

Economic Research:

Countdown To Brexit: What Might Have Been For The U.K. Economy

April 4, 2019

The U.K.'s June 2016 decision to leave the EU, although not made with the economy as a core consideration, will nevertheless change the country's business model. To what extent, exactly, will depend on its future relationship with the EU.

Regardless of which form that relationship will take, there is no doubt that the U.K.'s economic performance has already suffered from the mere anticipation of Brexit; after all, economic activity is driven by forward-looking behavior. The most visible effect has been the depreciation of the British pound. This triggered an increase in inflation, which peaked at 3% in the fourth quarter of 2017. The ultimate result was to erode household spending power and weaken private consumption. Net external trade did not see any significant boost from the depreciation.

In other areas, the impact has not always been so clear, at first sight. So how exactly has the economy already been affected, and what's the damage exactly?

To quantify the impact of the Leave vote on the economy, we have used and updated an econometric approach, known as the Doppelganger method (see appendix).

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Key Takeaways

- Had the U.K. not decided to leave the EU in the 2016 referendum, we estimate its economy might have been about 3% larger by the end of 2018.
- The main impact came via higher, imported inflation that hit private consumption.
- Uncertainty over the shape and form Brexit will take has increasingly paralyzed any forward-looking decision making, reflected in particular in a contraction of business investment in 2018.

Shift To A Lower Growth Trajectory

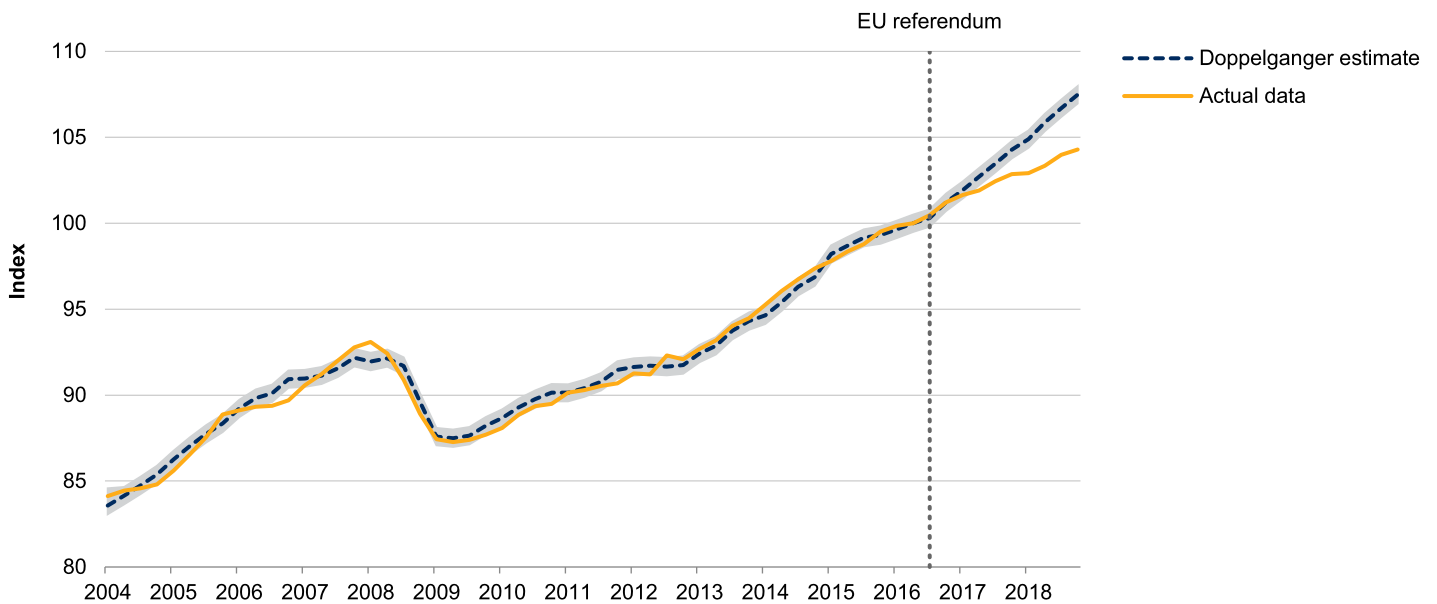
At first glance, the Leave vote did not affect economic performance too much. Most sentiment indicators rebounded quickly after the initial shock. GDP growth in 2017, the first full year after the referendum, at 1.8%, was the same as in the referendum year, which was unaffected in the

first half.

Only when the economy slowed to 1.4% in 2018 did it become more apparent that the anticipation of Brexit might weigh on U.K. growth, while the U.K.'s peers were forging ahead.

Chart 1

GDP Moved To A Lower Trajectory Following The Referendum In Q2 2016 Volume index (2016 Q2 = 100)



Note: Grey area shows one standard deviation on each side of the estimate. Data is quarterly. Sources: ONS, S&P Global Ratings.

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Our analysis suggests that the economy actually moved onto a lower growth trajectory almost immediately after the referendum. Moreover, we estimate that, by the end of 2018, the size of the U.K. economy was already between 2.4% and 3.4% smaller than it could have been otherwise. Our central estimate is that GDP was 2.9% lower at the end of 2018. That translates into average forgone economic activity of £6.6 billion (in 2016 prices) in each of the 10 quarters since the referendum. Quarterly growth rates could have averaged about 0.7%, rather than the 0.43% we actually saw.

Although it is impossible to be certain what the economy would have looked like without the referendum, or had the decision been to remain in the EU, we believe our approach provides a robust indication of what might have been. Independently of when we start or end our estimation, and independently of the country selection used in the estimation, the results point to the same magnitude of impact: around 3% at the end of 2018.

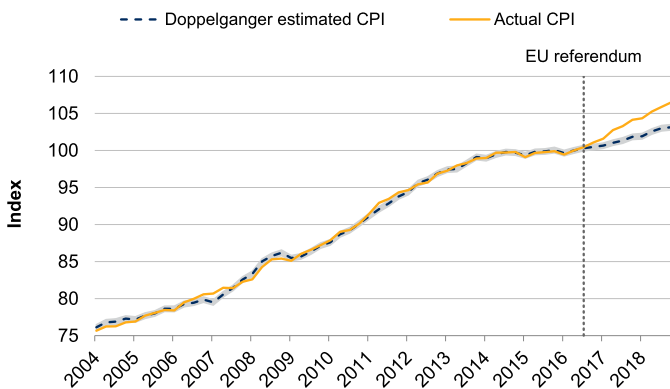
Imported Inflation Weighed On Activity

Immediately after the referendum, the pound fell by about 18%. This was the single most pertinent indicator of the impact of the vote and the drag it created, via inflation, has been spreading through the economy.

As imports became more expensive, inflation started to rise. Our analysis shows that by the third quarter of 2017, inflation was 1.8% higher than it would have been otherwise. On average, inflation was about 1% higher during the 10 quarters since the referendum.

Chart 2

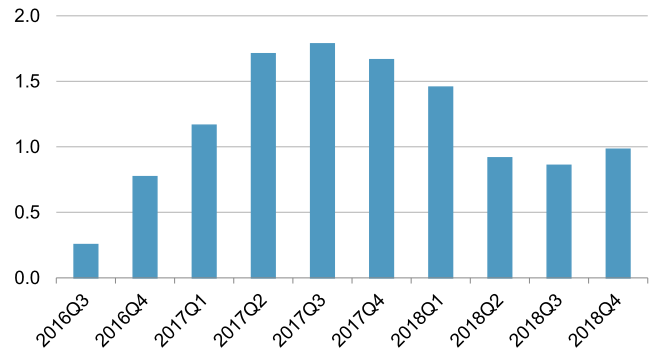
Sterling Depreciation Caused Higher Inflation Index (2016 Q2 = 100)



Note: Grey area shows one standard deviation on each side of the estimate. Data is quarterly. CPI--Consumer price index. Sources: ONS, S&P Global Ratings. Copyright © 2019 by Standard & Poor's Financial Services LLC. All rights reserved.

Chart 3

Difference Between Doppelganger And Actual CPI Inflation

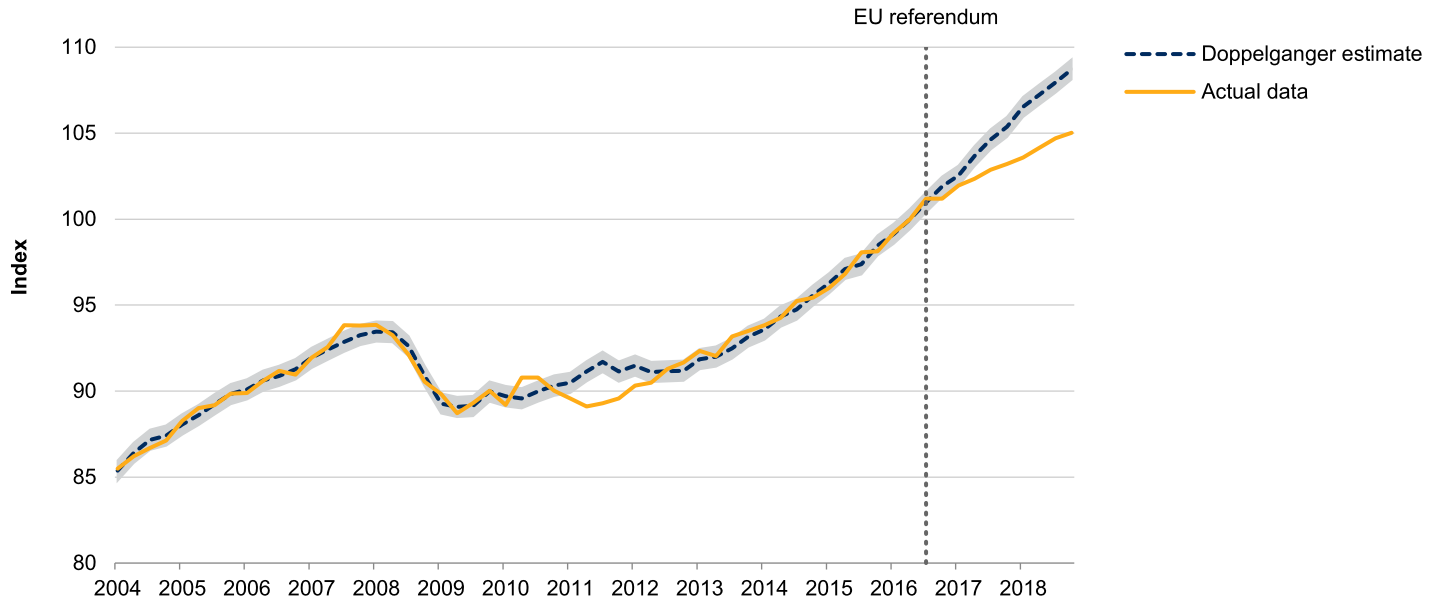


CPI--Consumer price index. Source: S&P Global Ratings. Copyright © 2019 by Standard & Poor's Financial Services LLC. All rights reserved.

Higher inflation dampened household spending. That said, private consumption held up relatively well following the referendum. This is because it only reacted to higher inflation. A more pessimistic view of the immediate future did not appear to be in play. In such a case, we would have expected households to start building precautionary savings, just as they did during the financial crisis. Instead, households mitigated the impact of higher inflation by tapping into savings--as a share of income, savings fell to 3.3% in the first quarter of 2017 from 7.3% in the second quarter of 2016, before recovering slightly. Despite this, we find that household spending would have been considerably stronger--in line with GDP--had the referendum not occurred.

Chart 4

Household Consumption Slowed After The Referendum
 Volume index (2016 Q2 = 100)



Note: Grey area shows one standard deviation on each side of the estimate. Data is quarterly. Sources: ONS, S&P Global Ratings.
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No more business as usual

It is only more recently that more pessimistic domestic expectations appear to have contributed to weaker U.K. growth, mainly via reduced investment spending. Indeed, our analysis does not suggest any major difference in initial investment behavior. However, as the date of Brexit approached, and uncertainty about the shape and form it would take persisted, and rose, businesses increasingly put regular investment plans on hold. Instead, they implemented contingency plans for a no-deal scenario. Business investment started contracting from the first quarter of 2018.

Currency depreciation is generally expected to provide a boost to net exports, which would offset some of the impact from higher inflation. We saw no such boost following the referendum, and none of the indicators related to external trade showed a robust response in our econometric exercise. We attribute this to several causes:

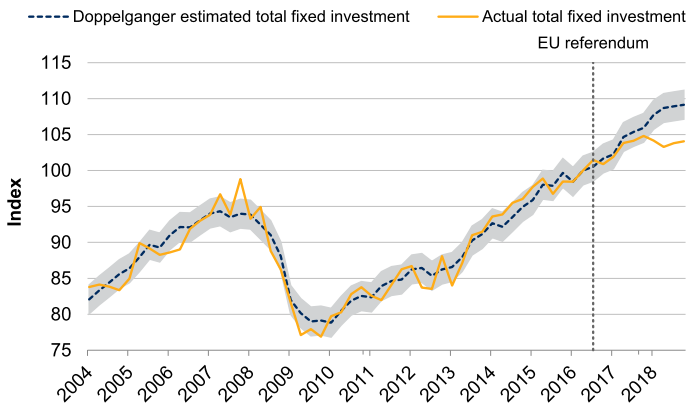
- Exporters did not pass on some of the price competitiveness they had gained;
- The U.K.'s exported goods have a large import content, which made them more costly to produce; and
- Services exports make up most of U.K. exports and are not as sensitive to prices as goods.

Another indication that domestic expectations may have been partly at play is that house prices also softened following the referendum result. In our view, house prices could have been 5% higher than their current level, but we do not attribute all of the shortfall to Brexit.

Chart 5

Investment Slowed Markedly Only From 2018

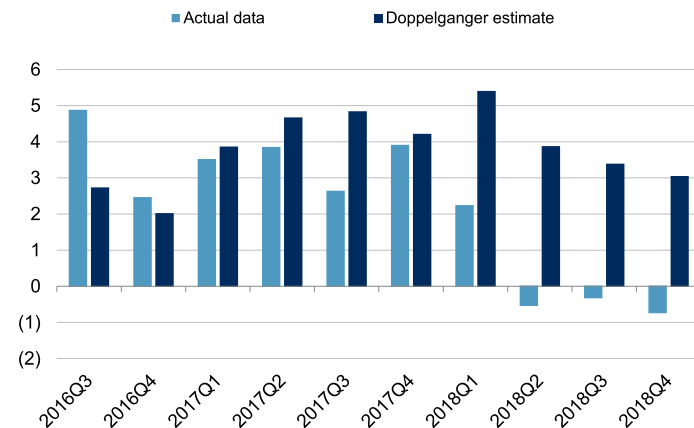
Volume index (2016 Q2 = 100)



Note: Grey area shows one standard deviation on each side of the estimate. Data is quarterly. Sources: ONS, S&P Global Ratings. Copyright © 2019 by Standard & Poor's Financial Services LLC. All rights reserved.

Chart 6

Total Fixed Investment, Year-On-Year Growth (%)



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It is more likely that some of the gap stems from the less-favorable tax treatment of buy-to-let investments introduced or phased in from April 2016, too close to the referendum date to separate. At the same time, it is unclear how much support the weaker currency might have provided to foreign investors by offering them a discount on the U.K. housing market.

Normalization Of Financial Conditions Has Been Arrested

Had we seen much stronger economic growth, we think it likely that the Bank of England would have accelerated the normalization of its monetary policy, more in line with the U.S. Federal Reserve Board. Higher interest rates would have supported banks' margins and insurers' return on their investments. At the same time, it would have increased households' mortgage payments and the government's debt financing costs.

Brexit Has Already Taken A Big Bite Out Of The U.K. Economy

We already expect the U.K.'s economic growth to be more moderate than it otherwise would have been once it leaves the EU, at least in the short-to-medium term. Our latest analysis shows that, in addition, the economy has already suffered in anticipation of its departure, to the tune of 3% of GDP.

Household consumption has been the bellwether. It performed less well than it could have, largely because high imported inflation curbed households' spending power. Ultimately, this was caused on global markets' more-pessimistic expectations about the U.K.'s future business model outside the EU. More recently, business investment, paralyzed by uncertainty, has also contributed to weaker growth.

If, and when, uncertainty finally lifts, we expect to see a moderate lift in growth, but it will take

time before some of the effects kick in. Moreover, some businesses have ventured well beyond the point of no return. They have reorganized their business structure to comply with regulation and to safeguard unimpeded EU market access. This will also dampen growth while the economy adjusts to the new business environment after Brexit, whether there is a deal or not.

Appendix: Measuring What Might Have Been

The Doppelganger approach--an econometric technique--was developed to quantify the economic impact of localized events, such as terrorism and new tobacco regulation. More recently, it was used to quantify the impact of Brexit (see related research). Here, we adopt that approach to quantify the economic impact of the Leave outcome of the referendum to end-2018.

The idea is to consider a pool of economies that are related to the U.K. in econometric terms. Because only the U.K. has made the decision to leave the EU, we can then construct a "synthetic" U.K. economy (the Doppelganger) based on the performance of the remaining economies in the pool to estimate how the U.K. economy would have performed, had it not decided to leave the EU.

The selection of the countries that constitute the pool is itself part of the method; it checks which countries describe the U.K. best overall and consistently across time.

Table 1

Percentage Contribution To U.K. Doppelganger

U.S.	28.4
Hungary	24.1
Canada	21.3
Japan	14.5
Denmark	4.9
Ireland	4.4
Portugal	2.6

Related Research

Related external research

- The Economic Costs of Conflict: A Case Study of the Basque Country by A Abadie and J Gardeazabal, published in *The American Economic Review*, Vol. 93, No. 1. (March, 2003), pp. 113-132.
- Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California's Tobacco Control Program by A Abadie, A Diamond, and J Hainmueller, published in the *Journal of the American Statistical Association*, June 2010, Vol. 105, No. 490
- The Economic Consequences of the Brexit Vote by B Born, G J Mueller, M Schularick, and P Sedlacek (2017), published as CEPR Discussion Paper No. 12454.

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