Article

UK productivity flash estimate: April to June 2020

Flash estimate of labour productivity for Quarter 2 (Apr to June) 2020 based on the latest data from the gross domestic product (GDP) first quarterly estimate and labour market statistics.

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1 . Main points

- Labour productivity for Quarter 2 (Apr to June) 2020, as measured by output per hour, fell by 2.5% when compared with the previous quarter – the largest fall since estimates began.

- While we normally recommend looking at productivity by comparing with the previous year, to capture the long-term structural nature of productivity change, the immediate nature of change has led to us highlighting the comparison with the previous quarter in this flash estimate.

- In Quarter 2 2020, output per worker fell by 19.9% compared with the previous quarter: while this is the steepest fall on record, this is steeper than that observed for output per hour because of the impact of the furlough scheme that retains employees as workers even though they work zero hours.

- When compared with the same quarter in the previous year (Quarter 2 2019), output per hour fell by 3.0% while output per worker fell by 22%, again reflecting the impact of furloughing.

- This article is the first to include flash estimates of labour productivity at the sector level, and every sector in the economy saw a quarter-on-quarter fall in output per hour, with construction seeing the largest fall of 11.4% and manufacturing the smallest fall of 0.3%; users are advised to note the methodology caveats around this work in the following sections.

- The labour productivity flash publication uses the latest labour market statistics and gross domestic product (GDP) first quarterly estimates to calculate labour productivity; this publication provides the first sight into UK productivity for Quarter 2 following measures introduced by the government to combat the coronavirus (COVID-19) pandemic.

2 . Output per hour and output per worker

In previous publications, our headline measure of productivity has been output per hour growth compared with the same quarter in the previous year. We normally use "quarter-on-year" comparisons as they give a better indicator of longer-term productivity trends. The coronavirus (COVID-19) pandemic has, however, resulted in significant fast, large and immediate changes in gross value added (GVA), hours worked and employment relative to historical trends. Therefore, this publication will – unless stated otherwise – primarily make comparisons with the previous quarter.

The coronavirus pandemic, and the government response to it, began to impact the UK economy at the end of Quarter 1 (Jan to Mar) 2020. Quarter 2 (Apr to June) 2020 is the first quarter that has been affected from start to finish.

Compared with the previous quarter (Quarter 1 2020), output per hour fell by 2.5% in Quarter 2 2020. This is the largest quarter on previous quarter fall since estimates began.

This result for Quarter 2 2020 was driven by GVA falling faster than hours worked. Compared with the previous quarter, GVA fell by 20.4% and hours worked fell by 18.4%. GVA is a measure of the production of goods and services in the economy and is closely aligned to gross domestic product (GDP).
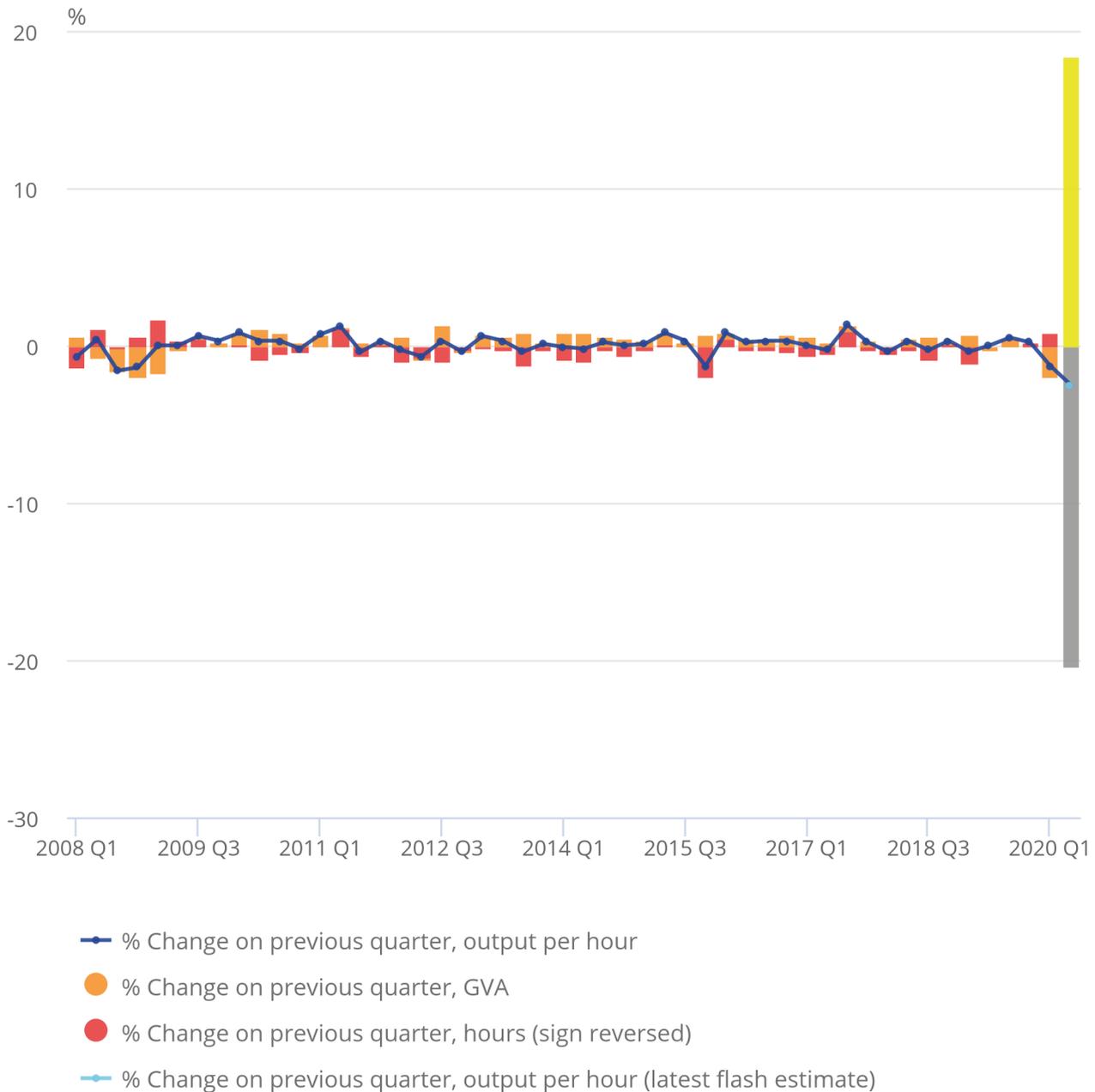
The contraction in GVA was particularly driven by services, which accounted for 15.9 percentage points of the fall compared with the previous quarter. Manufacturing and construction each contributed about two further percentage points to the fall in GVA.

Figure 1: Compared with the previous quarter, output per hour fell by 2.5% in Quarter 2 2020, the largest fall since estimates began

Seasonally adjusted, UK, Quarter 1 (Jan to Mar) 2008 to Quarter 2 (Apr to June) 2020

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Seasonally adjusted, UK, Quarter 1 (Jan to Mar) 2008 to Quarter 2 (Apr to June) 2020

- ● % Change on previous quarter, output per hour
- ● % Change on previous quarter, GVA
- ● % Change on previous quarter, hours (sign reversed)
- ● % Change on previous quarter, output per hour (latest flash estimate)

Source: Office for National Statistics – UK productivity flash estimate

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.

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](). The CJRS has resulted in a large disparity between output per hour and output per worker. Historically, both series have been much closer aligned.

Labour productivity as measured by output per worker decreased by 19.9% in Quarter 2 2020 compared with the previous quarter. The total number of workers has fallen by 0.7%, which is a much smaller movement than would be expected in response to a 20.4% fall in GVA.

This is the largest output per worker fall on record, but the furlough scheme, by design, makes this an extremely difficult period to compare with the historical data and strengthens our argument that output per hour should be considered the headline measure.
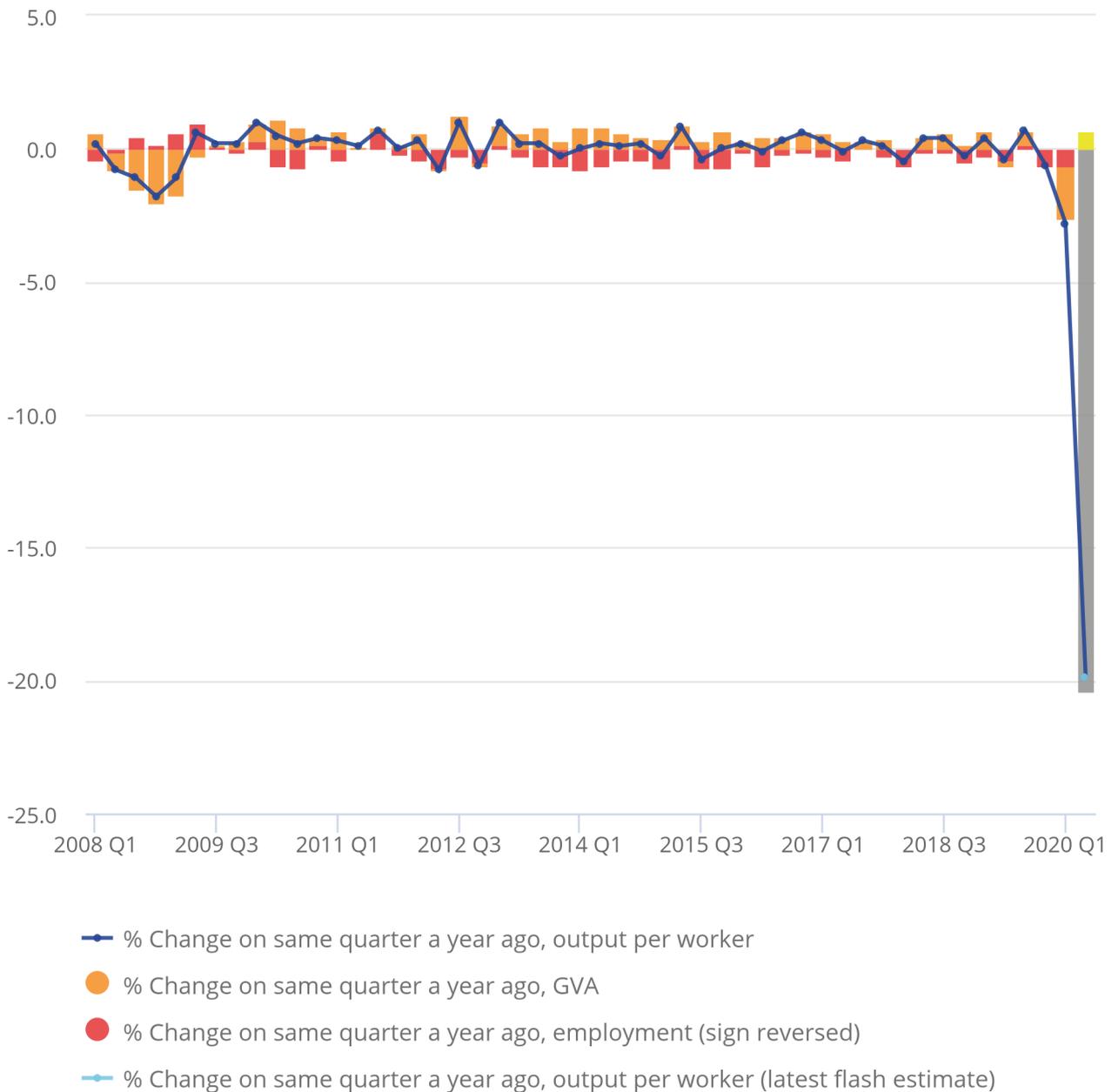
Output per worker estimates that exclude furloughed workers will be added to the data tables related to this release as soon as they are available.

Figure 2: Compared with the previous quarter, output per worker fell by 19.9% in Quarter 2 2020 as the furlough scheme retains workers despite falling GVA

Seasonally adjusted, UK, Quarter 1 (Jan to Mar) 2008 to Quarter 2 (Apr to June) 2020

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Seasonally adjusted, UK, Quarter 1 (Jan to Mar) 2008 to Quarter 2 (Apr to June) 2020

- —●— % Change on same quarter a year ago, output per worker
- ● % Change on same quarter a year ago, GVA
- ● % Change on same quarter a year ago, employment (sign reversed)
- —●— % Change on same quarter a year ago, output per worker (latest flash estimate)

Source: Office for National Statistics – UK productivity flash estimate

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.

Table 1: Headline labour productivity indicators for the UK
Seasonally adjusted, UK, Quarter 4 (Oct to Dec) 2016 to Quarter 2 (Apr to June) 2020

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	0.3
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	0.3	-0.3
2019 Q1	0	0.9	-0.4	0.4
2019 Q2	-0.4	0.1	0	-0.4
2019 Q3	0.4	0.4	0.5	0.7
2019 Q4	0.4	0.1	0.2	-0.6
2020 Q1	-0.6	-3.1	-1.3	-2.8
2020 Q2	-3.0	-22.0	-2.5	-19.9

Notes

1. Quarter 2 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

Output per hour fell by 3.0% during Quarter 2 2020 compared with the same quarter in the previous year. This is the largest fall since Quarter 4 (Oct to Dec) 2008. During the same period, output per worker fell by 22%.

Historical context

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

The consequences, such as government interventions, of the coronavirus pandemic have resulted in a fall in economic activity. Figure 3 highlights how GVA and hours worked have fallen at historic rates. The government furlough scheme has resulted in total employment broadly staying in-line with pre-COVID-19 levels.

Figure 3: Gross value added and hours worked see historically large fall while total workers remains comparatively stable due to government furlough scheme

Seasonally adjusted, UK, Quarter 1 (Jan to Mar) 2008 to Quarter 2 (Apr to June) 2020

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Seasonally adjusted, UK, Quarter 1 (Jan to Mar) 2008 to Quarter 2 (Apr to June) 2020
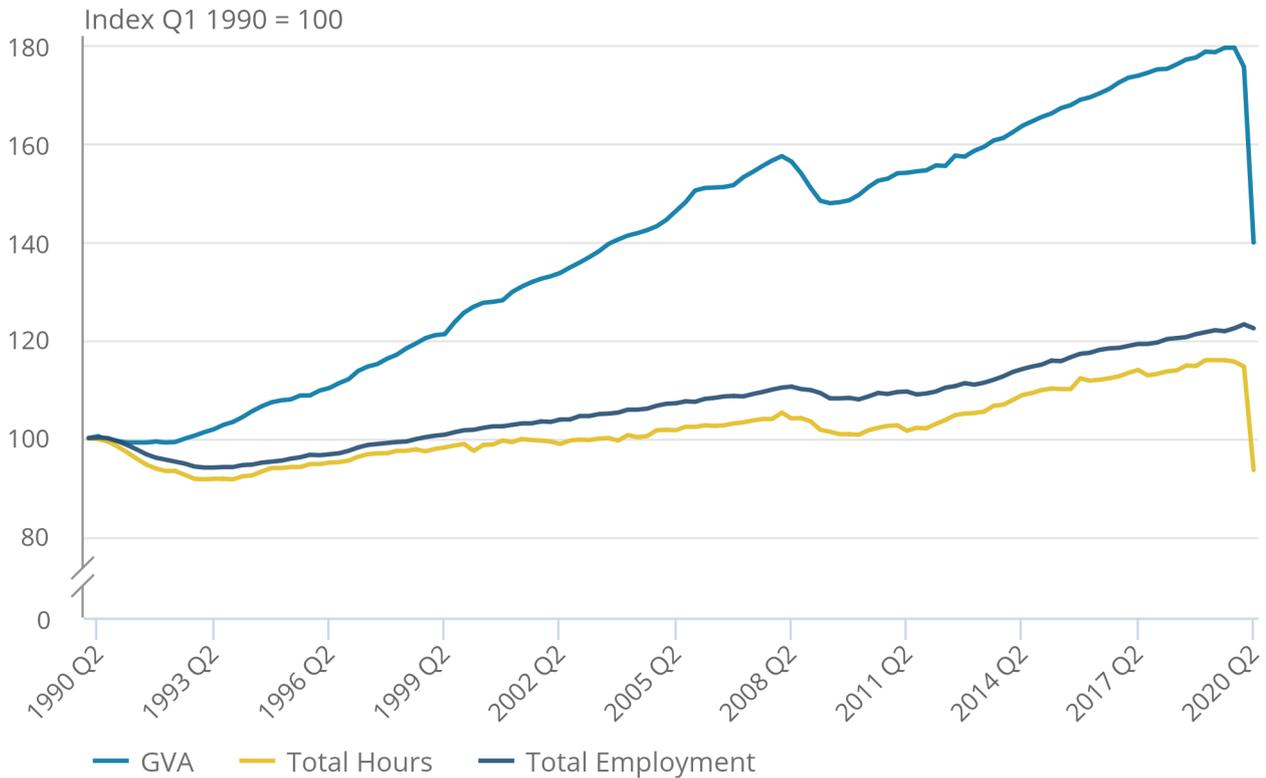
Source: Office for National Statistics – UK productivity flash estimate

3 . Output per hour by industry

For the first time, we have put together a flash estimate of output per hour by industry. Data by industry are available in the datasets accompanying this release. These data are experimental and are compiled by carrying forward Quarter 1 (Jan to Mar) 2020 estimates from short-term employment surveys that allocate workers to industries. These data will be revised after Quarter 2 (Apr to June) 2020 data become available and published in our subsequent productivity bulletin (published on 7 October 2020).

Every sector in the economy saw a quarter-on-quarter fall in output per hour. Construction saw the largest fall of 11.4% and manufacturing saw the smallest at 0.3%.

Table 2: Growth in output per hour by industry sector, with growth in gross value added and hours worked
Seasonally adjusted, UK, Quarter 2 (Apr to June) 2020

	Output per hour (growth %)	GVA (growth %)	Hours Worked (growth %)
Whole economy	-2.5	-20.4	-18.4
Non-manufacturing production	-0.5	-6.8	-6.4
Manufacturing	-0.3	-20.2	-19.9
Construction	-11.4	-35	-26.6
Services	-2.5	-19.9	-17.9

Source: Office for National Statistics – UK productivity flash estimate

The fall in output per hour in construction was driven by a fall in gross value added (GVA) of 35% for the sector, which was a more significant fall than the 26.6% drop in the number of hours

The second largest fall was seen in services, which saw GVA slide by 19.9%; this was a faster fall than the 17.9% fall in hours. These changes resulted in a 2.5% decrease in output per hour.

However, the results on a sector level mask much larger changes in the constituent industries. By far the most significant fall in output per hour was in the hotels and catering industry. Productivity in this industry decreased by 74.7%. This represents decreases of 86.7% in output and 47.2% in hours worked.

The second largest fall was in transport equipment manufacturing, which fell by 34.4% (minus 49.2% in GVA and minus 22.5% in hours). This was followed by manufacturing in textiles, apparel and leather products. Output per hour fell in this industry by 27.3% (minus 36.5% in GVA and minus 12.6% in hours).

There were some industries that saw an increase in output per hour. The water supply industry saw a GVA decrease of 5.6% and a 17.2% fall in hours, resulting in a 14% increase in output per hour. This is the largest recorded increase in output per hour for this industry. Manufacturing in computer, electronic, and optical and electrical products was relatively close behind with a 9.9% increase in output per hour (minus 11.7% in GVA and minus 19.7% in hours).

Figure 4: Contributions to quarter-on-quarter growth of output per hour, Quarter 2 (Apr to June) 2020

Seasonally adjusted, UK

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Seasonally adjusted, UK
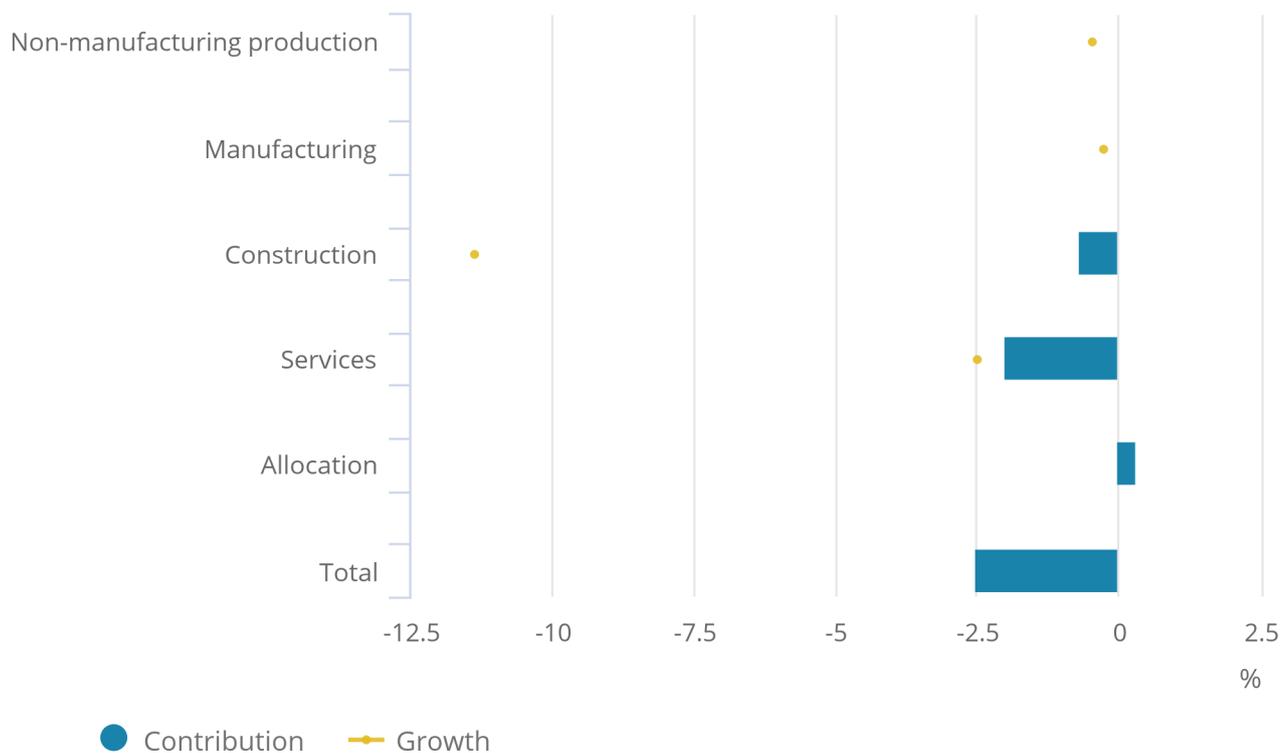
Source: Office for National Statistics – UK productivity flash estimate

4 . 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 2 (Apr to June) 2020. These data may be revised in subsequent months. As such, we release the more detailed Labour productivity bulletin after the publication of gross domestic product (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 concurrently. Estimates of earlier quarters are consistent with the Labour productivity National Statistics.

We intend on publishing additional data that exclude furloughed workers in due course, which will offer an additional insight in UK productivity.

5 . 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 (ONS) releases the more detailed Labour productivity bulletin after the publication of gross domestic product (GDP) quarterly national accounts.

GDP data for Quarter 2 (Apr to June) 2020 are from the GDP first quarterly estimate, UK: April to June 2020, published on 12 August 2020.

Contributions are to output gross value added (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 UK National Accounts – a short guide (PDF, 137KB).

Figure 5: Output per hour flash estimate revisions, UK, Quarter 4 (Oct to Dec) 2016 to Quarter 1 (Jan to Mar) 2020

Figure 5: Output per hour flash estimate revisions, UK, Quarter 4 (Oct to Dec) 2016 to Quarter 1 (Jan to Mar) 2020

- % Change on same quarter a year ago, National Statistic
- % Change on same quarter a year ago, previous flash estimates

Source: Office for National Statistics – UK productivity flash estimate

Labour market data for the same period are from the Labour market overview, UK: August 2020 statistical bulletin , published on 11 August 2020.

Data for the earlier quarters, Quarter 1 (Jan to Mar) 2008 until Quarter 1 2020, are consistent with the Labour productivity National Statistics. Figure 5 shows revisions to growth rates on the quarter a year ago compared to 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.