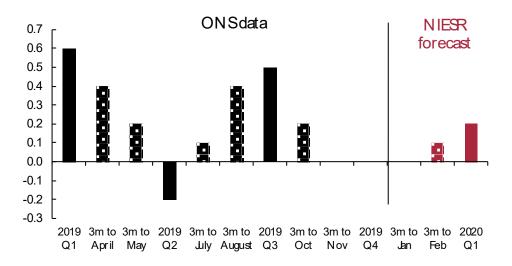


Tuesday, 11th February 2020

UK ECONOMY TO GROW AGAIN IN 2020 Q1

Figure 1 - UK GDP growth (3 months on previous 3 months, per cent)



Main points

- Latest economic data confirms that the UK economy posted zero growth in the fourth quarter of 2019, consistent with annual growth of 1.4 per cent in 2019. We expect a service sector-driven growth of 0.2 per cent in the first quarter of 2020, marginally revised from our forecast last month (figure 1).
- Data published this morning by the ONS suggest that the UK economy grew by 0.0 per cent in the three months to December, consistent with what we had forecast last
- Output increased by 0.3 per cent in December itself, largely reflecting growth in the services sector.
- Recent surveys show that all major sectors recorded an improvement in performance in January, primarily due to receding political uncertainty.

"The UK is benefitting from a post-election boost to business and consumer confidence, latest survey evidence confirms. However, there is no guarantee that this will be sustained. The latest data confirm that economic growth in the United Kingdom had stagnated at the end of 2019. Despite the post-election bounce to confidence, the potential complexity of trade negotiations with the EU means a high degree of uncertainty could resurface, which would weigh heavily on economic growth."

Dr Kemar Whyte

Senior Economist - Macroeconomic Modelling and Forecasting

Economic background

The latest business activities surveys suggest that the UK is benefitting from a post-election boost in business confidence. The PMI gives a clear indication that firms are starting to feel more upbeat following the clear victory of the Conservatives in the House of Commons in the December election and some of the uncertainty around Brexit has been reduced after the UK formally left the EU on 31st January. The March budget is expected to be focused on 'levelling up' income levels across the UK, but the additional public investment is unlikely to offset the negative effect of Brexit. Further, global economic conditions have stabilised – though rising debt levels pose future threats. An uneasy cessation of trade hostilities between the US and China have provided some needed relief. Though the signing of this 'Phase 1' agreement will ease global uncertainty for the time being, it is unclear how much economic relief from the trade war it will offer and what its broader economic effects are. While it is too soon to comment on the potential economic effect of the coronavirus outbreak, both globally and on the UK, potential disruptions to global supply chains could present a risk to the UK economy. The February 2020 NIESR UK forecast is for GDP growth of 1 ½ per cent in 2020 and 2021, unchanged from 2019.

News in latest ONS data

The latest monthly ONS data was broadly consistent with our expectations, with data confirming growth of 0.0 per cent in the final quarter of 2019. Figure 2 shows how our short-term forecasts for recent quarters have changed as new information has become available; the average absolute error of our estimate of quarterly GDP is around 0.2 per cent.

Figure 2 - Evolution of the NIESR quarterly GDP forecast (3 months on previous 3 months, per cent)

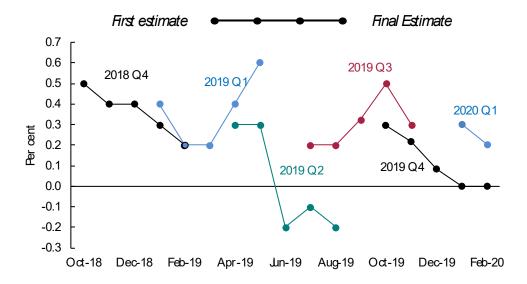
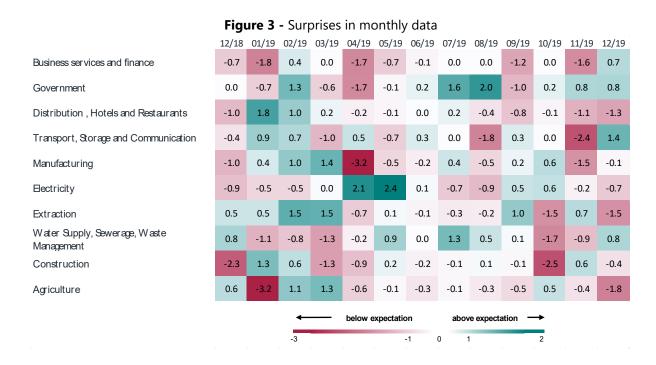


Figure 3 shows a heat map of the data surprises across sectors in the monthly data, highlighting the sectors where the surprises are large relative to the volatility of the output data. This month, there were negative surprises in agriculture, extraction and distribution, hotels and restaurants. Positive surprises were seen in private sector services, government, business services, and water supply, sewerage, waste management.



Note: Cells show forecast errors as a fraction of the standard deviation of errors for each series. Green cells are greater than expected, red cells are less than expected.

Sectoral detail

Economic growth of 0.0 per cent in the three months to December was driven by the service and construction sectors with a negative contribution from production. The stagnation of growth in the fourth quarter was primarily due to the weak performance of production, partly linked to the UK's originally planned departure dates from the EU. The forecast improvement in growth in the first quarter of 2020 is predicated on a recovery in the service sector (figure 4).

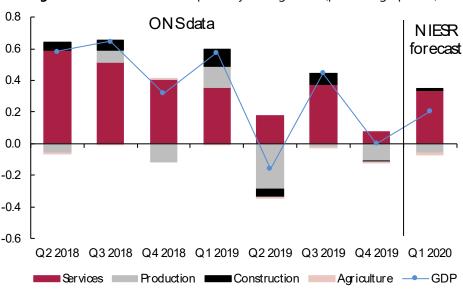
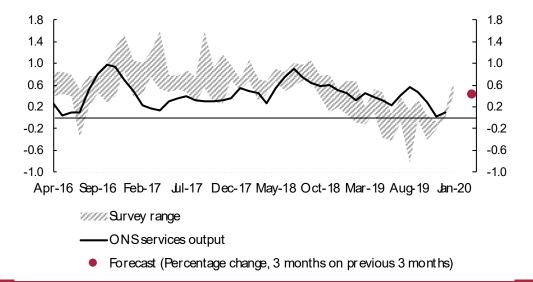


Figure 4 - Contributions to quarterly GDP growth (percentage points)

Services (80 per cent of GDP)

According to ONS data, growth in the service sector was 0.1 per cent in the three months to December, consistent with what we predicted last month. Within the service sector, official data indicates that growth was mainly driven by education, real estate, and the health sector. We now forecast the service sector to grow by 0.4 per cent in the first quarter of 2020 (figure 5).

Figure 5 - ONS service sector growth (3 months on previous 3 months, per cent) compared with swathe of business survey balances (standardised)



Note: The shaded swathe shows the highest and lowest values each month of a range of business survey balances that have been standardised so that they have the same mean and standard deviation as the quarterly growth of the ONS series. Source: ONS, CBI, Markit, Bank of England Agents, EC, NIESR calculations.

The survey balances point to a resumption of growth in the private service sector, as shown by the swathe of survey indicators in figure 5. The headline business activity balance in the HIS Markit/CIPS UK services PMI posted 53.9 in January, up from 50.0 in December, and edging closer to the long-run average of 54.9. There was some evidence that the headwind associated with delayed decision-making had dissipated since the result of general election, which aided a return to business activity growth in January. Improved business and consumer confidence fuelled an increase in consumer demand. Services activity also picked up globally, with a slight rise in the J.P. Morgan Global Services PMI survey to 52.7 in January from 52.0 in December.

The EU-collected UK services confidence indicator remained in negative territory for the fifteenth consecutive month. However, confidence increased significantly to -4.9 in January, up from -15.7 in December, but remain almost 9 points below its long-run average.

Production (14 per cent of GDP)

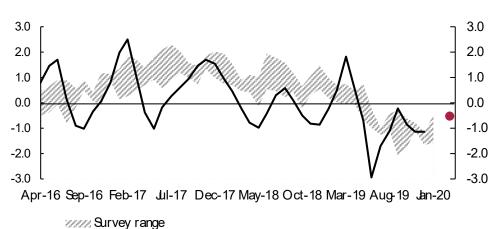
Production output fell by 0.8 per cent in the three months to December, marginally lower than the 0.7 forecast we published last month. We now forecast the production sector to contract by 0.4 per cent in the first quarter of 2020, though output in this sector is volatile and difficult to predict on a quarterly basis with any accuracy.

The production sector comprises manufacturing; mining and quarrying; electricity gas, steam and air conditioning; water supply and sewerage; and oil and gas extraction. The largest of these sectors is manufacturing, worth 10 per cent of GDP.

Manufacturing (10 per cent of GDP)

Within production, output in the manufacturing sector fell by 1.1 per cent in the three months to December, marginally stronger than the 1.2 per cent fall we had forecast last month. The decline was largely driven by falls in the manufacture of transport equipment. These industries were also the main drags on growth in April 2019, just after the UK's original planned date to exit the European Union. This may be indicative of some changes in the timing of activity around the second planned departure in October. Our central forecast is for a contraction of 0.5 per cent in the first quarter of 2020, a little lower than we had forecast last month.

Figure 6 - ONS manufacturing sector growth (3 months on previous 3 months, per cent) compared with swathe of business survey balances (standardised)



an vey range

- —ONS manufacturing output
- Forecast (Percentage change, 3 months on previous 3 months)

Note: The shaded swathe shows the highest and lowest values each month of a range of business survey balances that have been standardised so that they have the same mean and standard deviation as the quarterly growth of the ONS series. Source: ONS, CBI, Markit, Bank of England Agents, EC, NIESR calculations.

The IHS Markit/CIPS UK manufacturing PMI rose to 50.0 in January, up from 47.5 in December, as political uncertainty fades. Evidence suggests that the clarity gained from the outcome of the general election boosted new orders and business confidence, whilst stabilising production

volumes. Notwithstanding, overseas demand continues to weigh on the manufacturing sector as new export orders continue to decline.

The latest CBI survey also suggest that business optimism had improved markedly in January, but new orders fell at one of the fastest pace since the financial crisis, reflecting a sharp drop in domestic order. The main positive contributors to output volumes were mechanical engineering and food & drink. Looking ahead, manufacturers expect output volumes to stabilise in the next three months.

The J.P.Morgan Global Manufacturing Output rose to 50.4 in January, slightly up from 50.1 in December.

Mining and quarrying (1 per cent of GDP)

Mining and quarrying is a small but erratic component of industrial production that can have an influence on overall GDP growth. Output fell by 2.8 per cent in the three months to December. We now forecast a 1.0 per cent contraction in output in the first quarter of 2020.

Construction (6 per cent of GDP)

Output in the construction sector grew by 0.5 per cent in the three months to December, in line with what we had forecast last month. For the month of December, construction grew by 0.4 per cent, largely driven by growth in non-housing repair and maintenance, infrastructure, and other public and private housing. We now forecast a 0.2 per cent growth in construction output in the first quarter of 2020.

The latest data from the IHS Markit/CIPS construction PMI survey signalled an increase in the construction PMI, with the headline business activity balance at 48.4 in January, up from 44.4 in December, still consistent with contraction in the industry. Similar to other sectors, the boost to client demand for construction firms was attributed to subsiding political uncertainty. Going forward, firms now anticipate rising workloads over the next twelve months to match clients' renewed willingness to spend.

Table 1 - Summary Table of GDP growth (2016=100)

| | | | Index of Services - Components | | | Index of Production - Components | | | | | | | |
|--------------------|----------------|----------------------|--------------------------------|-----------------------|---------------------------|----------------------------------|----------------|----------------|-------------------------------|----------------|-------------------------------|-------------------------|----------------|
| 2016=100 | GDP index | Index of Services | Business | Government | Distribution, | Transport, | Index of | | Electricity, gas, | Mining and | Water Supply, Sewerage and | Index of Constructio | Agriculture |
| | | Services | services and finance | and other services | Hotels and Restaurants | Storage and Communications | Production | Manufacturing | steam and air conditioning | Quarrying | Waste | Constructio | |
| | 1000 | 796 | | | | | 136 | | | | Management | 61 | 7 |
| Latest weights | | | 339 | 217 | 133 | 108 | | 102 | 15 | 6 | 13 | | |
| Apr-18 | 103.1 | 103.1 | 102.7 | 101.6 | 104.1 | 105.9 | 102.3 | 102.7 | 98.7 | 108.2 | | 104.5 | 102.5 |
| May-18 Jun-18 | 103.4 103.7 | 103.5 103.6 | 102.7 102.8 | 101.7 101.9 | 105.8 105.9 | 106.6 107.0 | | 103.0 103.8 | 91.7 94.3 | 106.5 106.4 | 101.9 104.6 | | l . |
| Jul-18 | 104.0 | 103.9 | 103.0 | 101.9 | 106.9 | 107.2 | 103.2 | 103.5 | 97.2 | 111.1 | 104.3 | 106.7 | 101.7 |
| Aug-18 | 104.1 | 104.1 | 102.9 | 102.1 | 106.6 | 109.0 | 103.1 | 103.3 | 97.0 | 112.1 | 104.0 | 106.3 | 101.8 |
| ep-18 | 104.1 | 104.2 | 102.8 | 102.2 | 106.1 | 109.9 | | 103.0 | 94.9 | 108.0 | 104.3 | | 102.4 |
| Oct-18 Nov-18 | 104.4 104.6 | 104.5 104.8 | 103.4 103.4 | 102.4 102.4 | 106.8 107.7 | 109.5 110.0 | 102.4 102.2 | 102.5 102.6 | 96.2 95.7 | 111.4 107.9 | 103.7 103.2 | 107.7 107.3 | 103.0 103.0 |
| Dec-18 | 104.2 | 104.5 | 103.0 | 102.4 | 106.7 | 110.6 | | 102.1 | 94.6 | 107.3 | 102.9 | 105.2 | 102.0 |
| an-19 | 104.7 | 104.9 | 102.8 | 102.8 | 108.0 | 111.5 | 102.6 | 103.4 | 96.1 | 104.3 | 102.2 | 107.9 | 101.6 |
| eb-19 | 105.1 | 105.1 | 103.1 | 103.0 | 108.1 | 111.7 | 102.8 | 104.1 | 91.8 | 108.1 | 102.1 | 109.9 | 101.3 |
| Mar-19 April-19 | 105.2 104.6 | 105.2 105.1 | 103.1 102.7 | 103.2 103.1 | 108.4 108.3 | 111.8 112.5 | 103.7 100.3 | 105.3 100.6 | 91.8 94.4 | 109.7 105.8 | 102.5 101.7 | 108.2 107.8 | 101.2 101.1 |
| May-19 | 104.8 | 105.2 | 103.0 | 103.3 | 108.4 | 112.0 | | 101.5 | 94.5 | 106.5 | 104.4 | 108.3 | 101.0 |
| un-19 | 105.1 | 105.6 | 103.3 | 103.7 | 108.5 | 112.7 | 101.3 | 101.5 | 94.7 | 106.1 | 104.6 | 106.9 | 100.7 |
| ul-19 | 105.4 | 105.9 | 103.8 | 103.7 | 108.6 | 113.8 | | 101.7 | 93.9 | 105.3 | 104.1 | 108.3 | 100.5 |
| lug-19 Sep-19 | 105.2 105.3 | 105.8 105.7 | 103.7 103.4 | 104.2 104.2 | 108.5 108.1 | 112.4 113.2 | 100.5 100.7 | 100.8 100.5 | 92.7 92.5 | 105.7 112.7 | 104.9 105.4 | 108.3 109.9 | 100.4 100.5 |
| Oct-19 | 105.4 | 106.1 | 104.0 | 104.2 | 108.5 | 113.2 | | 100.8 | 94.9 | 105.3 | 103.4 | | 100.5 |
| Nov-19 | 105.1 | 105.6 | 103.5 | 104.4 | 107.9 | 111.8 | 99.6 | 99.2 | 95.2 | 106.0 | 105.0 | 110.1 | 100.4 |
| Dec-19 | 105.4 | 106.0 | 104.0 | 104.5 | 107.5 | 113.5 | 99.7 | 99.5 | 94.0 | 103.2 | 106.1 | 108.5 | 99.7 |
| lan-20 Feb-20 | 105.4 105.5 | 106.2 106.3 | 104.2 104.4 | 104.5 104.6 | 108.1 108.2 | 113.6 113.7 | 99.6 99.7 | 99.3 99.3 | 94.3 95.0 | 103.6 104.2 | 106.0 106.1 | | 99.0 98.6 |
| Mar-20 | 105.7 | 106.5 | 104.7 | 104.6 | 108.3 | 114.4 | | | 94.5 | 103.6 | 106.3 | | 98.6 |
| | | | | | | | | | | | | | |
| Fab 10 | 1 | | onths on previ | | | 1.2 | | ا م | 1.5 | 2.2 | 1.2 | ۱ ۵۵ | 1 11 |
| Feb-19 Mar-19 | 0.3 | 0.3 0.4 | -0.2 -0.3 | 0.5 | 0.7 1.0 | | 0.0 | 0.5 1.8 | -1.5 -2.4 | -2.3 -1.4 | -1.3 -1.0 | | -1.1 -1.3 |
| April-19 | 0.4 | 0.4 | -0.1 | 0.5 | 0.7 | 1.2 | | 0.6 | -2.9 | 1.3 | -0.6 | | -1.0 |
| May-19 | 0.2 | 0.3 | 0.0 | 0.4 | 0.7 | 0.7 | -0.6 | -0.7 | -0.6 | 0.7 | 0.5 | 0.4 | -0.5 |
| lun-19 | -0.2 | 0.2 | 0.0 | 0.4 | 0.2 | | -2.0 | 1 | 1.4 | -1.1 | 1.3 | | |
| Iul-19 Aug-19 | 0.1 | 0.4 0.6 | 0.4 | 0.5 | 0.2 0.2 | | -1.0 -0.7 | -1.7 -1.1 | 1.8 0.2 | -1.8 -1.5 | 2.2 1.6 | | -0.5 -0.6 |
| Sep-19 | 0.4 | 0.5 | 0.6 | 0.6 | 0.0 | | -0.1 | -0.2 | -1.6 | 1.7 | | | -0.5 |
| Oct-19 | 0.2 | 0.3 | 0.3 | 0.6 | -0.1 | 0.2 | -0.6 | -0.9 | -1.1 | 1.8 | 0.6 | 0.7 | -0.2 |
| Nov-19 | 0.0 | 0.0 | 0.0 | 0.4 | -0.3 | -0.1 | -0.6 | -1.2 | 0.5 | 2.2 | | | 0.0 |
| Dec-19 Jan-20 | 0.0 | 0.1 | 0.2 | 0.3 | -0.4 | -0.1 -0.1 | -0.8 -1.0 | -1.2 -1.3 | 1.8 | -2.8 -3.4 | 0.5 | | -0.2 -0.8 |
| Feb-20 | 0.1 | 0.3 | 0.5 | 0.3 | -0.2 | | | -0.8 | 0.2 | -4.0 | | | -1.4 |
| Mar-20 | 0.2 | 0.4 | 0.6 | 0.2 | 0.2 | 0.8 | | -0.5 | -0.1 | -1.0 | 0.8 | | -1.5 |
| | Dorsontago | change men | th on same m | anth in near | laus waar | | | | | | | | |
| Feb-19 | 2.3 | 2.6 | th on same m | 1.8 | ous yeur 4.4 | 7.0 | -0.1 | 0.5 | -9.3 | 5.5 | 2.5 | 4.7 | -1.7 |
| Mar-19 | 2.4 | 2.4 | 0.7 | 1.7 | 5.2 | | 0.9 | I | -11.3 | 10.3 | 1.4 | | l |
| April-19 | 1.5 | 1.9 | 0.0 | 1.5 | 4.0 | | -2.0 | -2.0 | -4.4 | -2.2 | 1.3 | | -1.4 |
| May-19 | 1.4 | 1.6 1.9 | 0.3 | 1.6 1.8 | 2.5 2.5 | 5.1 5.3 | -0.7 | -1.5 | 3.1 0.4 | 0.0 -0.3 | 2.5 0.0 | | -1.4 -1.2 |
| un-19 ul-19 | 1.4 1.3 | 1.9 | 0.5 0.8 | 1.8 | 1.6 | | -1.6 -1.9 | I | -3.4 | -5.2 | | | -1.2 |
| Aug-19 | 1.1 | 1.6 | 0.8 | 2.1 | 1.8 | 3.1 | -2.5 | -2.4 | -4.4 | -5.7 | 0.9 | | -1.4 |
| Sep-19 | 1.2 | 1.4 | 0.6 | 2.0 | 1.9 | 3.0 | | -2.4 | -2.5 | 4.4 | | | -1.9 |
| Oct-19 | 1.0 | 1.5 | 0.6 | 1.8 | 1.6 | 3.8 | | I | -1.4 | -5.5 | 1.1 1.7 | | |
| Nov-19 Dec-19 | 0.5 1.2 | 0.8 1.4 | 0.1 1.0 | 2.0 1.9 | 0.2 0.7 | | | I | -0.5 -0.6 | -1.8 -3.8 | | | -2.5 -2.3 |
| lan-20 | 0.6 | | 1.3 | 1.7 | 0.0 | | | | -1.9 | -0.6 | | | |
| Feb-20 | 0.4 | | 1.3 | 1.5 | 0.1 | | | | | -3.6 | | | |
| Mar-20 | 0.5 | 1.3 | 1.5 | 1.4 | -0.1 | 2.3 | -4.0 | -5.8 | 2.9 | -5.5 | 3.8 | 1.0 | -2.5 |
| | Percentage (| change, mon | th on previou | s month | | | | | | | | | |
| Feb-19 | 0.4 | | | 0.2 | 0.1 | 0.2 | 0.2 | 0.7 | -4.5 | 3.6 | -0.1 | 1.9 | -0.3 |
| Mar-19 | 0.1 | 0.1 | 0.0 | 0.2 | 0.3 | | | 1 | | 1.5 | | | |
| April-19 | -0.6 | -0.1 0.1 | -0.4 | -0.1 | -0.1 | | | -4.5 | | -3.6 | | | -0.1 -0.1 |
| May-19 Iun-19 | 0.2 | 0.1 | 0.3 | 0.2 | 0.1 0.1 | | | 0.9 | | 0.7 -0.4 | | | -0.1 |
| lul-19 | 0.3 | 0.3 | 0.5 | 0.0 | 0.1 | | | 0.2 | | -0.8 | | | l . |
| Aug-19 | -0.2 | -0.1 | -0.1 | 0.5 | -0.1 | -1.2 | | -0.9 | -1.3 | 0.4 | | | -0.1 |
| Sep-19 Oct-19 | 0.1 | -0.1 0.4 | -0.3 | 0.0 | -0.4 | | | -0.3 | -0.2 | 6.6 | | | 0.1 |
| Oct-19 Nov-19 | -0.3 | -0.5 | 0.6 -0.5 | 0.0 | 0.4 -0.6 | | | 0.3 -1.6 | 2.6 0.3 | -6.6 0.7 | | | 0.1 -0.2 |
| Dec-19 | 0.3 | 0.4 | 0.5 | 0.1 | -0.4 | | | 0.3 | -1.3 | -2.6 | | | -0.7 |
| Jan-20 | 0.0 | | 0.2 | 0.0 | 0.5 | | | | | 0.4 | | | |
| Feb-20 | 0.1 | | 0.2 | 0.1 | 0.1 | | | | 0.8 -0.6 | 0.5 | 0.1 0.2 | | |
| Mar-20 | 0.2 | 0.2 | 0.2 | 0.0 | 0.1 | 0.6 | -0.1 | -0.1 | -0.6 | -0.5 | 0.2 | 0.3 | 0.0 |

Health warning

The NIESR GDP Tracker provides a rolling monthly forecast for GDP growth. Our first estimate of growth for any particular quarter starts in the first month of that quarter and is then updated each month until the first official release in the second month of the following quarter. So, for example, our first estimate of growth in the first quarter of 2020 is published this month and will then be updated four times (in February, March, April and May) before the ONS publishes its first estimate for the first quarter of 2020 in May 2020. In other words, we publish four estimates of GDP for any particular quarter before the official release and change them as new evidence becomes available.

NIESR's short-term predictions of monthly GDP growth are based on bottom-up analysis of recent trends in the monthly sub-components of GDP. These predictions are constructed by aggregating statistical model forecasts of ten sub-components of GDP. The statistical models that have been developed make use of past trends in the data as well as survey evidence to build short-term predictions of the sub-components of monthly GDP. These provide a statistically-based guide to current trends based on the latest available data. Each month these predictions are updated as new ONS data and new surveys become available.

It is important to stress that the timelier NIESR guide to quarterly GDP growth is less reliable than the subsequent ONS data releases as its data content is lower, particularly for estimates of the current quarter which in some months will be based only on forecasts rather than hard data. To mitigate this issue, NIESR provides a guide to average errors based on past performance. NIESR also provides clear guidance on how the latest news has caused its estimates of GDP growth in the current and preceding quarter to change and thereby quantify how the short-term outlook is being affected by recent data releases.

As the bottom-up methodology for producing estimates of GDP growth for the current and preceding quarters is still relatively new, we do not yet have a long track record of estimates produced by this approach. To check how our methodology would work in real time we went back to late 2016 to produce judgement-free forecasts of GDP growth in future months based on the monthly data series available for the components in November 2016 (this was the earliest vintage then available on the ONS website) and in each subsequent three months. These are shown in Table 2, which has been updated to include estimates since we started producing the GDP Tracker in July 2018. We calculate the forecast quarter-on-quarter growth rates for the current quarter and compare these to the ONS first estimates of quarterly growth. The average absolute error for the quarters considered was 0.2 % points. The largest error was for 2019Q2 when our GDP tracker in May pointed to growth of 0.3 per cent, 0.5% points higher than the ONS first estimate of GDP growth. As shown in figure 2, we correctly revised our estimate of 2019Q2 growth down to -0.2 per cent in June when monthly GDP figures for April indicated a fall in output.

Table 2 Forecast Error Analysis: Quarterly GDP growth (%)

| Quarter | ONS first | ONS latest | NIESR nowcast* | Error in NIESR | ONS latest |
|----------|-----------|------------|-----------------|----------------|------------|
| | estimate | estimate | INIESK NOWCAST" | nowcast** | – first |
| 2016Q4 | 0.6 | 0.7 | 0.7 | -0.1 | 0.1 |
| 2017Q1 | 0.3 | 0.6 | 0.6 | -0.3 | 0.3 |
| 2017Q2 | 0.3 | 0.3 | 0.4 | -0.1 | 0.0 |
| 2017Q3 | 0.4 | 0.3 | 0.4 | 0.0 | -0.1 |
| 2017Q4 | 0.5 | 0.4 | 0.4 | 0.1 | -0.1 |
| 2018Q1 | 0.1 | 0 | 0.5 | -0.4 | -0.1 |
| 2018Q2 | 0.4 | 0.5 | 0.0 | 0.4 | 0.1 |
| 2018Q3 | 0.6 | 0.6 | 0.5 | 0.1 | 0.0 |
| 2018Q4 | 0.2 | 0.2 | 0.4 | -0.2 | 0.0 |
| 2019Q1 | 0.5 | 0.6 | 0.2 | 0.3 | 0.1 |
| 2019Q2 | -0.2 | -0.2 | 0.3 | -0.5 | 0.0 |
| 2019Q3 | 0.3 | 0.4 | 0.2 | 0.1 | 0.1 |
| 2019Q4 | | | 0.2 | | |
| Average | | | | | |
| absolute | | | | 0.22 | 0.08 |
| error | | | | | |

 $[\]ensuremath{^{*}}$ Made in the second month of the quarter, 3 months ahead of ONS first estimate

Notes for editors

For further information please contact the NIESR Press Office: Phil Thornton on p.thornton@niesr.ac.uk / 0207 654 1954 or Luca Pieri on lpieri@niesr.ac.uk / 079 305 44631

National Institute of Economic and Social Research

2 Dean Trench Street Smith Square London, SW1P 3HE United Kingdom

Switchboard Telephone Number: 020 7222 7665

Website: http://www.niesr.ac.uk

^{**} ONS first estimate - NIESR estimate