production inputs, such as labour and energy, is low relative to competitor countries. Cost competitiveness reflects how well a country (or a major economy such as the euro area) performs against competitors in terms of costs and prices.[2] It is often measured in terms of unit labour costs. When these costs decrease, cost competitiveness improves. Energy prices play a central role in cost competitiveness, as higher energy costs increase production costs and raise prices.

Non-cost competitiveness[3] refers to factors other than those directly linked to prices and costs. It reflects the long-term growth potential and adaptability of the economy and is therefore evident in productivity growth, in particular. The combined impact of cost competitiveness and non-cost competitiveness will ultimately also be seen in the economy's external balance, for example as changes in the current account and the financial account.

The COVID-19 pandemic, Russia's war in Ukraine and, most recently, the expanded conflict in the Middle East have further eroded the conditions for growth by weakening confidence and raising

oil prices. These same factors naturally affect competitor countries as well, but in the euro area they have driven up energy prices particularly sharply and kept them high for a long time. This has affected the euro area more strongly than many of its competitors, as the euro area remains heavily reliant on imported fossil fuels. At the same time, the green transition and digitalisation – and especially the rapid development of artificial intelligence (AI) – have placed new demands on the euro area's adaptability and economic resilience. Digitalisation has progressed slowly in the euro area, partly because the technology has not spread widely enough throughout the economy and the uptake of digital tools has been low, especially in small companies.[4]

This article examines the extent to which the competitiveness challenges in the euro area are caused by changes in each of the two elements of competitiveness: cost competitiveness and non-cost competitiveness.

Relative labour and energy costs are key factors in cost competitiveness

Cost competitiveness is made up of numerous different factors, but this article focuses mainly on labour and energy costs. Their significance varies across industries and regions, depending on how labour-intensive or energy-intensive production is and how these costs can be passed on to prices. In many industries, labour costs make up a much larger share of the total than energy costs, whereas in energy-intensive industries energy can account for a very high share of production costs.[5] In terms of competitiveness, the exchange rate and the terms of trade (the ratio of export prices to import prices) naturally also play a significant role. Unit labour costs adjusted for the terms of trade can be used to examine the cost competitiveness impact of labour productivity, the cost of labour, the terms of trade and exchange rates. This reveals that labour cost competitiveness in the euro area has remained fairly stable in recent years, whereas, by contrast, high energy prices have hit energy-intensive industries particularly hard.

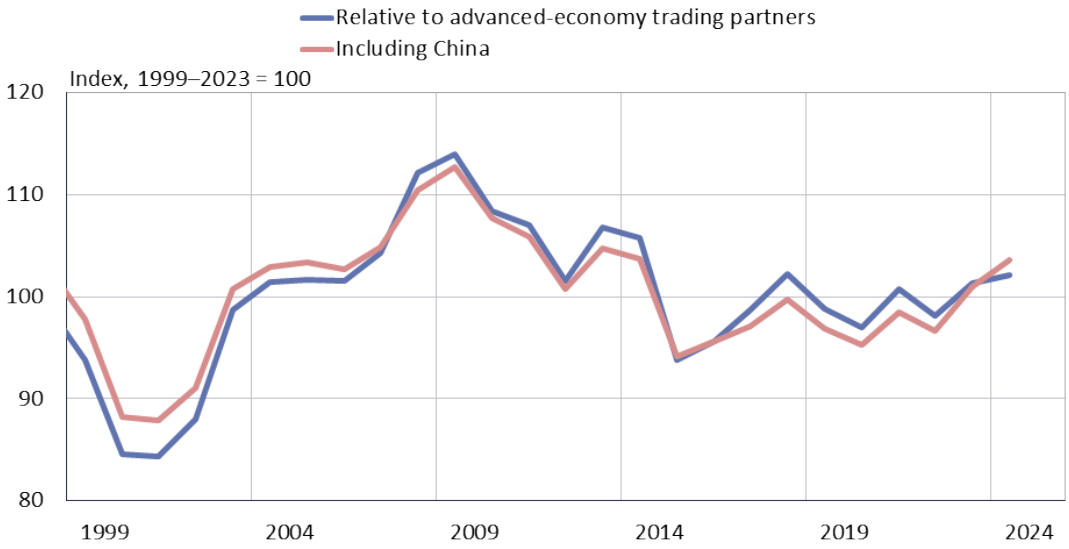
Unit labour costs have grown at the same pace as those of competitor countries

Relative unit labour costs adjusted for the terms of trade can be used in assessing cost competitiveness.[6] Chart 1 shows the euro area's unit labour costs, adjusted for the terms of trade, relative to seven advanced-economy trading partners (United States, United Kingdom, Japan, Switzerland, Denmark, Norway and Sweden). This indicates that there has been no major change in the euro area's cost competitiveness in recent years. In other words, the euro area's unit labour costs, adjusted for the terms of trade, have increased over the years by about the same amount as

in competitor countries. A comparison is also included in which China is added to the group of countries.[7] This does not significantly change the overall picture of cost competitiveness in the euro area, as unit labour costs have also risen rapidly in China during the review period.

Chart 1.

Euro area unit labour costs relative to trading partner countries have remained fairly stable in recent years



Trading partner countries: 7 traditional advanced economies, weighted by euro area trade, in the same currency.
Sources: European Commission, OECD and calculations by the Bank of Finland. 48067
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Indicators that measure cost competitiveness typically focus on changes in unit labour costs. However, this approach can easily overlook differences in the levels of unit labour costs. As wages in China are still significantly lower than in Europe, and productivity differences are less marked, China's unit labour costs are considerably lower than in the euro area.

Changes in relative unit labour costs adjusted for the terms of trade can be broken down into their components in order to obtain a more detailed picture. Chart 2 shows the cumulative contribution of labour productivity, the cost of labour, the terms of trade and exchange rates to the change in relative unit labour costs since 1999.

Chart 2.

Weak labour productivity has had a large cumulative impact on changes in relative unit labour costs adjusted for the terms of trade



Euro area relative to 7 trading partner countries.
Sources: European Central Bank, European Commission, OECD and calculations by the Bank of Finland.
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In the euro area, labour productivity growth has, on average, been weaker than in competitor countries during the period examined. This has limited the potential for equally rapid wage growth and lowered the relative cost of labour in the euro area (compensation costs per employee). In just the past few years, the cost of labour in the euro area has increased slightly faster than in its trading partners. On the other hand, weaker productivity growth has increased relative unit labour costs in the euro area. Therefore, in terms of the labour market, the challenges for euro area competitiveness seem to be related more to weak productivity growth than to a significant increase in wage costs.

Exchange rate fluctuations have also had a significant impact on relative unit labour costs in the 2000s. The appreciation of the euro against the currencies of trading partners (especially the US dollar) weakened cost competitiveness from the early 2000s until 2009, but since then, the weakening of the exchange rate has reduced the cumulative effect. Changes in the terms of trade have not had a significant impact on the euro area's cost competitiveness compared with other factors, with the exception of a few individual years. The analysis here does not include 2025, when the euro appreciated significantly against the US dollar.

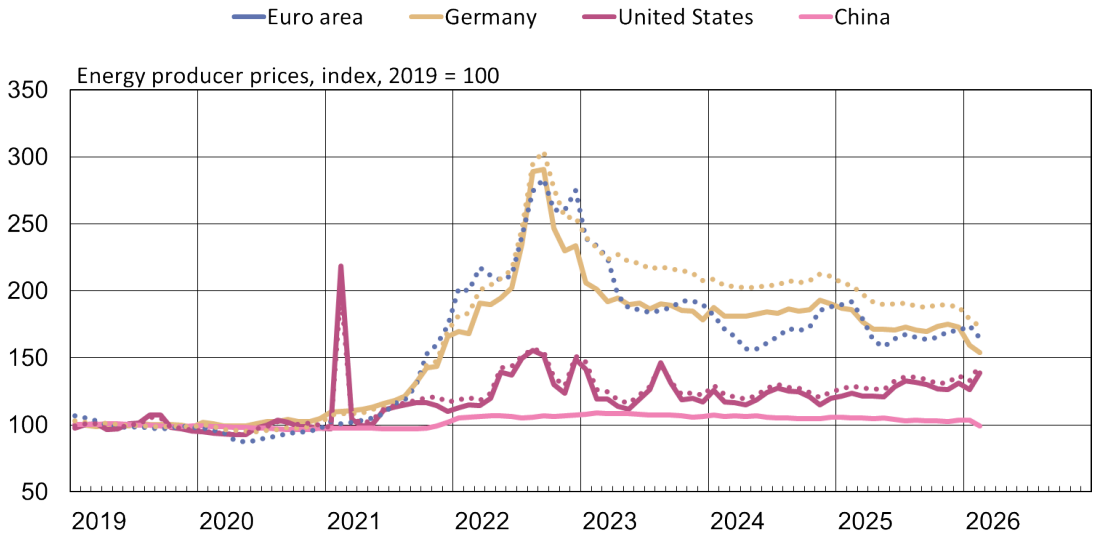
Rising energy costs have undermined cost competitiveness

During the energy crisis that began in the early years of the current decade, energy producer

prices rose to a clearly greater extent in the euro area than in other key economies. Prices began to rise sharply in the latter part of 2021, and the crisis escalated in the autumn of 2022 following the collapse in Russian pipeline gas supplies. In February 2026, producer prices of electricity and gas in the euro area were, on average, still 65% higher – and in Germany nearly 75% higher – than in 2019, before the COVID-19 pandemic (Chart 3). In the United States, producer prices of electricity and gas in February 2026 were 45% higher than the average price in 2019, while in China, the price of electricity in early 2026 had already returned to its 2019 level.[8] These different developments in energy prices have affected the competitiveness of the economies in question.

Chart 3.

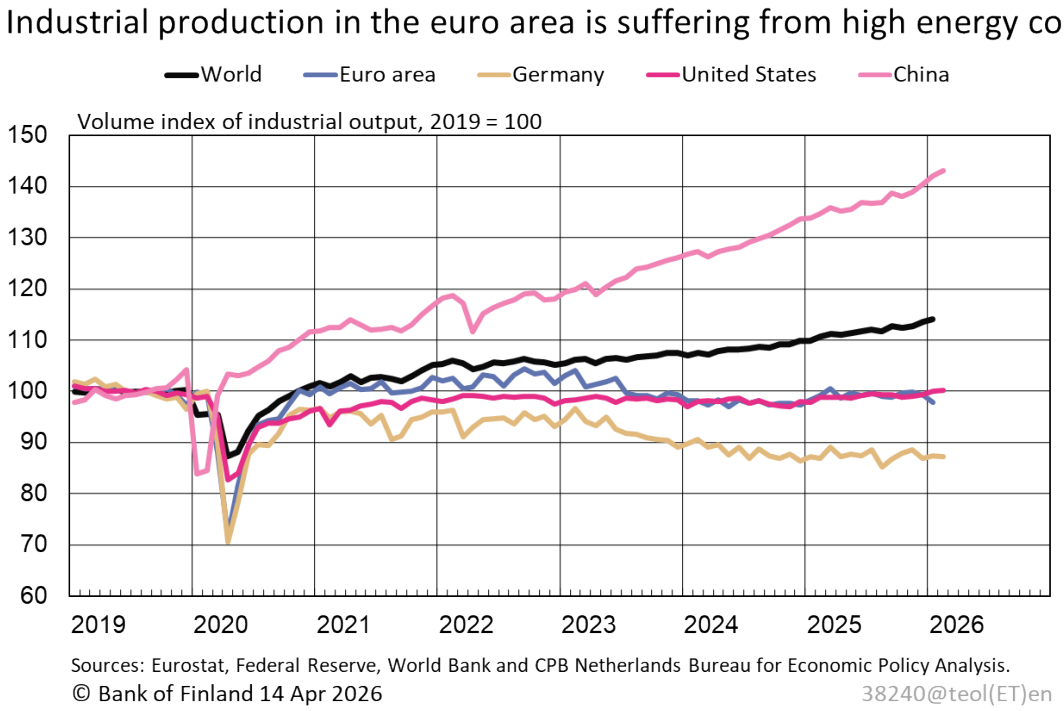
Energy producer prices have stayed high in the euro area



Electricity producer prices with a solid line. Electricity and gas producer prices with a dashed line.
Sources: Eurostat, U.S. Bureau of Labor Statistics (BLS) and National Bureau of Statistics of China (NBS).
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Industrial production in the euro area was still slightly lower in January 2026 than its 2019 average – and in Germany, in February 2026, as much as 13% lower (Chart 4). In the United States, industrial production in February 2026 was at its 2019 average. In China, by contrast, industrial production has continued to be strong, and in February 2026 it was as much as 43% higher than the 2019 average.[9]

Chart 4.

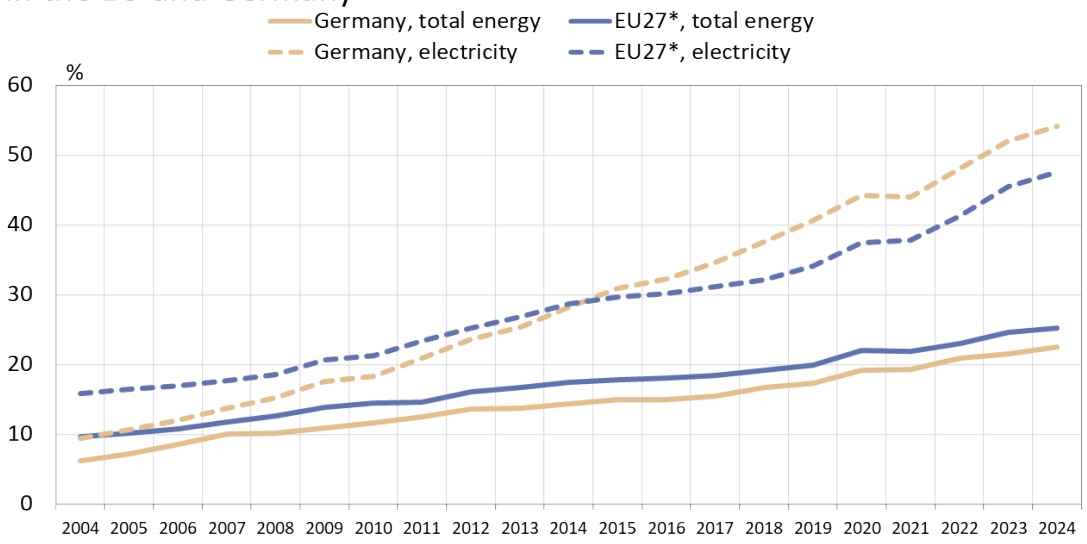


Is the green transition key to keeping energy prices in check?

The green transition has progressed well in electricity production in the EU, with nearly half of electricity already being produced using renewable energy sources (Chart 5). In contrast, transportation and the heating and cooling of buildings still rely largely on oil and natural gas. Fossil fuels still account for nearly 70% of the EU's total energy consumption, and the dependence on imported energy is significant.

Chart 5.

Share of renewables in electricity and total energy consumption in the EU and Germany



* Excl. United Kingdom.

Source: Eurostat. 48052, Chart2

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Wind and solar power may lower the wholesale price of electricity due to their low marginal costs, but the final price paid by companies is also affected by transmission fees, taxation and investment needs. Furthermore, weather-dependent production increases price volatility: on windy days, prices fall, but during calmer weather the price of wind power can rise rapidly. This intermittency also requires adequate storage capacity, which can be provided through, for instance, hydrogen generation.

In the long term, the green transition is likely to strengthen competitiveness by reducing dependence on imported oil and gas and increasing energy self-sufficiency and system flexibility. As energy supply becomes more diversified and electricity-based, the impacts of geopolitical crises will not be as easily transmitted to the economy as before. However, the materialisation of these benefits depends on how efficiently and quickly the energy system as a whole is developed. Finland is a good example of how an advanced green transition helps curb rising energy prices.

Productivity growth reflects the non-cost competitiveness of the economy

Non-cost competitiveness is a measure of the structural strength of the economy and of its ability to sustain growth in the long term. An economy with a high level of non-cost competitiveness does

not compete with prices, but with high added value production. Productivity is the most important factor in non-cost competitiveness. A high level of non-cost competitiveness may also itself promote productivity over time.

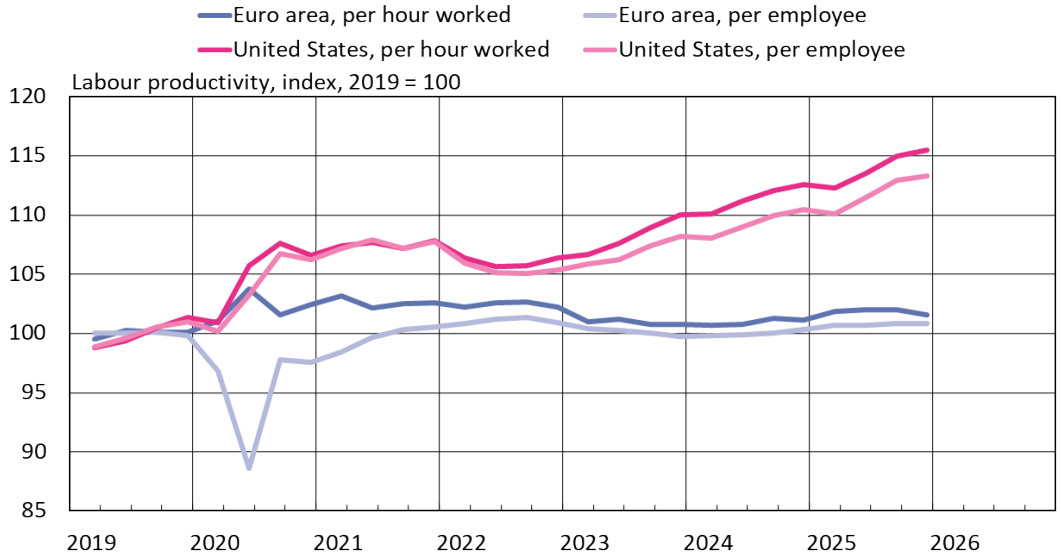
Productivity performance weaker in the euro area than in the United States

The euro area's labour productivity growth has long been significantly below that of the United States, and the gap has widened further in recent years. During the COVID-19 pandemic, the notably higher labour productivity growth in the US compared with the euro area was mainly due to a stronger contraction in labour input.[10] In early 2022, the recovery from the worst phase of the COVID-19 crisis was under way in Europe as well, and by the summer of that year, the gap between euro area and US labour productivity growth had decreased.

In autumn 2022, the energy crisis in the euro area escalated, and in other respects too Russia's war in Ukraine had a stronger impact on the euro area than on the US economy. Labour productivity in the euro area weakened to near the 2019 average level, and it has barely improved since the second half of 2024. At the same time, labour productivity in the United States started to grow strongly, and this is still continuing. As a result, the gap between euro area and US productivity growth has widened again (Chart 6).

Chart 6.

Labour productivity growth slower in the euro area than in the United States in recent years



Sources: Eurostat and U.S. Bureau of Labor Statistics (BLS).
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Labour productivity growth has been particularly weak in some of the energy-intensive manufacturing industries of the euro area. Labour productivity in the industrial category 'electricity, gas, steam and air conditioning supply' plummeted in 2022 to approximately 60% of its 2019 level, while in 'mining and quarrying' it had fallen by 2024 to about 80% of the 2019 figure. The sharp decline in labour productivity in these industries was also due to the decline in production. The slowdown in labour productivity growth in the euro area is partly due to the greater share of the services sector in GDP, as well as the difficulties in the German automotive industry.[11]

In the United States, labour productivity improved particularly strongly between 2019 and 2024 in production sectors directly linked with artificial intelligence. Nevertheless, the US is not in the position of being overwhelmingly the global leader in artificial intelligence (AI) in the way that it was with information technology. Instead, China is an important competitor in this field. The growth in US oil and gas production is also due to the significantly higher volume of liquefied natural gas purchases by the euro area since the end of 2022. This is reflected as productivity growth in the industry, as companies have been able to increase production more than labour input.

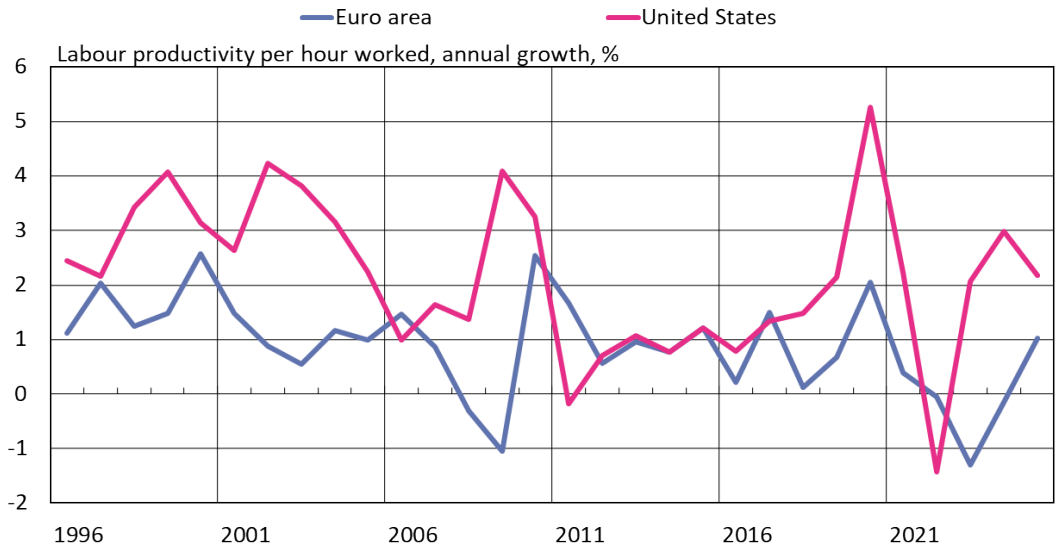
In the euro area too, labour productivity was growing until 2024 in comparison with 2019, particularly in industries such as information and communication and also professional, scientific and technical activities. Nevertheless, in these industries too, labour productivity growth is far below that of the United States. For the euro area, at least in the immediate years ahead, AI is hardly likely to become a driver of labour productivity growth to the extent it currently is in the United States, where growth is attributable particularly to production that is directly linked with AI.[12] These industries are much smaller in the euro area than in the US.

Labour productivity growth in the United States has often before been higher than in the current euro area – for example in the late 1990s and in the early 2000s (Chart 7). During these periods, the difference was due especially to the rapid development of information technology and its extensive utilisation in the US.[13] During the financial crisis of 2008–2009, one of the factors affecting the measured productivity was the stronger contraction of US employment in the recession, as was the case during the COVID-19 pandemic.[14]

Labour productivity growth in the euro area and the United States was relatively similar in the period 2010–2017[15], which also included the euro area sovereign debt crisis. In the US, labour productivity growth improved slightly in 2018–2019, just before the pandemic. The gap between the US and the euro area grew, mainly due to the weakness of productivity growth in the euro area.

Chart 7.

Labour productivity growth in the United States has also often before been higher than in the euro area



Sources: Eurostat and U.S. Bureau of Labor Statistics (BLS).
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Progress in implementing the Draghi recommendations concerning non-cost competitiveness

The Draghi report[16], published in autumn 2024, assessed the structural weaknesses of EU competitiveness and proposed an extensive reform programme for strengthening non-cost competitiveness, in particular. The report's core message is that the level of investment in the EU is too low, the capital markets are fragmented and the availability of venture capital is insufficient. Key solutions put forward in the report are a deepening of the single market, integration of the capital markets and strengthening of investment financing.

According to an assessment by the European Policy Innovation Council (EPIC)[17], approximately 15% of the Draghi report's 383 recommendations have been fully implemented. Most progress has been achieved in sectors in which the EU already has policies and powers, whereas progress has been slower in major structural issues, such as deepening the capital markets, expanding the use of innovation funding, coordination of industrial policy and building new investment capacity.

Progress has been uneven across different industries. Implementation has advanced most in critical raw materials and transport, whereas in energy, a high proportion of measures have not yet been fully implemented. The sectors that have made the fastest progress are those that are under

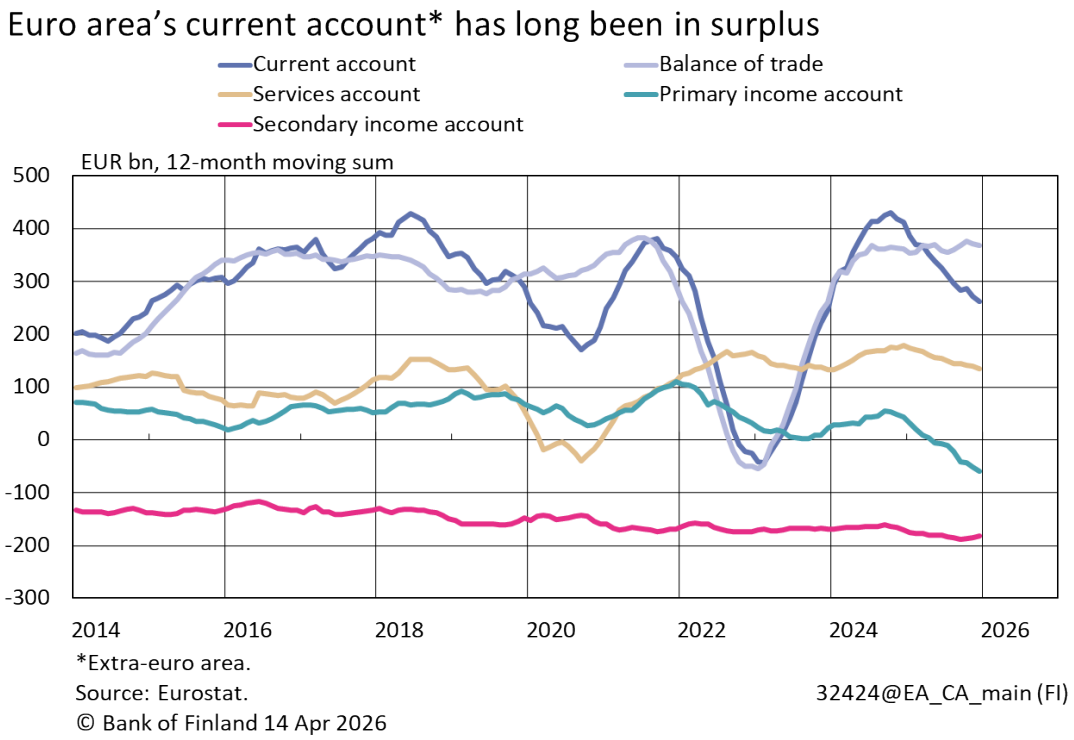
immediate pressure, geopolitically for example, whereas the sectors with the least progress require deep structural reforms, major investments and close cooperation between Member States.

Competitiveness is reflected in the economy's external balance

'External balance' refers to a situation where the economy as a whole does not incur debt with the rest of the world or have a savings surplus. In a competitive economy, exports are strong, external debt remains under control, and the cost structure, production structure and productivity performance all underpin the success of the economy relative to international competitors. The external balance can also be described in terms of the current account, which focuses on flows of foreign transactions. The euro area is not only a large internal market but also a significant exporter in the world market.

The euro area's current account has long been in surplus (Chart 8). The current account surplus has been sustained particularly by the surplus in the balance of trade. This is mainly due to the large trade surpluses of Germany, the biggest economy in the euro area, and the Netherlands. These trade surpluses have in recent years even slightly exceeded their pre-pandemic level. Of the other items in the current account, the primary income account – which for long showed a slight surplus and which includes cross-border dividend payments – turned negative at the end of 2025. The secondary income account, which shows current transfers between domestic and foreign entities, such as taxes, social security contributions and benefits, has a structural deficit, and this has gradually increased.

Chart 8.

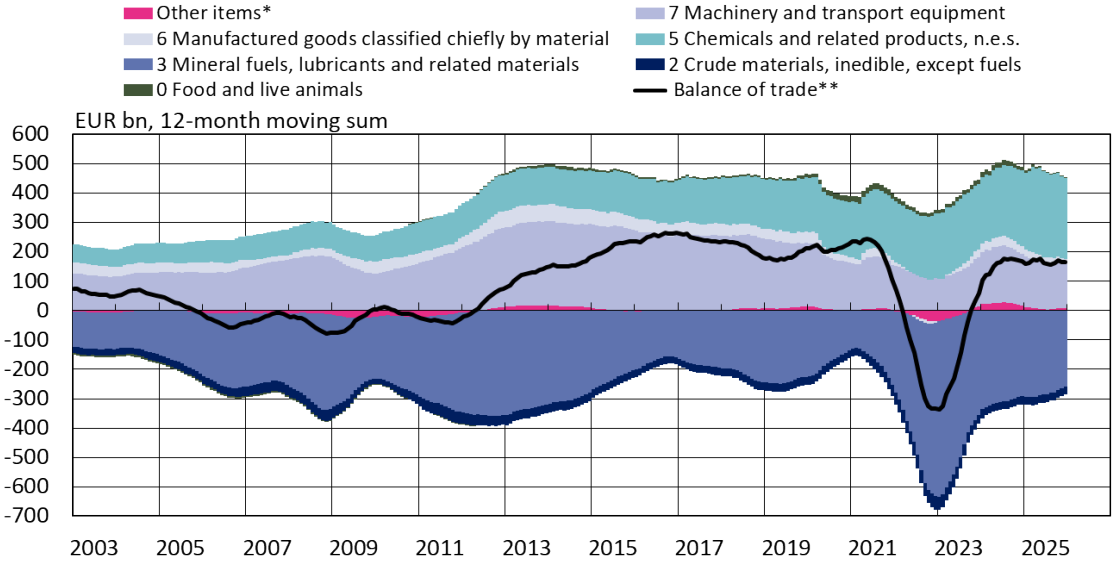


With the exception of the energy crisis of 2022, which drove up the costs of fuel imports significantly, the euro area goods trade has been in surplus since the financial crisis. At the same time, the volume of fuel imports has been even slightly greater than before. As a result, the structural deficit in the foreign trade in fuels deepened suddenly in 2022, and it has not since returned to its pre-energy crisis level. This reflects the euro area's dependence on imported energy as noted above, and the fact that energy prices stayed relatively high after the worst phase of the crisis was over.

Although following the price fluctuations of the energy crisis, the euro area's trade surplus has returned almost to the high level seen in most of the 2010s, its composition has changed slightly (Chart 9). The surplus in the trade in machinery and transport equipment has decreased, and the surplus in the foreign trade in chemicals has increased. Imports of machinery and transport equipment from China have grown steadily since the early 2000s, and since 2016 have been larger than the surplus of exports to the United States. The difference has increased further in the 2020s. Despite the problems in the German automotive industry, euro area exports of machinery and transport equipment have increased steadily. The contraction in the trade surplus for these products is because the growth in imports of machinery and transport equipment to the euro area has exceeded the growth in exports from the euro area. The surplus in the trade in chemicals has been boosted particularly by the growth in exports to the United States from the 2010s onwards.

Chart 9.

Composition of the euro area's balance of trade surplus has changed slightly in recent years



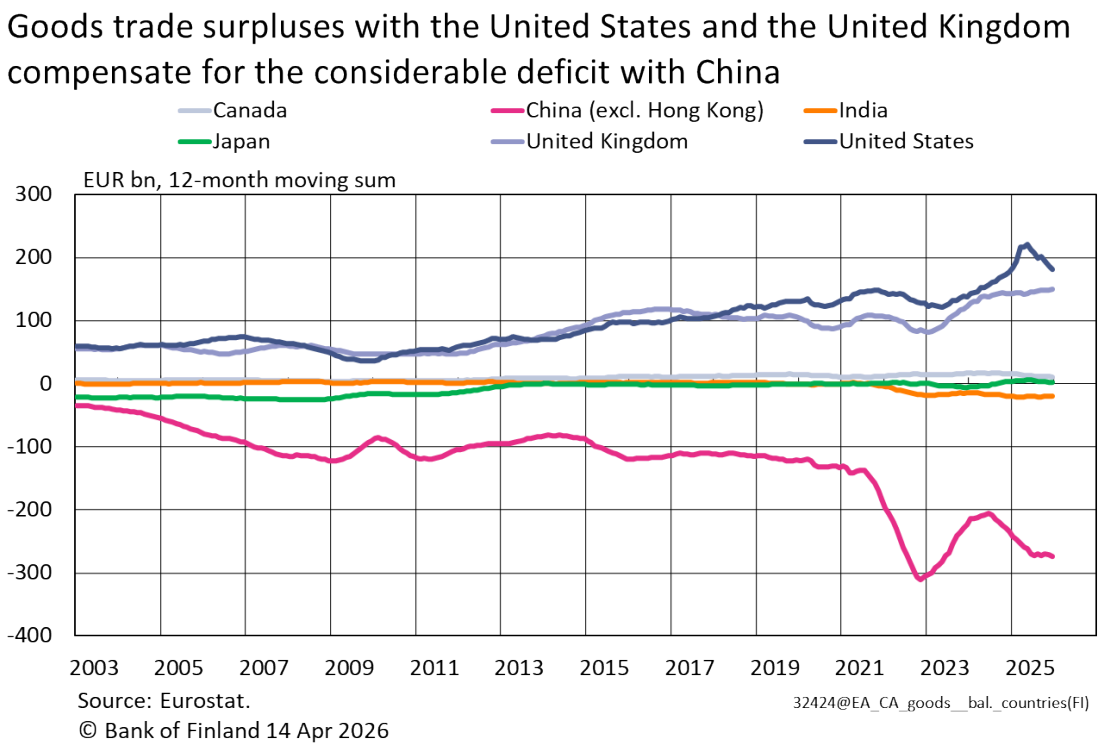
*Includes the SITC sections1 (Beverages and tobacco), 4 (Animal and vegetable oils, fats and waxes), 8 (Miscellaneous manufactured articles) and 9 (Commodities and transactions not classified elsewhere in the SITC). ** Extra-euro area. Source: Eurostat.

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The euro area's balance of trade by trading partner (Chart 10) shows that the euro area's surplus is due to the strong surplus in goods trade with the United States and the United Kingdom. These surpluses have increased slightly in recent years and have compensated for the very large deficit in goods trade with China. In addition to the steady growth in exports of machinery and transport equipment mentioned above, the trade surplus with the US has been boosted by exports of chemicals and chemical products, which have grown considerably more rapidly in the past ten years than previously. The deficit with China, in turn, is explained solely by the steady growth in imports of machinery and transport equipment since the early 2000s.

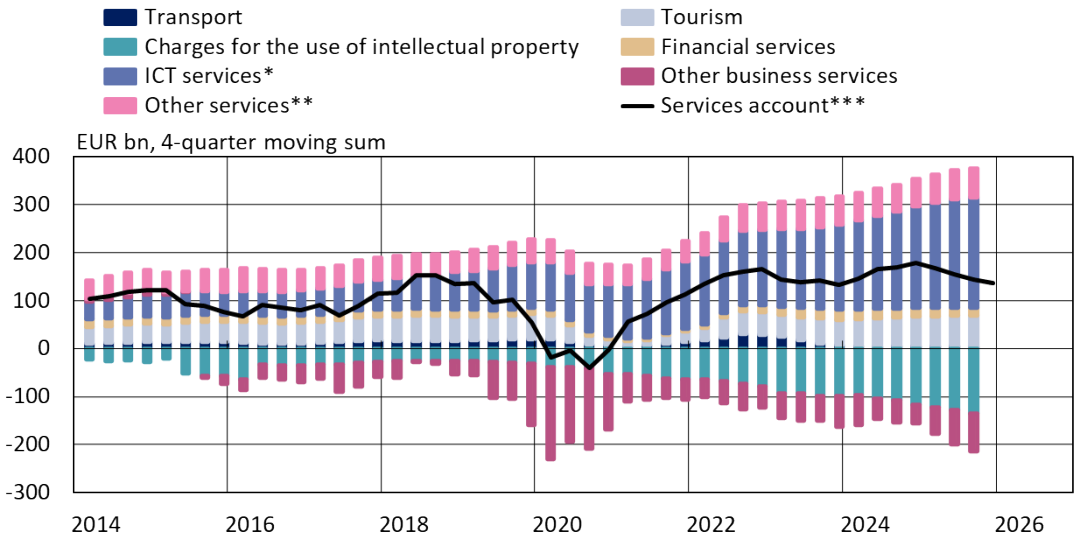
Chart 10.



The euro area's services account has also been in surplus, with the exception of the first pandemic year 2020, as growth in service exports has exceeded growth in service imports. The surplus in telecommunication, computer and information services trade, in particular, has increased steadily. On the other hand, the surplus in the services account has, since 2020, been curbed by imports of intellectual property products (i.e. intangible assets) from the United States (Chart 11). As a result, the US is the only key trading partner with whom the euro area's services account is strongly in deficit.

Chart 11.

Euro area's services account is in surplus overall, but clearly in deficit with the United States



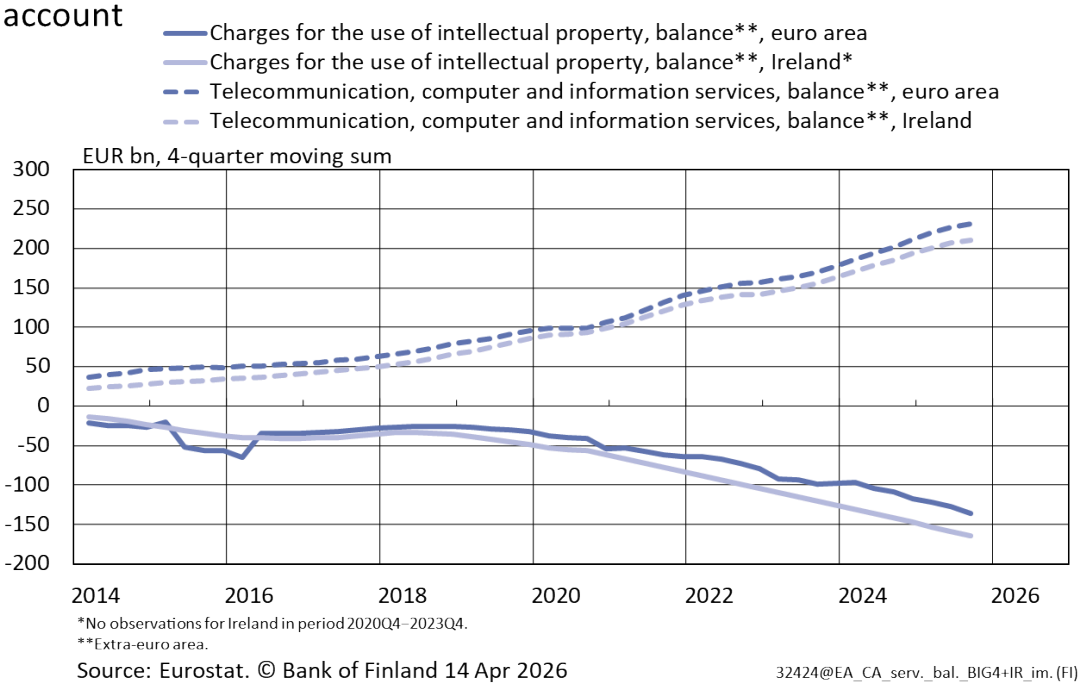
*Telecommunication, computer and information services.
**Manufacturing services; maintenance and repair services; construction; insurance and pension services; personal, cultural and recreational services; government goods and services; other services n.e.c.
***Extra-euro area.

Source: Eurostat. © Bank of Finland 14 Apr 2026 32424@EA_CA_serv._bal. (FI)

Multinational US companies with production activity in the euro area import intellectual property products for use as key inputs. This concerns almost solely Ireland, where many subsidiaries of US companies are located. The supply chain described will be reflected in the euro area as a significant deficit in income from foreign direct investment with the United States. However, the intellectual property products imported by these companies also support the production of high added value goods in the euro area, which, in turn, increases the euro area's services exports and boosts its export market shares particularly in ICT services (Chart 12). In the euro area this, too, takes place via companies located in Ireland, in particular.

Chart 12.

Ireland has a key impact on recent changes in the euro area's services account



Overall, the euro area's persistent current account surplus is based on the importance of a small number of industries and trading partners. The energy crisis of 2022 revealed the euro area's dependence on imported energy, and the energy trade deficit is still larger than before the 2022 crisis. The euro area is therefore still very vulnerable to a rise in energy prices, as the effects of the ongoing extended conflict in the Middle East start to be felt in Europe. At the same time, the surplus in the euro area's goods trade is increasingly based on trade with the United States and the United Kingdom, among others, and the trade deficit with China is increasing. In the foreign trade in services, too, the euro area has many industry and country-specific dependencies.

The euro area's current account surplus is not a direct indication of the strength or sustainability of the external balance, but may also be a sign of weak domestic demand, for example. An examination of the entire balance of payments, i.e. the aggregate of the current, capital and financial accounts, shows that European savings are channelled abroad via, for example, direct investments, and in the form of other investments particularly to the United States, where the expected return on capital is higher.

Conclusions

The competitiveness of the euro area has weakened in the present decade. This is explained by short-term shocks and persistently weak productivity growth. Cost competitiveness measured in

terms of unit labour costs has remained roughly unchanged, because weak productivity performance has been compensated by the slower rise in the cost of labour than in competitor countries. Even though cost competitiveness is often measured using labour costs, the strong rise in energy prices at the beginning of the current decade, and the fact that they have remained high, also has an impact on the cost competitiveness of the euro area. The high level of energy prices has been a burden particularly on energy-intensive industries in those euro area countries in which fossil energy still plays a major role. Energy producer prices in the euro area have remained significantly higher than those in the US and China. In the euro area, the green transition is expected to increase energy self-sufficiency, but the transition is progressing slowly, particularly in sectors other than electricity production, and still requires substantial investments.

Productivity is a crucial factor in longer-term non-cost competitiveness. The key problems of the euro area would seem to be attributable to insufficient investment and innovation, fragmentation of the capital markets and inefficiency of the single market, among other things. These are the very weaknesses that Mario Draghi pointed out in his 2024 report on European competitiveness. Progress with the implementation of the Draghi report recommendations has been slow, however, and the situation has been complicated by the increase in geopolitical uncertainty in the EU's neighbouring regions. Nevertheless, in some areas, such as the trade in critical raw materials, the uncertainty has hastened reforms. The reasons for the euro area trailing the United States have more recently also included the slower adoption and utilisation of new technologies, such as artificial intelligence.

Even though the euro area's current account has remained in surplus, this focuses on specific industries and countries, underlining the vulnerability of the overall situation. Moreover, the surplus is not only a sign of the competitiveness of exports, but an indication of the relative weakness of both domestic demand and the investment appetite, the latter being combined in the euro area with a savings surplus in the private sector. This underlines the need to strengthen long-term competitiveness in a way that is based on productivity growth, structural reform of the economy and the efficient utilisation of technological advances.

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Notes

1. See https://www.ecb.europa.eu/press/economic-bulletin/articles/2024/html/ecb.ebart202406_01~3639959dc2.en.html. ↑
2. The European Central Bank (ECB) does not provide a separate single-sentence definition of cost competitiveness, but with reference to the harmonised competitiveness indicators (HCIs) it uses, price or cost competitiveness is defined as the level of relative costs in relation to foreign competitors, adjusted for exchange rate impacts. HCIs are calculated using nominal exchange rates and appropriate cost or price indicators (e.g. unit labour costs). https://www.ecb.europa.eu/stats/balance_of_payments_and_external/hci/html/index.en.html. ↑
3. Also known as non-price competitiveness. ↑
4. See https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op339~f67b6981a9.en.pdf. ↑
5. A report from the European Commission shows that energy usually accounts for 0%–3% of production costs for an average European business, while in energy-intensive industries it is typically 3%–20%, and in some sub-sectors, such as primary aluminium, around 40%. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52024DC0136. ↑
6. See: 'Measuring cost-competitiveness in Finland', Bank of Finland Bulletin, 22 June 2017, and Eerola, E., Peltonen, J. and Pönkä, H. (2026), 'Assessing Cost Competitiveness: The Bank of Finland Approach', BoF Economics Review, 1/2026. ↑
7. This is an experimental analysis, as Chinese data is not easily available. In the chart, China's unit labour costs have been calculated using the European Commission's real effective exchange rate (REER) and nominal effective exchange rate (NEER) for China, deflated by unit labour costs. Unlike the figures for other countries, the Chinese data have not been adjusted for the terms of trade, which slightly weakens the comparability of the data. ↑
8. See also 'Financing conditions will ease as inflation falls – Euro area growth picking up slowly' (in Finnish), Euro & talous, 4/2024. ↑
9. In the euro area, productivity measured on a per employee basis weakened because the various lay-off and other working time arrangements meant that employees were shown in the statistics as being employed, even though they produced no output. Even so, growth in productivity per hours worked was also significantly weaker in the euro area than in the United States. ↑
10. The manufacture of motor vehicles in the euro area in 2025 was only 80% of the level it reached in 2019. ↑
11. On the beneficial effects of AI on labour productivity growth, see: e.g. https://www.eurojatalous.fi/fi/2025/artikkelit/tekoalyn-kehitys-vaikuttaa-tyomarkkinoihin-ja-tuottavuuteen/ (in Finnish), and https://www.eurojatalous.fi/fi/2025/artikkelit/tekoaly-kiihdyttaa-kasvua-jos-talous-sopeutuu-rakennemuutokseen/ (in Finnish). ↑
12. See also: Gordon, R.J. (2015), Secular Stagnation: A Supply-Side View, American Economic Review, 105 (5), pp. 54–59, and 'Corona crisis has increased the risk of stagnation in the euro area', Bank of Finland Bulletin, 9 November 2020. ↑

13. See: e.g. https://www.ecb.europa.eu/pub/pdf/other/eb201508_article01.en.pdf. ↑
14. During this period, the term 'secular stagnation' became used, referring to sluggish long-term growth. ↑
15. European Commission (2024), https://commission.europa.eu/topics/competitiveness/draghi-report_en. ↑
16. See: https://thinkepic.eu/publication/the-draghi-observatory-implementation-index-update-january-2026/. ↑

Keywords

competitiveness, euro area