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The Impact of Brexit on the United Kingdom's Economy

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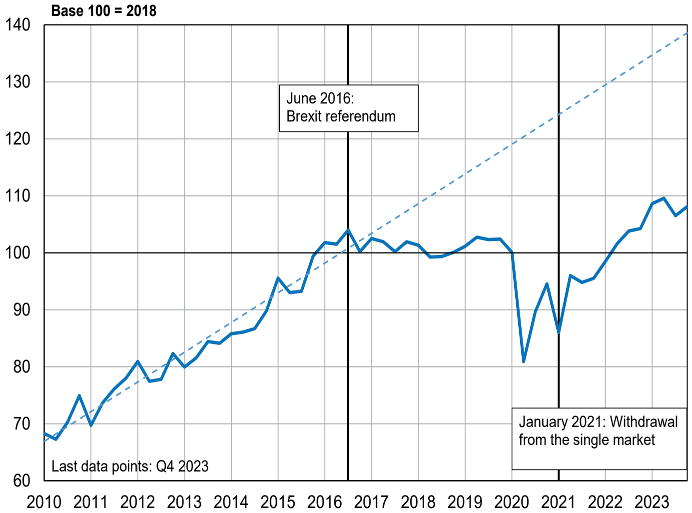
- The United Kingdom's withdrawal from the European Union (EU), which was voted for by referendum in June 2016, became effective on 31 January 2020. After a transition period, the UK left the single market on 1 January 2021. Brexit has had an impact on the United Kingdom's economy and has dampened its growth potential through three main channels.
- Firstly, owing to the reintroduction of non-tariff barriers, the UK's trade in goods with the EU fell in 2021 to a greater extent than trade with non-EU countries, although the impact only seems to have been temporary. On the other hand, trade in services with the EU has been more lastingly affected, especially for financial and transportation services.
- Secondly, business investment in most sectors has stalled since the 2016 referendum following a period of strong growth. Due to the effects of both Brexit and the COVID-19 pandemic, in Q2 2023, it was more than 20% below the level that it would have reached had it maintained the momentum seen between Q1 2010 and Q2 2016 (see Chart).
- Lastly, restrictions on the employment of EU nationals have reduced the labour supply at a time when the UK's labour market is under great strain. Employment of EU workers has levelled off since 2016 whereas it had rocketed during the years prior to the referendum. This has forced British employers to have greater recourse to non-European labour.

Business investment in the United Kingdom



Source: Office for National Statistics (ONS), DG Trésor calculations.

1. The difficulty in gauging the impact of Brexit

On 23 June 2016, in a referendum, the British public voted in favour of the UK's withdrawal from the EU which became known as Brexit. A round of negotiations on the form that the future relationship between the UK and EU would take then began, with withdrawal being initially scheduled for 2019. The date was delayed on several occasions and the UK actually left the EU on 31 January 2020 on the effective date of the Withdrawal Agreement. After a transition period, the UK withdrew from the single market on 1 January 2021. Relations between the EU and UK are now governed by the Trade and Cooperation Agreement which was signed on 24 December 2020.

1.1 Most economists foresaw an adverse long-term impact on trade and foreign direct investment

Prior to the Brexit referendum, in April 2016,[1] HM Treasury projected that the UK's withdrawal from the EU would have major negative economic repercussions. It estimated that GDP would be 6.2% lower in the long-term if the future relationship with the EU were to be governed by a free trade agreement, such as was actually concluded. This essentially pointed to an adverse effect on trade flows and inward foreign direct investment (FDI) owing to the introduction of non-tariff barriers. The slowdown in trade and FDI would put a drag on productivity, as less openness to the exterior would cause less specialisation and less competition among firms, which meant productivity losses. Another adverse effect highlighted by the Treasury was an overall increase in the level of uncertainty.

Similarly, the Office for Budget Responsibility (OBR), which is tasked with providing the British government's growth forecasts, posited in November 2016 that withdrawal from the EU would lead to a 15% decline in trade (total of imports and exports) over the long term, in relation to its trend at the time.

1.2 In the initial years, growth and inflation were little affected unlike the financial markets

The Brexit vote on 23 June 2016 caused economists to lower their short-term growth projections for the UK. In March 2016, the OBR had forecast growth of 2.2% for 2017. In November 2016, in the wake of the referendum, the forecast was slashed to 1.4%. The IMF also agreed with this more negative outlook; in April 2016 it had projected 2.2% growth for 2017 which it revised to 1.1% in October 2016.[2]

However, this slowdown failed to materialise as British growth rose to 2.7% in 2017. In addition, the average annual growth rate in the UK remained stable between 2010 and 2015 and again between 2016 and 2019.

A sector-based analysis of value-added also does not point to a specific dip in output immediately after the Brexit vote in the tradable and non-tradable goods and services sectors.[3] A slowdown in manufacturing of tradable goods could have been expected, with manufacturers foreseeing problems with exports in the absence of a clearly-defined agreement, over the period from 2016 to 2019.

In March 2020, the OBR estimated the fall in productivity in relation to its trend associated with Brexit at 4%.[4] As the OBR has not reviewed this estimate, it is still using figures that do not factor in the impact of the COVID-19 pandemic.

Lastly, despite the depreciation of sterling (see Box 1), overall prices were not affected by the Brexit vote as there was no major jump in the inflation rate around 2016. It is even more astonishing that the inflation rate

(1) HM Treasury analysis (2016): "The long-term economic impact of EU membership and the alternatives".

(2) DG Trésor's 2017 growth forecasts for the UK were also revised downwards between spring 2016 (2.2%) and autumn of that year (1.2%), see *Trésor-Economics* Nos. 167 and 181.

(3) A good or service is said to be "tradable" if it can be easily "consumed" by a non-resident of the producing country (like manufactured goods). This applies both if the good or service is exported and if it can be easily consumed in situ by a non-resident visiting the producing country. For instance, a public service such as hospital care is not easily tradable as it is costly to travel to another country to use this service. Product classification follows the Standard Industrial Classification (SIC). Products in the following sectors are deemed to be tradable: agriculture, mining and quarrying; manufacturing; electricity, gas, steam; wholesale and retail trade; transportation and storage; accommodation and food service activities; information and communication. Products in the following sectors are deemed to be non-tradable: construction; water treatment; finance and insurance; real estate activities; scientific and technical activities; administrative activities; health care, education; other service activities. This classification is used to assess the impact of Brexit on (i) manufacturing, (ii) investment, (iii) employment and (iv) prices. Some sectors (production of electricity and sewerage) have been excluded from the analysis of employment and business investment data due to the lack of detailed information.

(4) The OBR came up with an average figure by consulting a dozen studies conducted by different authors and institutions concerning the expected impact on productivity.

in the tradable goods sector did not become "detached" from the rate in the non-tradable goods sector over the 2016-2020 period (see below).

Nevertheless, leaving the EU did stoke food price inflation. According to a Centre for Economic Policy Research (CEPR) paper,[5] the ballooning of food prices between December 2019 and March 2023 (up 25%) was compounded by eight points and the increase in consumer prices by 1.3 points (out of an aggregate 18.7% rise) due to the cost of new non-tariff barriers such as labelling, logistics and trade channels.

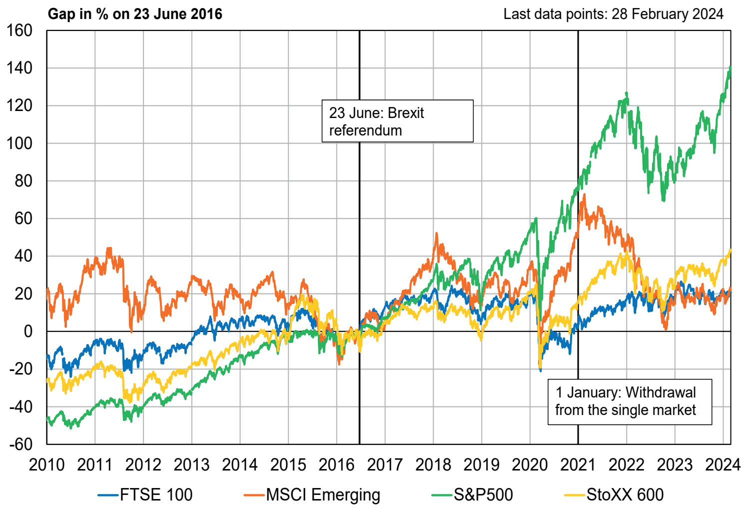
Box 1: Brexit's impact on financial markets

In late 2015, even before votes were cast, the Brexit referendum had an impact on financial markets with a sharp depreciation of sterling. Between October 2015 and October 2016, the nominal effective exchange rate (NEER)[a] for sterling fell by 18.7%. In December 2023, it was still 7.8% below its pre-referendum level. This depreciation reflected anticipation of the adverse impact of leaving the EU on long-term investment and productivity, and concerns about London's place as the major financial centre on international capital markets.[b]

The outcome of the referendum also had a negative effect on the main financial markets. The London Stock Exchange suffered from fears of an economic slowdown and the depreciation of sterling.[c] This meant that the announcement of Brexit increased the FTSE's volatility by at least 15%.[d] Between the date of the June 2016 referendum and 31 December 2023, the British stock market index, the FTSE 100, grew by 22%, compared with 125% for the S&P 500 and 38% for the STOXX Europe 600 (see Chart 1). In addition, between January 2016 and June 2020, individual British investors withdrew almost £13bn from domestic equity funds which then only accounted for 14% of their assets versus 23% prior to the referendum.

Lastly, the UK's withdrawal from the EU led to the relocation of some financial activities towards the EU. The think tank, New Financial, estimates the amount of bank balance sheet transfers at £900bn, that is 10% of the entire banking system based in the UK. There has been a lesser impact on employment, with the think tank only noting 7,500 relocated jobs out of almost one million employees in the UK's financial sector (with 400,000 based in London). The financial centres that have gained the most from firms' expansion outside the UK since 2016 are Dublin, Paris and Luxembourg, followed by Frankfurt and Amsterdam. However, the City is still by far Europe's leading financial centre and third worldwide behind New York and Chicago according to the Open Financial Ecosystem indeX (OFEX), and in second place after New York according to the Global Financial Centres Index 2023.

Chart 1: Prices on the main equity indices



Source: Reuters, DG Trésor.

a. The NEER of a monetary area is the sum of bilateral exchange rates weighted by the extent of competition for exports on third-party markets. Changes to this rate should be seen as reflecting the overall amount of appreciation or depreciation of a currency, taking all bilateral exchange rates.
b. IMF analyses point to a broad overvaluation of sterling up to 2021, the date when it considers, on average, that the real effective exchange rate (REER) was still overvalued by between 2.5% and 17.5%. The REER is the NEER, adjusted by changes to prices in non-EU countries. *See UK 2021 Article IV Consultation.* When the IMF's work was updated in 2023, it noted that sterling was in line with its exchange rate fundamentals.
c. H. Breinlich et al. (2018), "The Economic Effects of Brexit: Evidence from the Stock Market", *Fiscal Studies*.
d. N.K. Anaraki (2018), "Post-Brexit Stock Market Volatility and European Central Bank Reaction Function", *Journal of Finance and Economics*.

(5) See J. Bakker et al. (2023), "Brexit and consumer food prices: 2023 update", *CEPR*.

1.3 The overlap with the COVID-19 pandemic makes it more complicated to pinpoint the impact of Brexit

Whilst leaving the single market took effect on 1 January 2021, the British government introduced a strict lockdown as from 6 January: working from home was made mandatory whenever possible, schools were closed, people were only to leave their home once a day[6] and all public gatherings were banned. The lockdown was lifted in progressive stages up to July 2021. The COVID-19 pandemic had a greater effect on the British economy than on those of its neighbours with growth falling by 10.4% in 2020. The economy quickly recovered, but the fact that the pandemic happened at the same time makes it more complicated to identify the specific effects of leaving the single market. For a more precise idea of the impact of the UK's withdrawal from the EU, we can compare changes in trade with the EU with those in trade with the rest of the world.

2. A temporary impact on trade in goods with the EU but a more lasting one on services

Trade with the EU was significantly disrupted on 1 January 2021 due to the combined effect of the reintroduction of non-tariff barriers and the impact of stockpiling ahead of actual withdrawal from the Customs Union.[7] Overall, trade flows were also hampered by the stepping up of anti-COVID measures.

2.1 Recovery from the 2021 shock affecting trade in goods with the EU was rapid

Trade flows (in real terms) with the EU were substantially affected when the UK left the single market in January 2021: imports and exports of goods from and to the EU fell by 34% and 45% respectively (monthly year-on-year change). For the same month, imports from the rest of the world were only down 11% whereas exports remained stable. However, the gap between trade with the EU and trade with the rest of the world was only temporary. It closed several months later for exports of goods and in several quarters for imports of goods (see Charts 2 and 3). Import and export flows are now at equivalent levels between EU and non-EU countries, although they are still below 2018 volumes.

Chart 2: Imports of goods by the UK in real terms

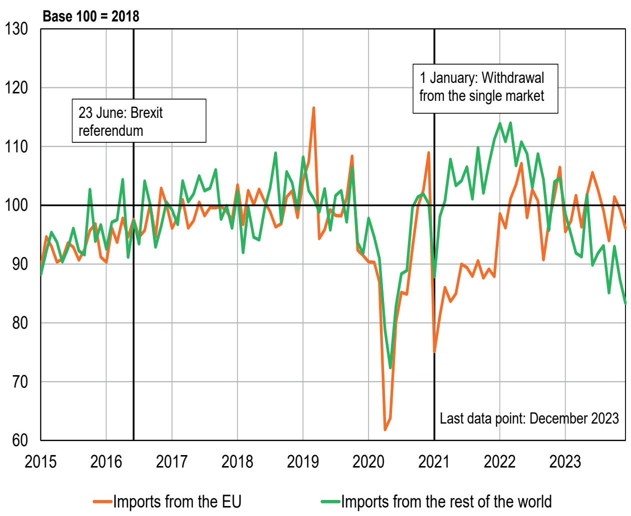
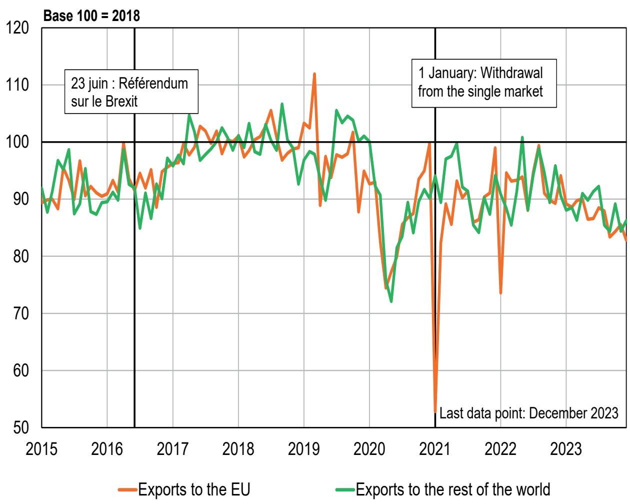


Chart 3: Exports of goods from the UK in real terms



Source: ONS, DG Trésor calculations.

Fields: Chain-linked volumes of goods restated to include non-monetary gold.

(6) At that time, the UK had introduced a "Stay at Home" policy under which people were strongly advised to leave or be away from their home only once a day for shopping or exercise.

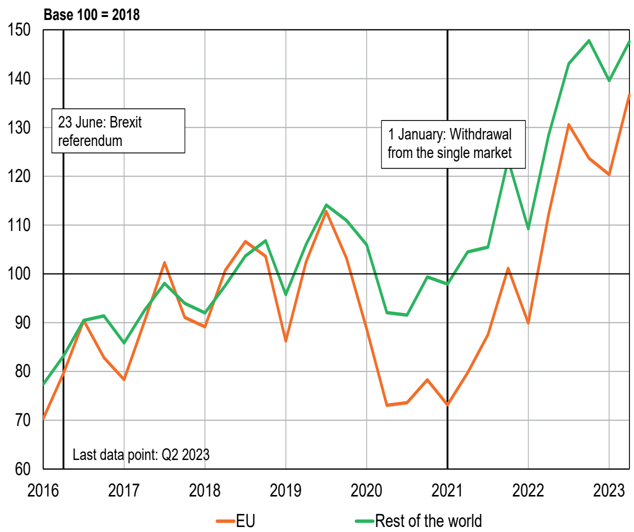
(7) See L. Adjiman, O. Besson, N. Dunne, R. Fournier, S. Milliaud and P-M. Voegeli (2022), "The European Union's New Trade Relationship With the United Kingdom", *Trésor-Economics*, No.300.

Trade in nominal terms, which allows for a breakdown of flows by country, shows a number of disruptions, only some of which are connected with Brexit. Trade with Ireland,[8] the UK's third largest global export partner, was particularly hard hit when the UK left the single market (UK exports to Ireland account for 12% of its exports to the EU): exports of goods to Ireland plummeted by 65% between December 2020 and January 2021 which goes some way to explaining the fact that exports to the EU fell more sharply than imports from the EU. However, as from October 2021, trade with Ireland, in nominal terms, recovered to well above its 2018 level. In addition, the UK's imports from China have mushroomed since 2020,[9] to such an extent that, in 2021, China became the UK's leading partner for imports, ahead of Germany, although it did lose this status in 2022. Increased trade with China, which would appear to be more related to the COVID-19 pandemic, can also partly explain the gap between changes to imports from the EU and from rest of the world in 2021.

2.2 Trade in services with the EU is still affected

As for goods, trade in services in nominal terms with the EU fell more sharply than with the rest of the word in 2021 (see Chart 4). However, unlike for goods, the gap between trade in services appears to be lasting as growth in trade with the EU since 2018 is still lower than growth in trade with the rest of the world.[10] This gap essentially concerns financial and transportation services, whereas the gap for tourism,[11] which appeared in 2020 and 2021 with the COVID-19 pandemic, narrowed in 2022. Trade in financial services with the EU was shrouded in particular uncertainty as the Memorandum of Understanding governing it was only signed in June 2023.

Chart 4: The UK's total trade in services (imports + exports) in nominal terms[12]



Source: ONS, DG Trésor calculations.

3. Brexit has led to a decline in business investment

As from 2016, investment by British businesses suddenly halted due to the uncertainty caused by leaving the single market.

3.1 Business investment in almost all sectors stalled after the referendum

After a period of strong growth between 2010 and Q2 2016, business investment in real terms stalled following the Brexit vote in June 2016: between 2010 and 2015, investment had increased at an average annual rate of 5.8% before falling by 0.5% per year between 2017 and 2019.

In Q4 2023, business investment was more than 20% below the level that it would have reached had it maintained the momentum seen between 2010 and

(8) Since 2020, trade with the Republic of Ireland has been governed by the Northern Ireland Protocol which introduced a de facto customs border between Great Britain and Northern Ireland. This means that goods bound for the EU are subject to checks and controls when entering Northern Ireland. The Protocol was nevertheless changed in February 2023 by the Windsor Framework. Goods moving from Great Britain to Northern Ireland and destined to stay there are now labelled "Not for EU" and have fewer checks and controls. However, goods moving on to the Republic of Ireland, and therefore to the EU, are subject to the required full checks and controls when they arrive in Northern Ireland.

(9) This stepping up of imports was initially driven by demand for face masks (imports of textiles from China tripled in 2020) then by imports of computers and mobile phones which were 15% above their 2018 level in 2020.

(10) 2018 is taken as the benchmark year as trade in goods, and in particular imports of goods, was affected by stockpiling behaviour during 2019 relating to the various delays in Brexit which was initially scheduled for March 2019. As a result, 2018 was a more "normal" year and represents a better benchmark.

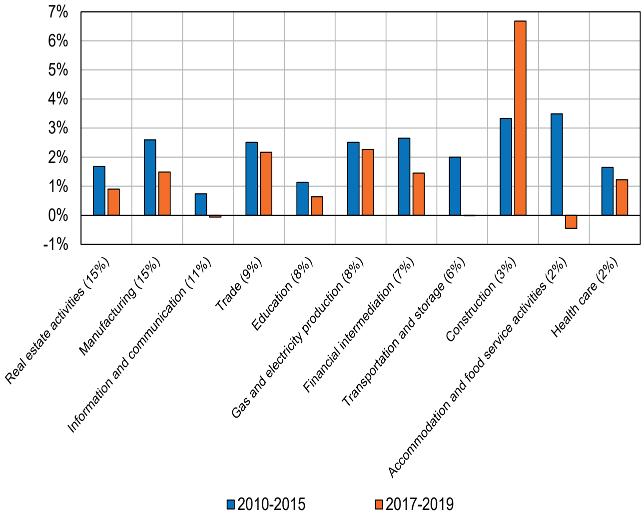
(11) During the COVID-19 pandemic, tourism from the EU was more seriously affected than tourism from the rest of the world as Europeans were subject to stricter lockdowns than Americans who make up the majority of non-European tourists in the UK.

(12) Total trade data (imports + exports) is presented as both imports and exports have experienced the same changes between the EU and the rest of the world.

2016. This reflects the combined impact of Brexit and the COVID-19 pandemic.

When compared with the pre-2016 trend, business investment either halted or fell in almost all sectors except construction where investment is especially volatile (see Chart 5).

Chart 5: Average annual growth rate of business investment (by companies' sector of activity)



Source: ONS, DG Trésor calculations.

Note: The contribution of each sector to business investment is shown in brackets.

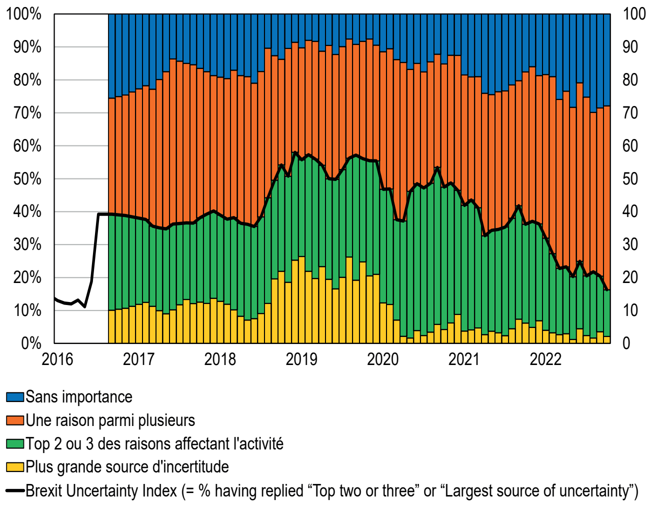
Investment has faltered the most for companies operating in tradable goods sectors, in particular transportation services, accommodation and food services, and information and communication services, where it has fallen, whereas total business investment has been almost stable since 2016.

3.2 This stalling demonstrates the uncertainty caused by Brexit

Brexit put a dampener on business investment because it created a climate of uncertainty and worsened the economic outlook. When faced with uncertainty, businesses tend to wait for information that can clarify this outlook and therefore delay making investment decisions as these usually generate costs that cannot be recovered.

The results of Bank of England (BoE) surveys (*Decision Maker Panel*, November 2022) of a panel of 2,600 businesses of varying sizes which have been monitored since 2016 show that at the time of the vote almost 40% of firms rated Brexit as one of the three main drivers of the uncertainty they faced (see Chart 6). In 2019, this proportion had risen to over 50% and it was only during 2021, after the UK left the single market, that Brexit-related concerns lessened. The survey also reveals that businesses having recorded the largest slowdown in investment were those which stated that they were facing major Brexit-related uncertainty.[13]

Chart 6: Businesses' replies to the question: "How much has the result of the EU referendum affected the level of uncertainty affecting your business?"



Source: Bank of England, DG Trésor calculations.

(13) See Bloom et al. (2019), "The impact of Brexit on UK firms", NBER, *Working Paper,* No. 26218.

4. Brexit has accentuated the reduction in labour supply owing to the COVID-19 pandemic

The British labour market is currently beset with a supply problem owing to the fall in participation during the COVID-19 pandemic and the hurdles to employing Europeans in the wake of Brexit.

This had led to serious strain which has nevertheless eased since mid-2022. In December 2023, the unemployment rate stood at 3.8% after having reached an unprecedented low of 3.5% in August of that year. The UK still has over 900,000 vacancies, i.e. 30% more than the average between 2010 and 2015 despite a continuous reduction since August 2022.

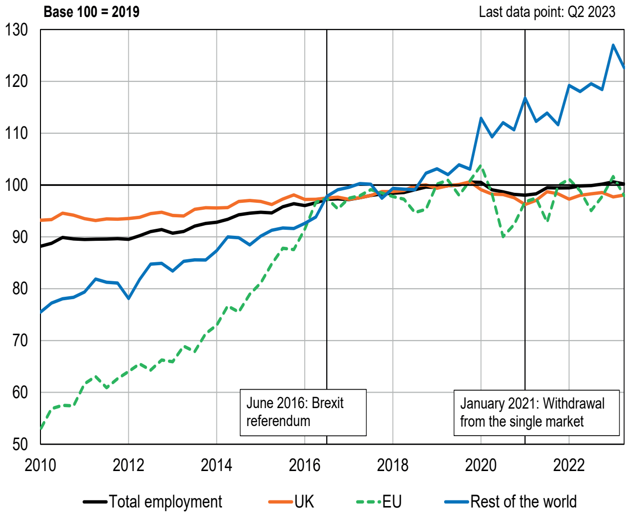
The labour market has experienced significantly lower participation since March 2020 that is attributable, in particular, to a sharp increase in economically inactive older people (50-64 years old) who have left the labour market due to long-term sickness.

However, the labour market is also facing a fall in the number of European workers which has been triggered by Brexit. Leaving the single market has hampered the hiring of people of European origin as it requires new European workers to obtain a visa.[14]

Whilst the employment of Europeans had grown significantly since 2010, the 2016 vote put the brakes on it: the number of jobs held by Europeans has levelled off since 2016 (see Chart 7). This loss has been partly offset by an increase in hiring non-Europeans which has been gaining momentum since 2020.

According to our calculations, the shortfall in European workers that can be attributed to Brexit stands at 200,000. If the number of European employees had remained in line with the trend noted between 2010 and 2016, it would have reached 2.7 million in Q1 2020 compared to the 2.5 million actually recorded (Q1 2020 has been taken as an example to exclude the COVID-19 pandemic-related impact). For its part, older workers leaving the labour market following the pandemic explains the 320,000 additional economically inactive people in January 2023. In that same month, these two reductions accounted for 0.6% and 0.9% of the labour force respectively.

Chart 7: Employment in the UK according to geographical origin



Source: ONS.

Lastly, as for business investment, employment in the tradable and non-tradable goods sectors followed the same trend between 2010 and 2015 with the gap having widened since then. In Q1 2023, employment in the tradable sectors was 5% less than its average 2016 level but 10% more than this level in the non-tradable sectors.[15]

(14) Several visas are available depending on the worker's situation (Skilled Worker Visa, Health and Care Visa, Start-Up Visa, etc.) and must be applied for at least three months prior to the start of the employment contract.

(15) A gap owing to Brexit could already be seen in Q1 2020 and this then widened with the COVID-19 pandemic.

5. The overall impact of Brexit on the UK's economy

Brexit has had a lasting adverse impact on the UK's economy through three main channels namely trade, business investment and the labour market. In December 2022, the Centre for European Reform posited that Brexit had reduced GDP by 5.5% and investment by 11%.[16] The delay in private investment could have an additional effect on the economy's long-term productive potential. The OBR comes to a more positive conclusion with loss of long-term productivity of 4%, around 1.5 points of which may already have been lost when the UK left the single market on 1 January 2021.

The British authorities have striven to introduce initiatives to mitigate the cost of Brexit by, inter alia, supporting business investment and increasing labour market supply. The Autumn Statement in November 2023 made the full expensing arrangements for businesses, which had been introduced temporarily in 2021, permanent and recast the pension savings system to make long careers more appealing. In addition, the UK is now replacing its European migrants with those from the rest of the world such as from Hong Kong or Ukraine: from June 2022 to June 2023, the ONS estimates that net non-European immigration represented around 700,000 people, making for a record annual figure. Around a third of non-EU migrants arrived in the UK to work. As for trade, the UK's foreign policy involves concluding trade agreements, in particular with Australia in 2021 and New Zealand in 2022.

(16) See The cost of Brexit to June 2022, John Springford, 21 December 2022. The estimate quoted is based on the "doppelgänger" (double) method which builds a counterfactual UK that did not leave the EU based on 22 countries whose economic performance closely matches the UK. This counterfactual enables, inter alia, the impact of the pandemic to be neutralised. The paper highlights the lack of a substantial effect on trade in services.

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