

Article

# Productivity economic commentary, UK: April to June 2020

The main findings from official statistics and analysis of UK productivity to present a summary of recent developments.

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## Notice

### 7 October 2020

Previous releases of the [productivity economic commentary](#) included the main findings from official statistics of labour productivity, multi-factor productivity, public service productivity and unit labour costs. This economic commentary focuses only on public service productivity and unit labour costs as we are delaying publication of some of the productivity measures normally contained in this bulletin to give further time to review and analyse a complex dataset. We will publish additional productivity estimates as soon as possible.

# Table of contents

1. [Main points](#)
2. [Public service productivity](#)
3. [Unit labour costs](#)
4. [Measuring the data](#)
5. [Related links](#)

# 1 . Main points

- Public service productivity decreased by 35.7% in Quarter 2 (Apr to June) 2020 compared with the same quarter a year ago; this fall was driven by an increase in inputs of 15.8% and a fall in output of 19.9%.
- Healthcare and social protection were the main drivers of the overall inputs growth, while the larger contributions to the output fall was observed in healthcare and education.
- Unit labour costs (ULCs) increased by 27.4% compared with the same quarter a year ago, easily the largest increase since records began.

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## 2 . Public service productivity

This section presents [experimental](#) estimates for total public service productivity, inputs and output. These statistics provide a short-term, timely indicator of the future path for the [National Statistics](#) estimates of total [public service productivity](#), which are produced with a two-year lag, but hold quality adjustment constant, as these data only arrive with a time lag. Data including quality adjustment for 2020 will be published in two years' time.

Compared with the same quarter in the previous year, productivity for total public services fell by 35.7% in Quarter 2 (Apr to June) 2020. Over this period, inputs increased by 15.8% while output fell by 19.9%, causing productivity to fall.

This is the largest fall in productivity since measurement began in 1997. The previous largest fall in productivity was 3.8% (revised from the [previous experimental publication](#)) in Quarter 1 (Jan to Mar) 2020, at the beginning of the coronavirus (COVID-19) pandemic and nationwide UK lockdown.

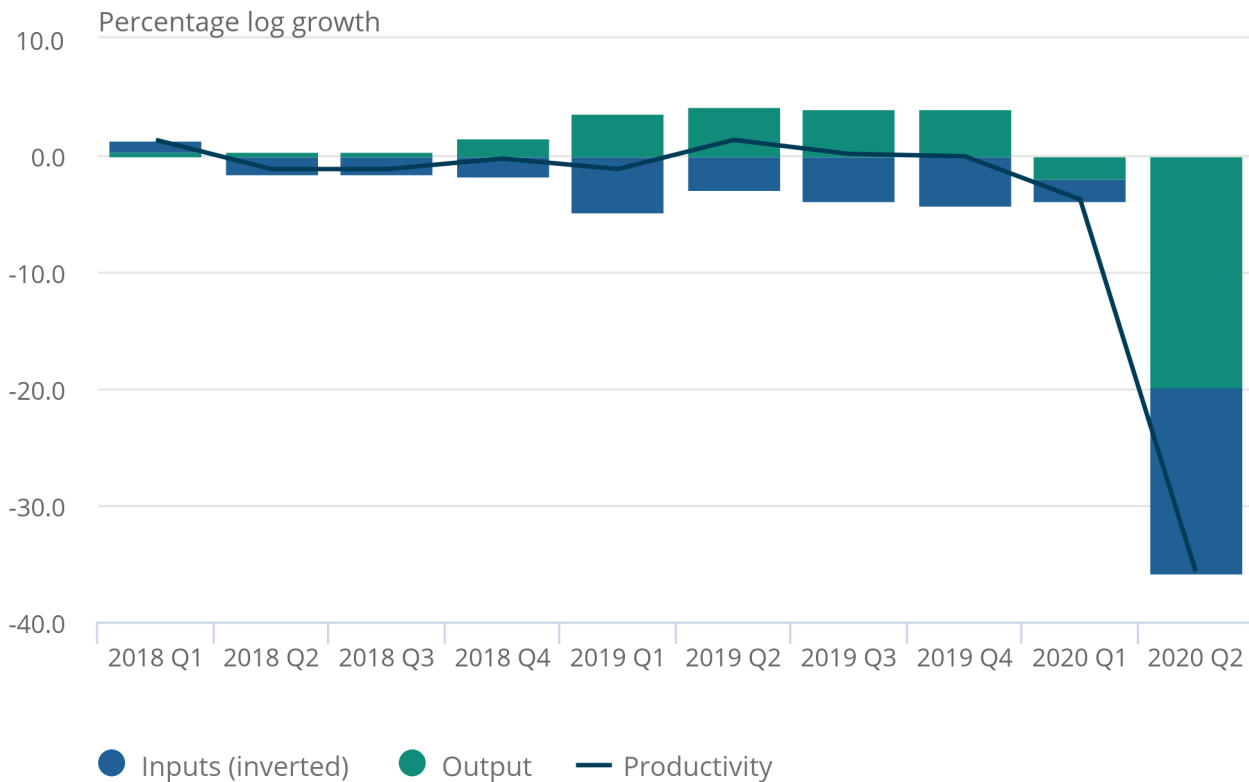
As inputs growth has a negative effect on productivity growth, Figure 1 inverts the growth rates of inputs. As such, the sum of the stacked bars (inverted inputs and output) is equal to productivity growth.

**Figure 1: Productivity has fallen considerably in Quarter 2 2020 compared with the same quarter a year ago**

Public service productivity, inputs and output, quarter-on-same-quarter a year ago growth rates, UK, Quarter 1 (Jan to Mar) 2018 to Quarter 2 (Apr to June) 2020

Figure 1: Productivity has fallen considerably in Quarter 2 2020 compared with the same quarter a year ago

Public service productivity, inputs and output, quarter-on-same-quarter a year ago growth rates, UK, Quarter 1 (Jan to Mar) 2018 to Quarter 2 (Apr to June) 2020



Source: Office for National Statistics – Productivity economic commentary

Notes:

1. Data are from this experimental quarterly release.
2. Experimental quarterly estimates of productivity are indirectly seasonally adjusted, calculated using seasonally adjusted inputs and seasonally adjusted output.
3. Growth rates have been expressed in (natural) logarithm changes.

An increase in healthcare and social protection expenditure was the main source of total inputs growth, whereas a fall in healthcare and education output was the main cause of the fall in total output.

The increase in inputs likely reflects government procurement of personal protective equipment (PPE) and construction of Nightingale hospitals as well as the additional social care responsibilities taken on by local government in response to the coronavirus pandemic.

An [adjustment to our education output measurement methodology](#) was introduced to take into consideration the widespread school closures from March onwards and the shift to "remote learning". This resulted in a decrease in our education output measures. The [fall in healthcare output](#) reflects the reductions in the number of GP appointments, accident and emergency admissions, non-emergency surgeries and outpatient activities, and the cancellation of all but emergency dental and ophthalmic treatment, as discussed in a [previous publication](#). To guarantee the quality of the current and future data, the Office for National Statistics (ONS) is working closely with the NHS.

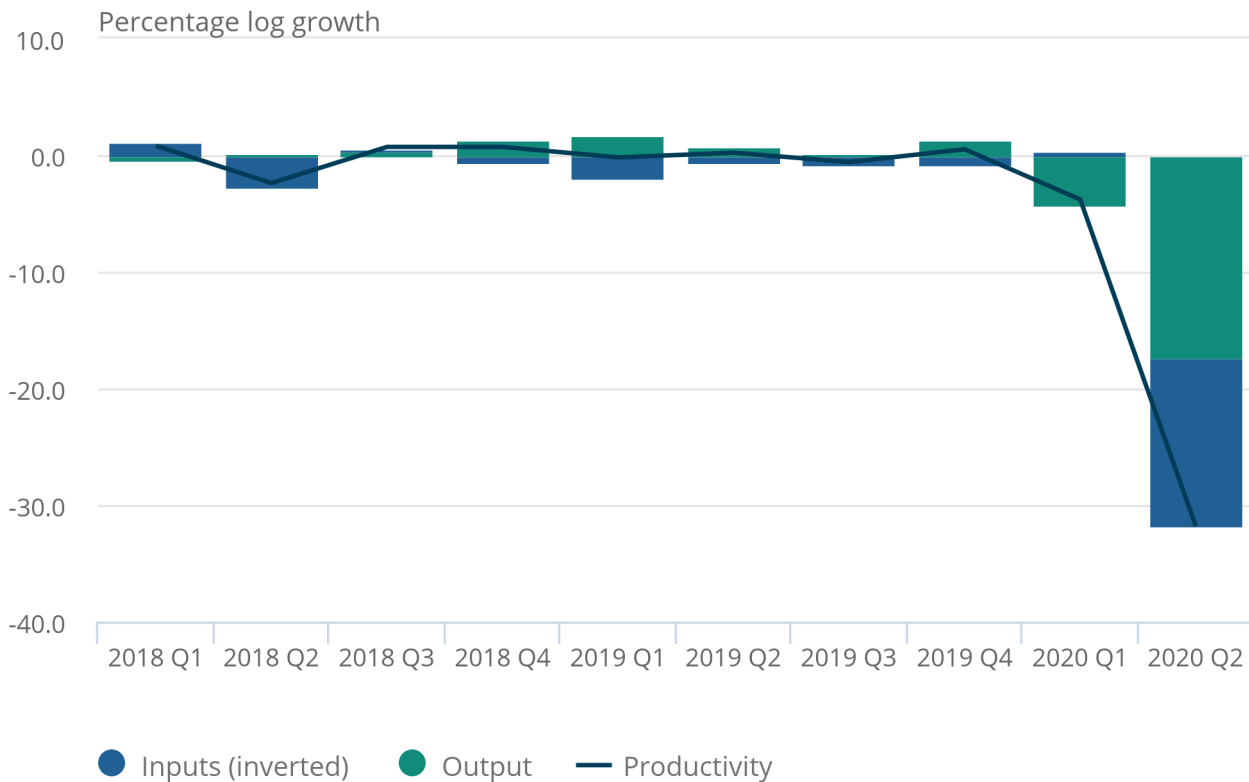
Figure 2 describes the comparison with the previous quarter. Quarterly public service productivity fell by 31.8% in Quarter 2 (Apr to June) 2020 compared with Quarter 1 (Jan to Mar) 2020. The steep decline in productivity in Quarter 1 and Quarter 2 is unprecedented and suggests the coronavirus pandemic and nationwide UK lockdown will have a significant impact on the annual estimate for 2020.

**Figure 2: Total productivity was stable for 2018 and 2019, but quarterly productivity was on a steep decline from Quarter 4 (Oct to Dec) 2019 to Quarter 2 (Apr to June) 2020**

Public service productivity, inputs and output, quarter-on-quarter growth rates, UK, Quarter 1 (Jan to Mar) 2018 to Quarter 2 (Apr to June) 2020

Figure 2: Total productivity was stable for 2018 and 2019, but quarterly productivity was on a steep decline from Quarter 4 (Oct to Dec) 2019 to Quarter 2 (Apr to June) 2020

Public service productivity, inputs and output, quarter-on-quarter growth rates, UK, Quarter 1 (Jan to Mar) 2018 to Quarter 2 (Apr to June) 2020



Source: Office for National Statistics – Productivity economic commentary

**Notes:**

1. Data are from this experimental quarterly release.
2. Experimental quarterly estimates of productivity are indirectly seasonally adjusted, calculated using seasonally adjusted inputs and seasonally adjusted output.
3. Growth rates have been expressed in (natural) logarithm changes.

Figure 3 shows total public service productivity in the context of a longer time series. Our forecast of annual productivity shows that productivity fell by 0.1% in 2018 and grew by 0.2% in 2019. [These estimates contain revisions](#) compared with the previous publication, where productivity was estimated to have increased in 2018 and decreased in 2019. These revisions reflect more up-to-date inputs and output data including revisions to Blue Book 2020-consistent gross value added (GVA) data as published in [GDP quarterly national accounts, UK: April to June 2020](#); these revisions affect all time periods.

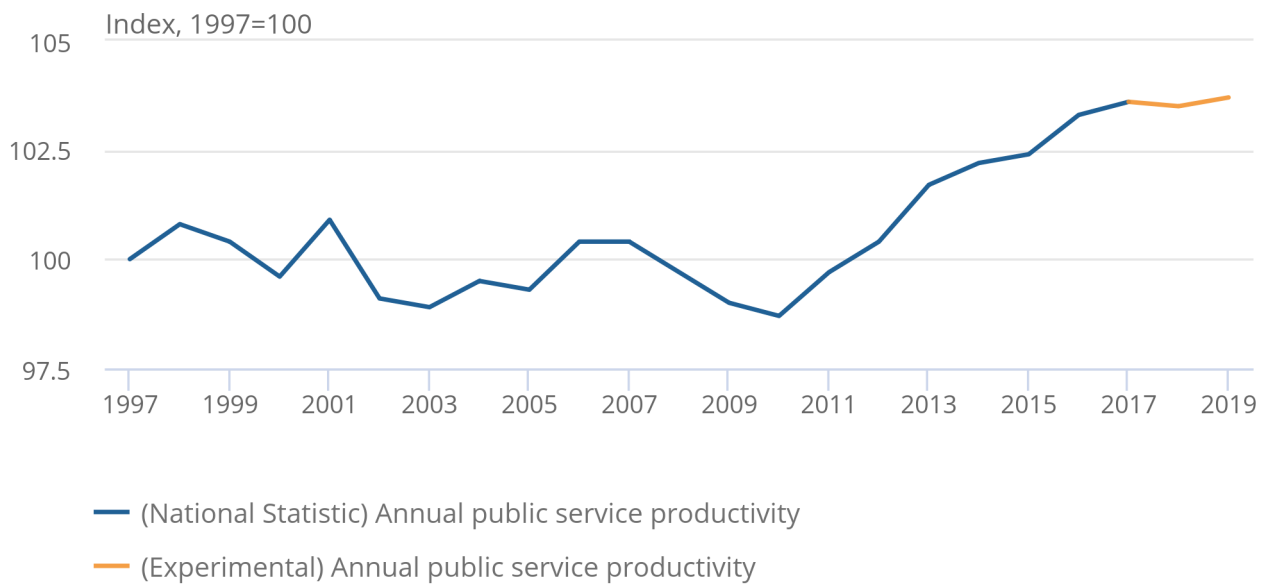
Because of the impact of the coronavirus on the availability of data and on our methodology, it is probable that there will be further revisions to our estimates for recent quarters. However, we are working with our data suppliers to ensure the provision of our current and future data needs and will fully explain the impact that any revision might have on our estimates.

### Figure 3: The estimate for annual public service productivity growth in 2018 has been revised down

Total public service productivity, UK, 1997 to 2019

## Figure 3: The estimate for annual public service productivity growth in 2018 has been revised down

Total public service productivity, UK, 1997 to 2019



Source: Office for National Statistics – Productivity economic commentary

#### Notes:

1. Estimates from 1997 to 2017 are based on the latest annual public service productivity release.
2. Estimates from 2018 to 2019 are annualised estimates taken from the experimental quarterly estimates in this article.

On 8 January 2021, the ONS will publish updated estimates of annual public service productivity. In the previous two years, the ONS has published separate analytical articles for the UK and England series of the healthcare sector of public service productivity. From January 2021, commentary in [Public service productivity: healthcare](#) will focus on the England financial year series, and there will not be a separate article analysing these series for the UK on a calendar year basis. This change has been made as commentary on the UK series typically focused on the data series from England, because of England accounting for the large majority of the inputs and output series for the UK. However, all UK data series previously produced in [Public service productivity: healthcare, UK: 2017](#) will continue to be available to users in the datasets accompanying the public service productivity release.

### **3 . Unit labour costs**

Unit labour costs (ULCs) capture the full costs of labour incurred in the production of a unit of economic output; they reflect the relationship between the cost of labour and the value of the corresponding output. If increases in labour costs are not reflected in the volume of output, this can put upward pressure on the prices of goods and services. Hence, ULCs are a closely watched indicator of domestically generated inflationary pressure in the economy. They are usually expressed as a ratio of the total labour compensation per hour worked, to the output per hour worked.

In Quarter 2 (Apr to June) 2020, ULCs increased by 27.4% compared with the same quarter in the previous year. This is the greatest change in ULCs since records began.

The increase was driven by a fall in gross value added (GVA) over the quarter. During lockdown, government programmes for furloughed workers have helped keep labour costs elevated despite the fall in production activities. This has also had a notable effect on ULCs this period.

Since the start of 2020, ULCs have increased by 25.7%. The last two quarters of volatility follow a period of fairly stable ULCs growth, which has occurred since Quarter 2 2016. Prior to this, ULCs growth had been volatile.

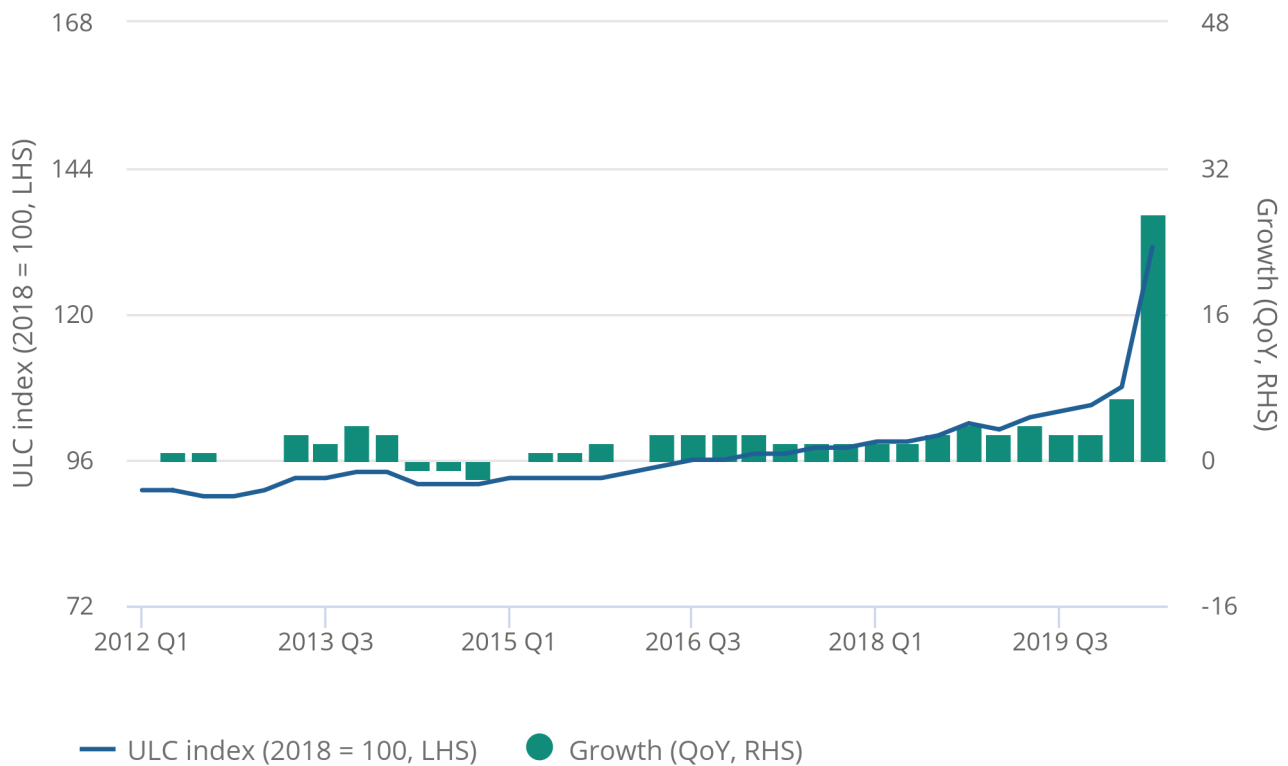


**Figure 4: Whole economy unit labour costs increased by 27.4% compared with the same quarter a year ago, easily the largest increase since records began**

Whole economy unit labour costs, quarter on year growth rates, seasonally adjusted, UK, Quarter 1 (Jan to Mar) 1997 to Quarter 2 (Apr to June) 2020

Figure 4: Whole economy unit labour costs increased by 27.4% compared with the same quarter a year ago, easily the largest increase since records began

Whole economy unit labour costs, quarter on year growth rates, seasonally adjusted, UK, Quarter 1 (Jan to Mar) 1997 to Quarter 2 (Apr to June) 2020



Source: Office for National Statistics – Productivity economic commentary

Notes:

1. Labour costs per hour estimates will differ from those in our index of labour costs per hour bulletin because of differences in methodology.

## 4 . Measuring the data

Information on data used in public service productivity can be found in our [previous release](#) and in [Sources and methods for public service productivity estimates](#).

The datasets accompanying this release incorporate revisions to Blue Book 2020-consistent gross domestic product (GDP) as published in [GDP quarterly national accounts, UK: April to June 2020](#); these revisions affect all time periods.

## 5 . Related links

### [GDP quarterly national accounts, UK: April to June 2020](#)

Bulletin | Released 30 September 2020

Revised quarterly estimate of gross domestic product (GDP) for the UK. Uses additional data to provide a more precise indication of economic growth than the first estimate.

### [Public service productivity: total, UK, 2017](#)

Article | Released 8 January 2020

Updated measures of output, inputs and productivity for public services in the UK between 1997 and 2017. Includes service area breakdown, as well as impact of quality adjustment and latest revisions.

### [UK productivity flash estimate](#)

Article | Quarterly

Flash estimate of labour productivity based on the latest data from the gross domestic product (GDP) first quarterly estimate and labour market statistics.

### [Coronavirus and the effects on UK productivity measures](#)

Article | Released 19 May 2020

How the global coronavirus (COVID-19) pandemic and the wider containment efforts are expected to impact on UK productivity estimates, and challenges on data collection.

### [Productivity measurement – how to understand the data around the UK's biggest economic issue](#)

Article | Released 13 March 2020

First in a series of explainer articles from expert academics providing a view on the measurement of productivity in the UK and the productivity puzzle.

# 1 Unit labour costs and unit wage costs

## United Kingdom

Seasonally adjusted (2018=100)

Section	Whole economy		Manufacturing
	Unit labour costs	Unit wage costs	Unit wage costs
	A-U	A-U	C
<b>Indices</b>			
	LNNL	LNNK	DIX4
2016	95.2 <sup>†</sup>	95.3 <sup>†</sup>	96.5 <sup>†</sup>
2017	97.4	97.1	97.7
2018	100.0	100.0	100.0
2019	103.1	102.3	103.5
2016 Q3	96.0 <sup>†</sup>	95.8 <sup>†</sup>	97.2 <sup>†</sup>
Q4	96.0	95.7	95.8
2017 Q1	96.6	96.1	95.8
Q2	97.4	96.9	97.4
Q3	97.9	97.4	99.0
Q4	97.9	97.9	98.7
2018 Q1	98.6	99.0	99.1
Q2	99.3	99.6	99.7
Q3	100.3	100.1	100.3
Q4	101.7	101.3	100.9
2019 Q1	101.3	101.1	99.7
Q2	103.1	102.4	103.7
Q3	103.6	102.5	104.7
Q4	104.5	103.3	106.0
2020 Q1	108.1	106.6	107.7
Q2	131.4	129.0	128.5
<b>Per cent change on quarter a year ago</b>			
	DMWN	LOJE	DJ4J
2016 Q3	3.0 <sup>†</sup>	2.2 <sup>†</sup>	1.9 <sup>†</sup>
Q4	2.9	2.2	–
2017 Q1	3.0	1.8	–0.5
Q2	2.2	1.6	0.9
Q3	2.0	1.7	1.9
Q4	2.0	2.3	3.0
2018 Q1	2.1	3.1	3.5
Q2	2.0	2.8	2.3
Q3	2.5	2.8	1.3
Q4	3.9	3.4	2.3
2019 Q1	2.7	2.0	0.5
Q2	3.8	2.9	4.0
Q3	3.2	2.4	4.4
Q4	2.7	2.0	5.0
2020 Q1	6.7	5.5	8.1
Q2	27.4	26.0	23.9
<b>Per cent change on previous quarter</b>			
	DMWO	DMWL	DJ4I
2016 Q3	0.7 <sup>†</sup>	0.5 <sup>†</sup>	0.6 <sup>†</sup>
Q4	–	–0.1	–1.4
2017 Q1	0.6	0.4	–
Q2	0.8	0.8	1.8
Q3	0.6	0.6	1.6
Q4	–	0.5	–0.3
2018 Q1	0.8	1.2	0.5
Q2	0.7	0.5	0.5
Q3	1.0	0.6	0.6
Q4	1.4	1.1	0.6
2019 Q1	–0.4	–0.2	–1.2
Q2	1.8	1.3	4.0
Q3	0.4	0.1	1.0
Q4	0.8	0.8	1.2
2020 Q1	3.5	3.2	1.7
Q2	21.6	21.0	19.3

<sup>†</sup> indicates that estimates are new or have been revised. The period marked is the earliest in the table to have been revised.

# R1 REVISIONS ANALYSIS

## Revisions since previously published estimates

	Whole economy		Manufacturing	
	Unit labour costs		Unit wage costs	
	Per cent change on quarter a year ago	Per cent change on previous quarter	Per cent change on quarter a year ago	Per cent change on previous quarter
	DMWN	DMWO	DJ4J	DJ4I
2016 Q1	0.5	-0.3	0.2	0.1
Q2	-	-0.1	0.1	-0.2
Q3	0.2	0.3	-0.2	-0.1
Q4	0.1	0.2	-0.2	-0.1
2017 Q1	1.0	0.6	-0.3	0.1
Q2	0.3	-0.8	-0.3	-0.1
Q3	-0.4	-0.3	-	0.2
Q4	-0.7	-0.2	0.3	0.2
2018 Q1	-1.6	-0.2	-0.3	-0.5
Q2	-0.5	0.3	-0.3	-0.3
Q3	-	0.1	-0.4	0.2
Q4	0.1	-0.1	-0.3	0.2
2019 Q1	0.1	-0.3	0.2	-
Q2	-	0.3	-	-0.4
Q3	0.1	0.2	0.1	0.2
Q4	-	-0.3	-0.6	-0.4
2020 Q1	0.5	0.2	0.1	0.7