Office for National Statistics

Article

UK productivity flash estimate: January to March 2020

Flash estimate of labour productivity for Quarter 1 (Jan to Mar) 2020 based on latest data from GDP first quarterly estimate and labour market statistics.

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1 . Main points

- This flash estimate provides the first sight of the impact of the coronavirus (COVID-19) on productivity in the UK – labour productivity for Quarter 1 (Jan to Mar) 2020, as measured by output per hour, fell by 0.4%, when compared with the same quarter in the previous year.
- In Quarter 1 2020, output per worker fell by 2.9%, compared with the same quarter in the previous year; the steeper fall than output per hour reflects the impact of a government policy that retains workers as employees with zero hours, but is also driven by a growth in the number of workers over the quarter.
- When compared with the previous quarter (Quarter 4 (Oct to Dec) 2019), output per hour fell by 1.1% while output per worker fell by 2.6%, again reflecting the impact of the government policy noted previously.
- The labour productivity flash publication uses the latest labour market statistics and gross domestic product (GDP) first quarterly estimate to calculate labour productivity.

2 . Output per hour and output per worker

The coronavirus (COVID-19) pandemic and the government response to it began to impact on the UK economy at the end of Quarter 1 (January to March) 2020. This publication, therefore, presents the first estimates of how these have affected UK productivity.

In normal times, we headline the output per hour measure comparing the quarter on the same quarter a year ago basis to reflect the long-term nature of productivity change. This approach means that at potential turning points in economic activity the impact in the latest quarter will be mitigated by the previous three quarters. In this instance the effect will be small as the previous three periods have seen little growth or decline and therefore change in the latest quarter is visible in our results: Output per hour in Quarter 1 2020 fell by 0.4%, compared with the same quarter a year ago.

This was a result of gross value added (GVA) falling faster than hours worked. Compared with the same quarter a year ago, GVA fell by 1.6% and hours worked by 1.2%. GVA is a measure of the production of goods and services in the economy and is closely aligned to gross domestic product (GDP).

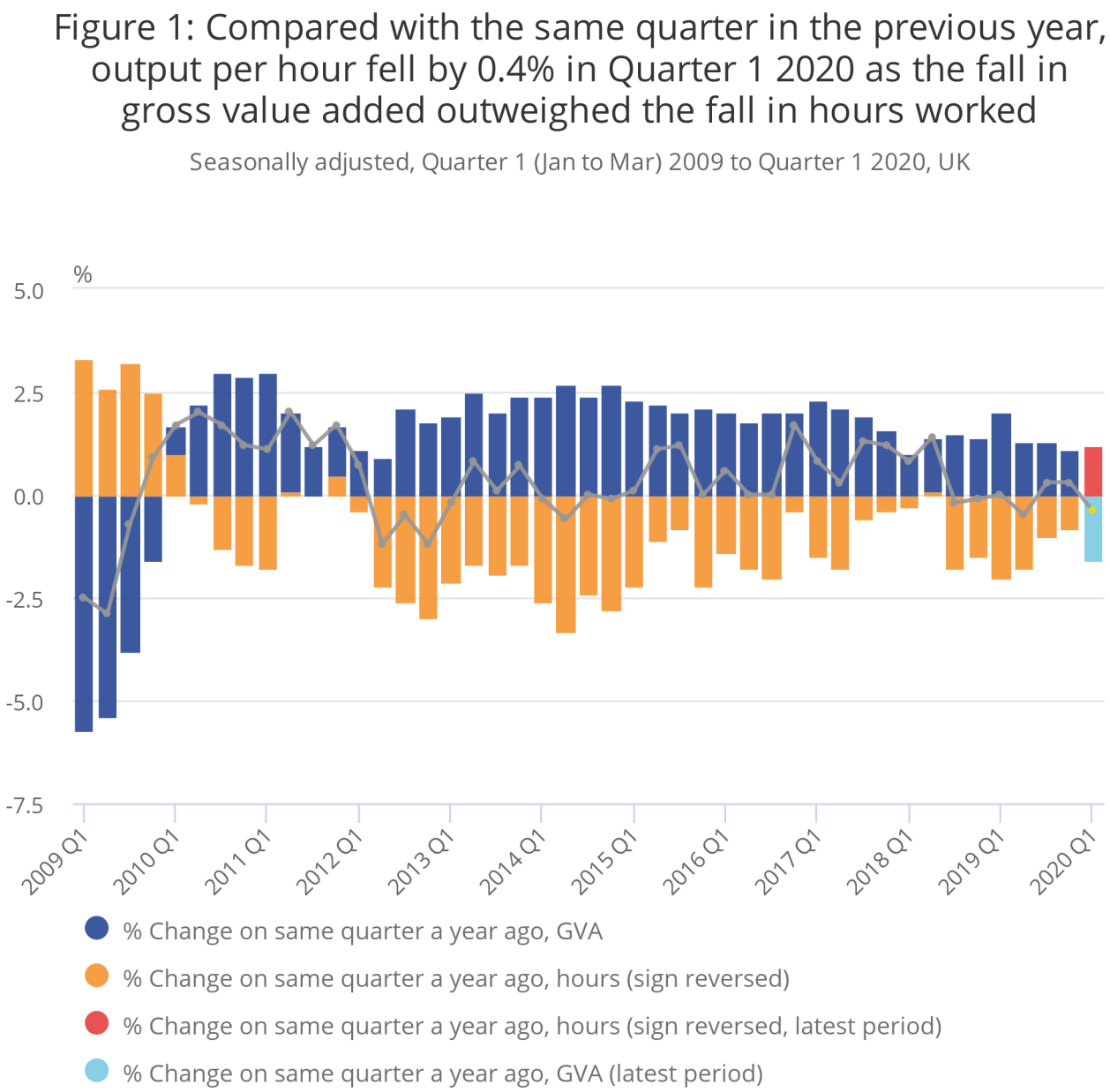
Negative growth in GVA during Quarter 1 2020, compared with the same quarter a year ago, was mainly driven by services, of which distribution, hotels and restaurants made the largest negative contribution of 0.6 percentage points. Manufacturing also contributed 0.6 percentage points towards lower GVA.

The number of hours worked has been negatively impacted by the government response to the coronavirus. The Coronavirus Job Retention Scheme (CJRS) allows companies to furlough workers, keeping them employed and allowing them to work zero hours, as described in the Coronavirus and the effects on UK GDP article.

In Quarter 1 2020, growth in the number of people employed (1.4%) did not counteract a fall of 2.5% in average actual weekly hours worked compared with the same quarter in the previous year. Total weekly hours worked therefore fell by 1.2%.

Figure 1: Compared with the same quarter in the previous year, output per hour fell by 0.4% in Quarter 1 2020 as the fall in gross value added outweighed the fall in hours worked

Seasonally adjusted, Quarter 1 (Jan to Mar) 2009 to Quarter 1 2020, UK



Source: Office for National Statistics

Notes:

1. Estimates of hours worked have had their sign reversed to reflect how they affect output per hour. An increase in hours worked will contribute negatively to output per hour; while a decrease in hours worked will contribute positively to output per hour.

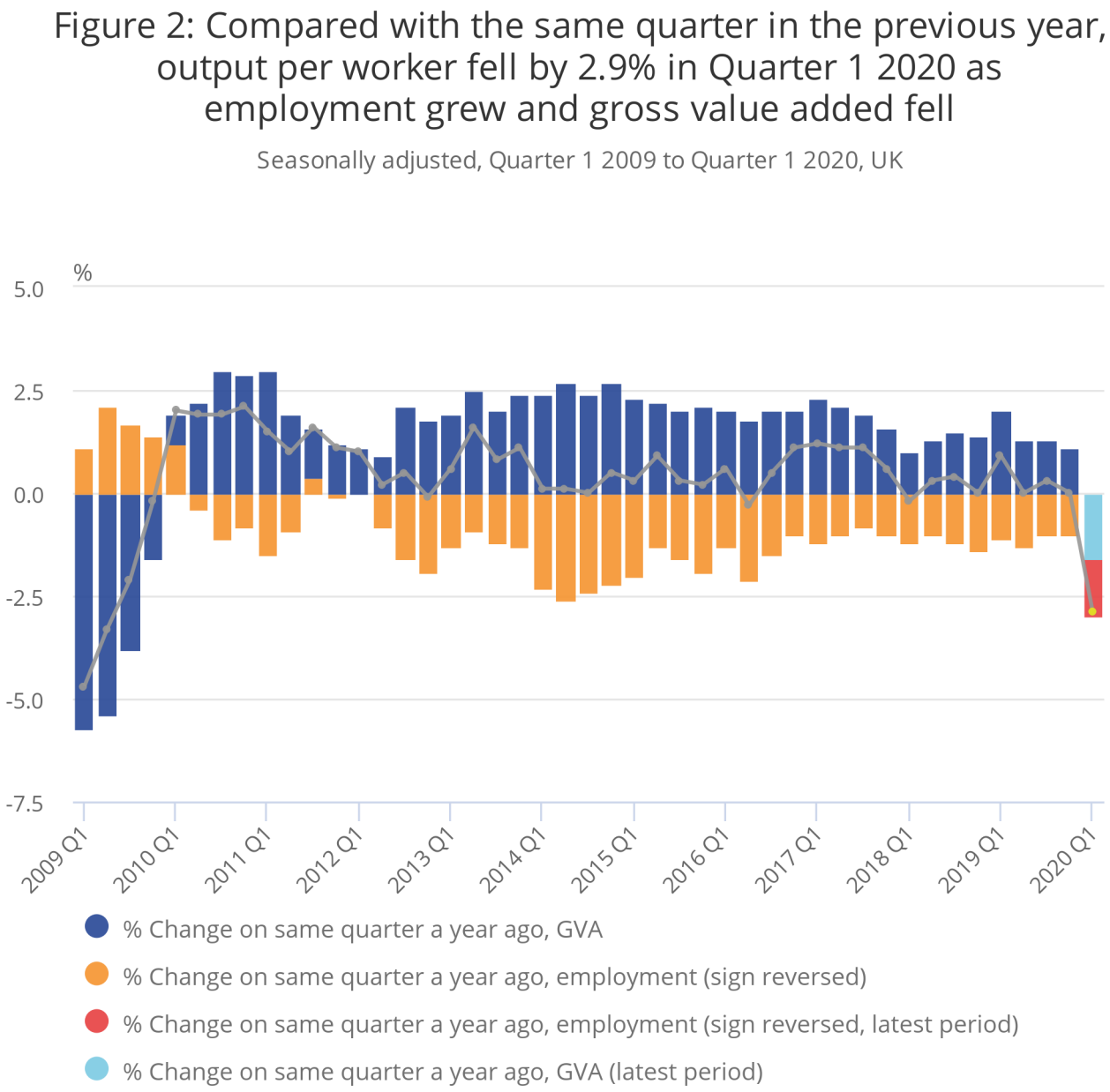
Productivity can also be measured in terms of output per worker. We would expect to see the impact of the CJRS most clearly when comparing output per hour worked with output per worker. This is because, as explained previously, the scheme is designed to keep people employed as workers but to cover their salaries whilst they do no hours worked. As such, one would expect the hours worked to fall faster than the number of workers.

However, we also need to be aware that these schemes only impacted at the very end of the period, and that through the quarter there was actually a growth in the number of workers, driven by an increase (1.3%) in the number of employees, along with growth (1.4%) in the number of people who were self-employed, compared with the same quarter a year ago.

Output per worker, therefore, fell by 2.9% Quarter 1 2020, compared with the same quarter a year ago. This was driven by the previously mentioned fall in GVA, as well as the increase in employment.

Figure 2: Compared with the same quarter in the previous year, output per worker fell by 2.9% in Quarter 1 2020 as employment grew and gross value added fell

Seasonally adjusted, Quarter 1 2009 to Quarter 1 2020, UK



Source: Office for National Statistics

Notes:

1. Estimates of employment have had their sign reversed to reflect how they affect output per worker. An increase in employment will contribute negatively to output per worker; while a decrease in employment will contribute positively to output per worker.

2. Because of rounding, values of growth in output per worker for Quarter 1 (Jan to Mar) 2020 may not add to zero when calculated from growth of the individual components, that is growth in GVA and growth in employment.

Table 1: Headline labour productivity indicators for the UK
UK, Quarter 4 (Oct to Dec) 2016 to Quarter 1 (Jan to Mar) 2020, seasonally adjusted

	Whole economy			
	Quarter on same quarter in previous year		Quarter on previous quarter	
	Output per hour (growth %)	Output per worker (growth %)	Output per hour (growth %)	Output per worker (growth %)
2016 Q4	1.7	1.1	0.3	0.6
2017 Q1	0.8	1.2	0.0	0.3
2017 Q2	0.3	1.1	-0.3	-0.1
2017 Q3	1.3	1.1	1.3	0.3
2017 Q4	1.2	0.6	0.2	0.1
2018 Q1	0.8	-0.2	-0.4	-0.5
2018 Q2	1.4	0.3	0.3	0.4
2018 Q3	-0.2	0.4	-0.3	0.4
2018 Q4	-0.1	0.0	0.3	-0.3
2019 Q1	0.0	0.9	-0.4	0.4
2019 Q2	-0.5	0.0	-0.1	-0.5
2019 Q3	0.3	0.3	0.5	0.7
2019 Q4	0.3	0.0	0.3	-0.5
2020 Q1	-0.4	-2.9	-1.1	-2.6

Source: Office for National Statistics

Notes

1. Quarter 1 2020 contains data from the first available information on output and labour inputs. Data for the earlier quarters are consistent with the labour productivity National Statistics. Back to table

As an alternative to measuring growth relative to the same quarter a year ago, growth can also be measured relative to the previous quarter. Quarterly movements in labour productivity can be volatile and may not indicate the long-term trend of labour productivity growth in the UK. In this release we headline the latest quarter growth rates with the same period a year ago to allow comparison with the Labour productivity statistics.

Output per hour fell by 1.1% during Quarter 1 2020 compared with the previous quarter. This follows a growth in Quarter 4 (Oct to Dec) 2019, of 0.3%. During the same period, output per worker fell by 2.6%. Since records began, the only other period where output per worker growth was this low was in Quarter 1 (Jan to Mar) 1974.

Historical context

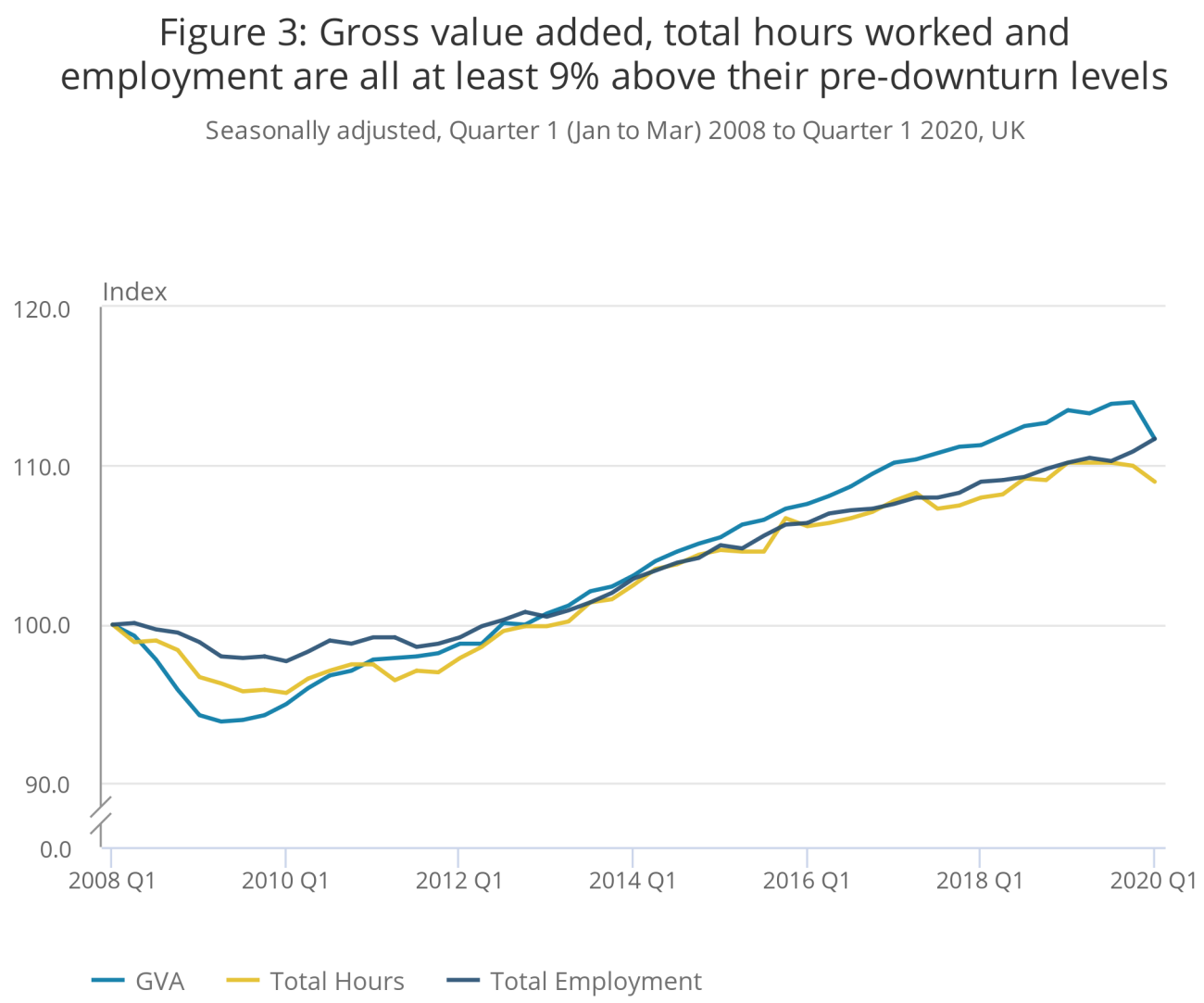
Since the 2008 to 2009 economic downturn, both employment and total hours have demonstrated positive growth, which over the period has broadly kept pace with the growth in gross value added (GVA), causing productivity to grow slowly by historical standards.

In addition to the significant challenges posed by the coronavirus pandemic, productivity estimates are strongly pro-cyclical and distorted by economic downturns, as we saw during 2008 and 2009. This makes it particularly difficult to measure productivity growth during economic turning points.

Figure 3 shows these relative movements over the post-downturn period. It indicates that in Quarter 1 2020, all three economic indicators were above their pre-recession levels, with GVA, hours and employment being up by 11.7%, 9.0% and 11.7% respectively.

Figure 3: Gross value added, total hours worked and employment are all at least 9% above their pre-downturn levels

Seasonally adjusted, Quarter 1 (Jan to Mar) 2008 to Quarter 1 2020, UK



Source: Office for National Statistics

3 . Things you need to know about this release

This flash estimate of UK productivity uses the first available information on output and labour input for the latest quarter, Quarter 1 (Jan to Mar) 2020. These data may be revised in subsequent months. As such, we release the more detailed Labour productivity bulletin after the publication of GDP quarterly national accounts.

This release uses gross value added (GVA) to determine growth in output for the latest quarter and uses the latest estimates from the GDP first quarterly estimate released just before this publication. Estimates of earlier quarters are consistent with the Labour productivity National Statistics.

An article Coronavirus and the effects on UK productivity measures describes the measurement challenges caused by the coronavirus (COVID-19) pandemic that are common across all productivity measures before discussing challenges specific to each measurement of productivity.

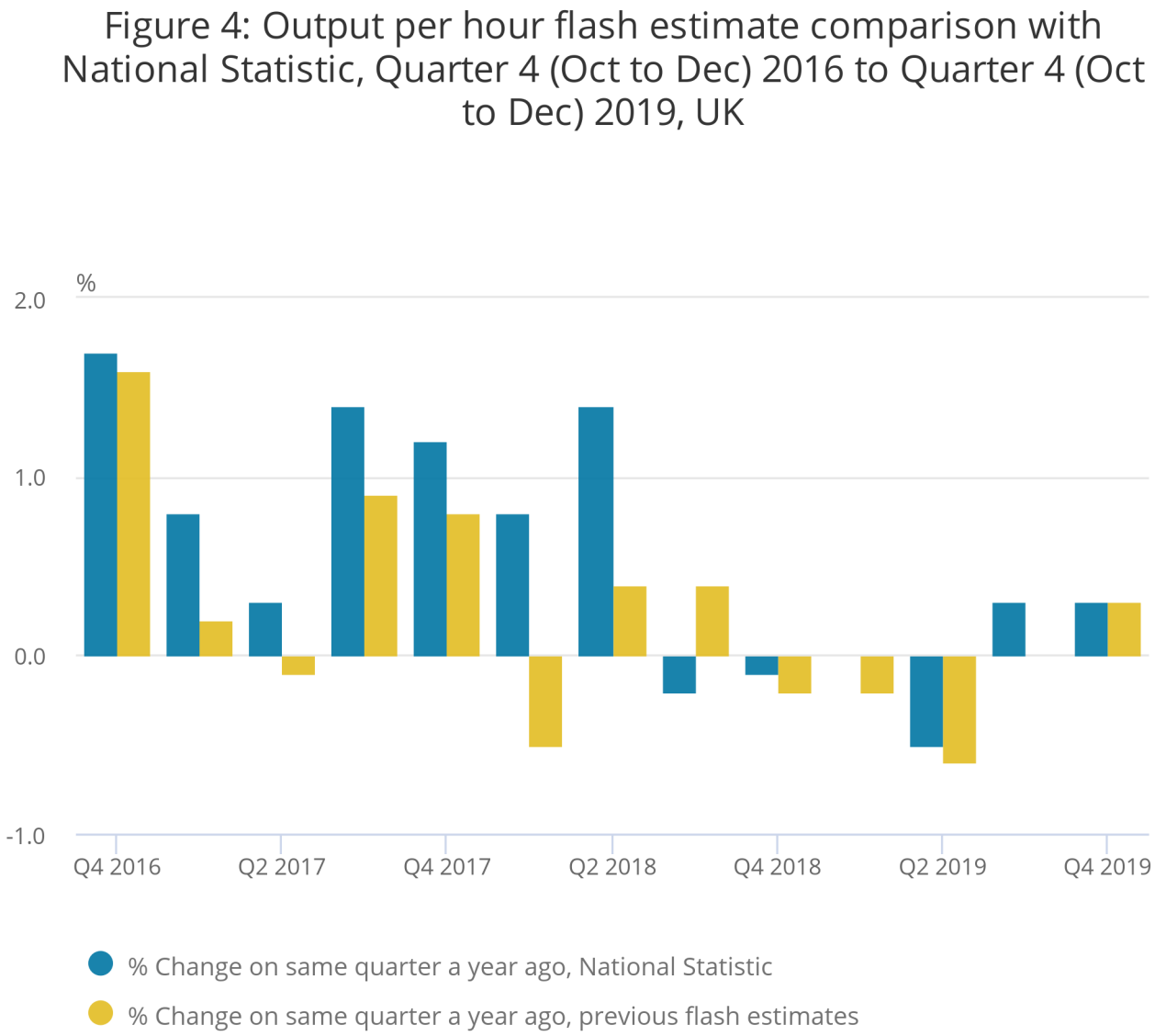
4 . Data sources and revisions

This flash estimate of UK productivity uses the first available information on output and labour inputs for the latest quarter; earlier quarters are consistent with the Labour productivity statistics. The latest flash estimate data have been appended onto previous productivity statistics. These data may be revised in subsequent months. As such, the Office for National Statistics releases the more detailed Labour productivity bulletin after the publication of gross domestic product (GDP) quarterly national accounts.

Gross domestic product (GDP) data for Quarter 1 (Jan to Mar) 2020 are from the GDP first quarterly estimate, UK: Jan to Mar 2020, published on 13 May 2020.

Contributions are to output GVA and therefore may not sum to the percentage change in average GDP. More information of the difference between the three measures can be found in the Guide to national accounts.

Figure 4: Output per hour flash estimate comparison with National Statistic, Quarter 4 (Oct to Dec) 2016 to Quarter 4 (Oct to Dec) 2019, UK



Source: Office for National Statistics

Labour market data, for the same period are from the Labour market statistics – May 2020 statistical bulletin, published on 19 May 2020.

Data for the earlier quarters, Quarter 1 2008 until Quarter 4 2019, are consistent with the Labour productivity National Statistics. Figure 4 shows revisions to growth rates on the quarter a year ago compared with the first flash estimates published for the corresponding period. The aim is to show the reliability of the initial flash estimates over time.

Details of the policy governing the release of new data are available from the UK Statistics Authority.