

Statistical bulletin

# Earnings and employment from Pay As You Earn Real Time Information, UK: March 2021

Experimental monthly estimates of payrolled employees and their pay from HM Revenue and Customs' (HMRC's) Pay As You Earn (PAYE) Real Time Information (RTI) data. This is a joint release between HMRC and the Office for National Statistics (ONS).

Contact:  
Debra Leaker, Martin Gentile  
labour.market@ons.gov.uk;  
rtstatistics.enquiries@hmrc.gov.uk

Release date:  
23 March 2021

Next release:  
20 April 2021

ONS: +44 (0)1633 455400;  
HMRC: +44 (0)3000 553172

## Table of contents

1. [Main points](#)
2. [Payrolled employees](#)
3. [Median monthly pay](#)
4. [Pay distribution](#)
5. [Regional data](#)
6. [Industry data](#)
7. [Age data](#)
8. [Earnings and employment data](#)
9. [Glossary](#)
10. [Measuring the data](#)
11. [Strengths and limitations](#)
12. [Related links](#)

# 1 . Main points

- Early estimates for February 2021 indicate that the number of payrolled employees fell by 2.4% compared with February 2020, which is a fall of 693,000 employees.
- In February 2021, 68,000 more people were in payrolled employment when compared with January 2021.
- Early estimates for February 2021 indicate that median monthly pay increased by 3.9%, compared with the same period of the previous year.
- Of the 693,000 decrease in payrolled employees between February 2020 and February 2021, 437,000 (63.1%) were younger than 25 years.
- Annual growth in payrolled employees in February 2021 was the highest in Cornwall and Isles of Scilly (a fall of 0.6%) and lowest in Inner London East (a fall of 6.1%).
- Annual pay growth in the UK for employees was highest at the 10th percentile (positive 7.7%) and lowest at the 75th percentile (positive 4.1%) in the three months to January 2021.
- The increase in payrolled employees between February 2020 and February 2021 was largest in the health and social work sector (a rise of 132,000 employees) and smallest in the accommodation and food services sector (a fall of 368,000).
- Annual growth in median pay for employees in February 2021 was highest in the health and social work sector (an increase of 6.8%) and lowest in the accommodation and food services sector (a decrease of 7.7%).

## About the data in this release

Early estimates for February 2021 are provided to give an indication of the likely level of employees as well as median pay in the latest period. The figures for February 2021 are based on around 85% of information being available. They are considered of lower quality and may be subject to revision in next month's release when between 98% to 99% of data will be available. This work was introduced in April 2020, in response to the coronavirus (COVID-19) and methods will continue to be developed. A [revisions triangle](#) is available for employees and median pay at the UK level.

This release covers people paid through the Pay As You Earn (PAYE) system where their pay is reported through the Real Time Information (RTI) system. As employees who are furloughed as part of the Coronavirus Job Retention Scheme (CJRS) programme should still have their payments reported through this system, they should feature in these data and contribute toward the employment and pay statistics for the relevant periods.

Statistics in this release are based on people who are employed in at least one job paid through PAYE, and monthly estimates reflect the average of such people for each day of the calendar month. This follows the introduction of a [new methodology](#) in December 2019, designed to better align with international guidelines for labour market statistics. This differs from the methodology used prior to December 2019, which produced statistics based on the total number of people paid in a particular time period.

## 2 . Payrolled employees

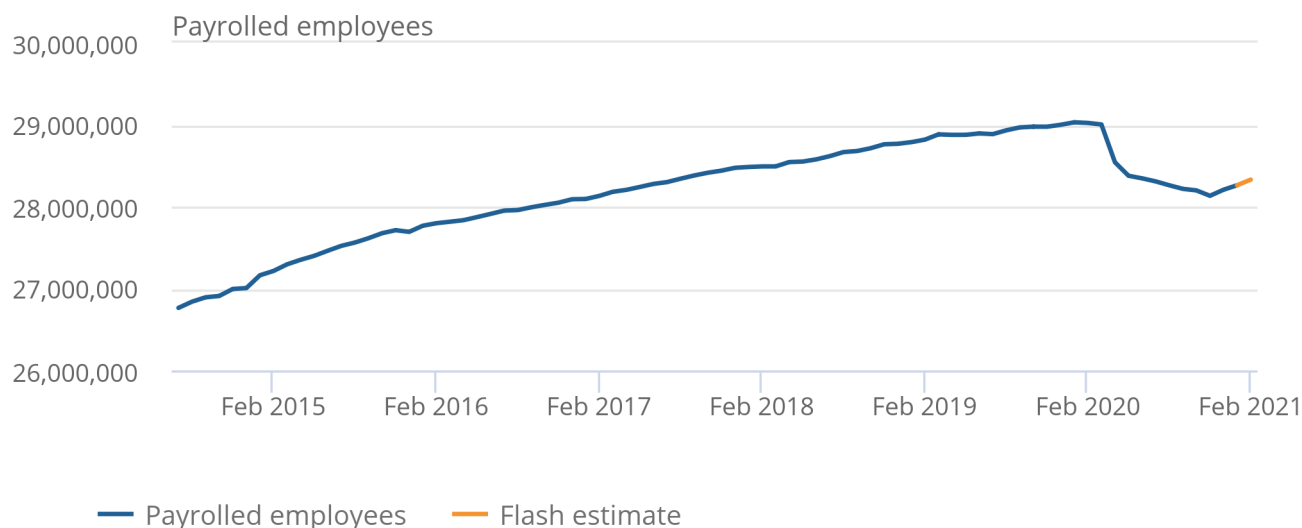
Early estimates for February 2021 indicate that there were 28.3 million payrolled employees (Figure 1), a fall of 2.4% compared with the same period of the previous year and a decline of 693,000 people over the 12-month period. Compared with the previous month, the number of payrolled employees increased by 0.2% in February 2021 – equivalent to 68,000 people.

**Figure 1: The number of employees declined between February and November 2020, but has risen slightly more recently**

Payrolled employees, seasonally adjusted, UK, July 2014 to February 2021

**Figure 1: The number of employees declined between February and November 2020, but has risen slightly more recently**

Payrolled employees, seasonally adjusted, UK, July 2014 to February 2021



Source: HM Revenue and Customs – Pay As You Earn Real Time Information

**Notes:**

1. The latest period, highlighted in orange, is based on early data and therefore is more likely to be subject to slightly more significant revisions.
2. The January 2021 figure is not a flash estimate of payrolled employees, this is included purely for graphing purposes.

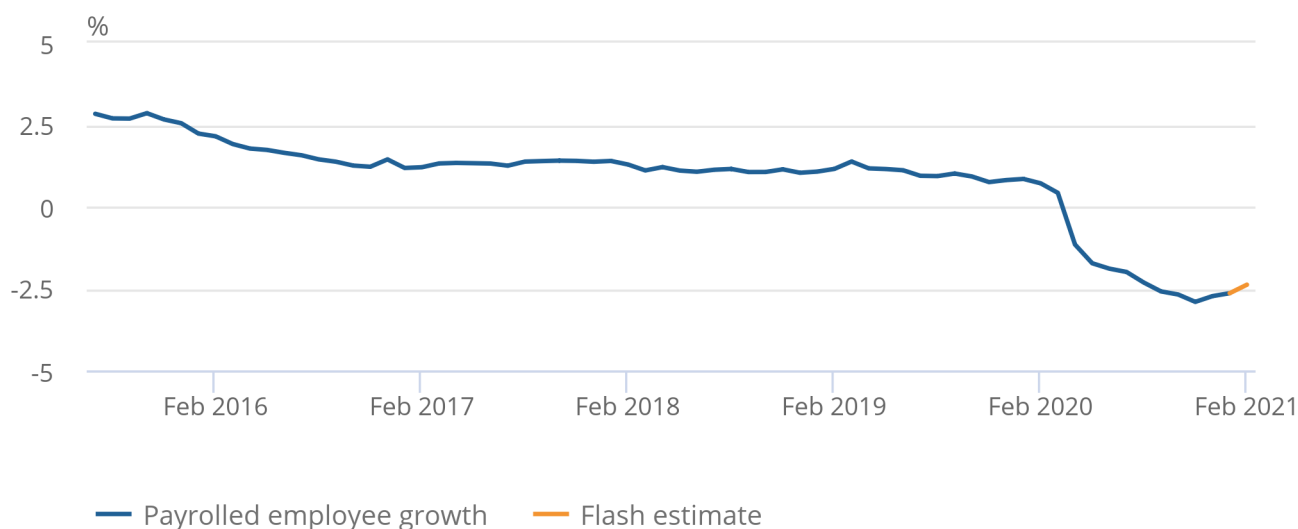
Annual growth in the number of employees remained broadly within a range of 1.0% to 1.5% from mid-2016 until 2019. Growth rates prior to mid-2016 were higher than 1.5% (Figure 2). Starting around early 2019, employee growth began a slight downward trend. However, employee growth slowed more substantially past March 2020, (becoming negative in April 2020) coinciding with the coronavirus (COVID-19) pandemic.

**Figure 2: Growth in the number of payrolled employees fell recently, becoming negative in April 2020**

Percentage change on same month in previous year, seasonally adjusted, UK, July 2015 to February 2021

## Figure 2: Growth in the number of payrolled employees fell recently, becoming negative in April 2020

Percentage change on same month in previous year, seasonally adjusted, UK, July 2015 to February 2021



Source: HM Revenue and Customs – Pay As You Earn Real Time Information

### Notes:

1. The latest period, highlighted in orange, is based on early data and therefore is more likely to be subject to slightly more significant revisions.
2. The January 2021 figure is not a flash estimate of payrolled employees, this is included purely for graphing purposes.

## 3 . Median monthly pay

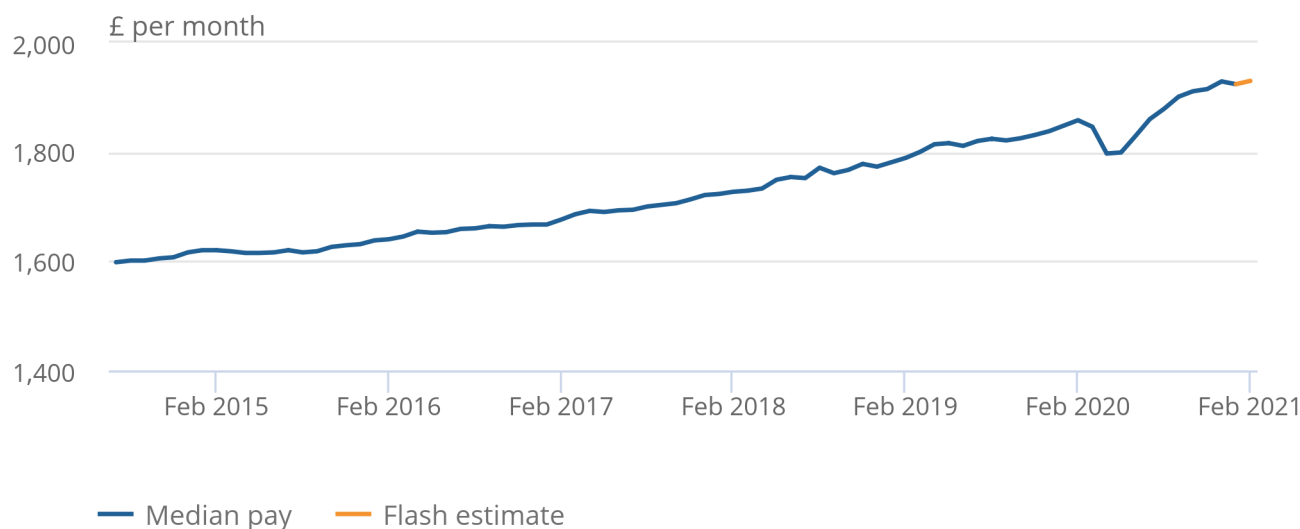
Early estimates for February 2021 indicate that median monthly pay increased to £1,930, an increase of 3.9% compared with the same period of the previous year.

**Figure 3: Median pay decreased sharply in April, but has returned to the previous trend since August 2020**

Median pay per month, seasonally adjusted, UK, July 2014 to February 2021

### Figure 3: Median pay decreased sharply in April, but has returned to the previous trend since August 2020

Median pay per month, seasonally adjusted, UK, July 2014 to February 2021



Source: HM Revenue and Customs – Pay As You Earn Real Time Information

**Notes:**

1. The latest period, highlighted in orange, is based on early data and therefore is more likely to be subject to slightly more significant revisions.
2. The January 2021 figure is not a flash estimate of median pay, this is included purely for graphing purposes.

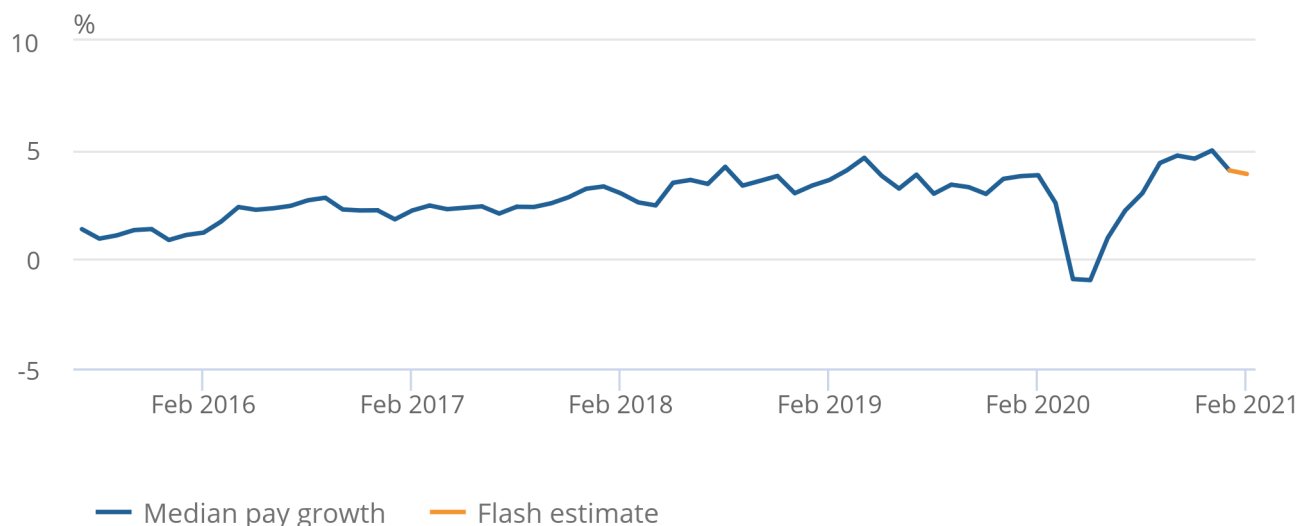
Following a general trend of increasing pay growth between mid-2015 and mid-2018, pay growth tended to fluctuate around 3.6% (Figure 4). Pay growth for April and May 2020 became negative, coinciding with the coronavirus (COVID-19) pandemic as well as related economic and policy responses. More recently, median pay growth has increased, and is now above pre-coronavirus (February 2020) levels.

**Figure 4: The rate of growth in median pay fell between March and May 2020, but is now higher than the average growth before March 2020**

Percentage change on same month in previous year, seasonally adjusted, UK, July 2015 to February 2021

**Figure 4: The rate of growth in median pay fell between March and May 2020, but is now higher than the average growth before March 2020**

Percentage change on same month in previous year, seasonally adjusted, UK, July 2015 to February 2021



Source: HM Revenue and Customs – Pay As You Earn Real Time Information

**Notes:**

1. The latest period, highlighted in orange, is based on early data and therefore is more likely to be subject to slightly more significant revisions.
2. The January 2021 figure is not a flash estimate of median pay growth, this is included purely for graphing purposes.

The relatively high level of pay growth between June and December 2020 is partially explained by lower levels of inflows than usual during that period. As explored in the [August](#) and [September](#) bulletins, whilst the general trend of pay growth is dominated by those continually employed, the mean pay of inflows tends to be around 40% lower than mean pay for those continually employed – meaning inflows into payrolled employment tend to bring down average pay and average pay growth. As inflows were relatively low between June 2020 and December 2020, this reduced the downward pressure on pay growth, which in turn increased median pay growth.

## 4 . Pay distribution

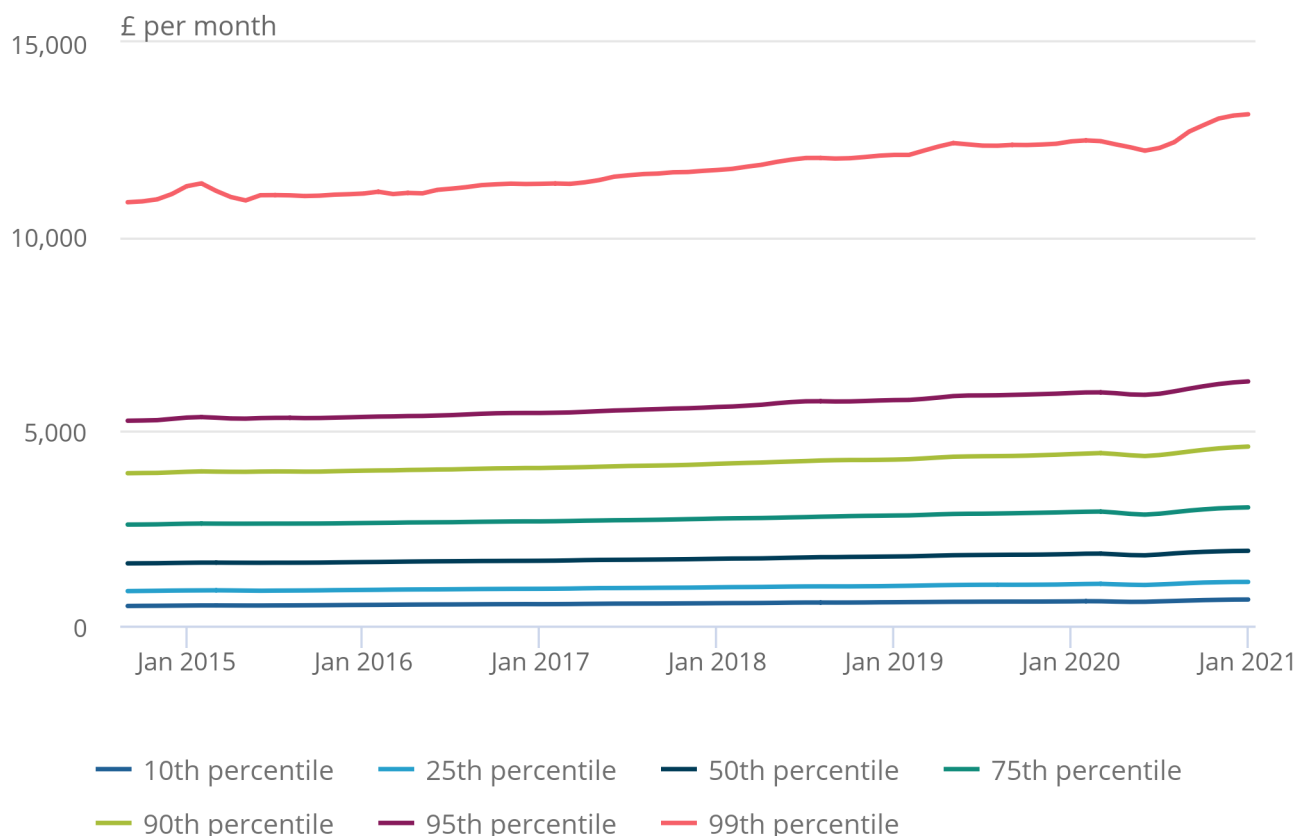
In the three months to January 2021, the 10th percentile of the monthly pay distribution was £670, the 90th percentile was £4,604 and the 99th percentile was £13,152 (Figure 5). This means that 10% of payrolled employees earned equal to or less than £670 per month, 90% earned equal to or less than £4,604, and 99% earned equal to or less than £13,152.

**Figure 5: 10% of employees earn less than £670 per month and 90% earn less than £4,604 per month**

Pay per month, seasonally adjusted, UK, three months to September 2014 to three months to January 2021

**Figure 5: 10% of employees earn less than £670 per month and 90% earn less than £4,604 per month**

Pay per month, seasonally adjusted, UK, three months to September 2014 to three months to January 2021



Source: HM Revenue and Customs – Pay As You Earn Real Time Information

Notes:

1. Data for the 50th percentile (that is, the median) in this chart are based on three-month moving averages. For this reason, they are not directly comparable with Figures 3 or 4 (which use data for a single month).

## 5 . Regional data

The regional figures in this bulletin are based on where employees live and not the location of their place of work. They include data for February 2021, and cover [Nomenclature of Territorial Units for Statistics: NUTS1 and NUTS2 regions](#).

While the UK as a whole has experienced moderate, if declining, payrolled employee growth since January 2017, growth within regions has not been uniform (Figure 6).

Numbers of payrolled employees in the UK for the regions shown in Figure 6 range from 746,000 in Northern Ireland to 3,994,000 in the South East in February 2021.

## Figure 6: Regional employee growth has fallen across the UK in recent months

Percentage change on same month in previous year, seasonally adjusted, UK, January 2017 to February 2021

### Notes:

1. The latest period is based on early data and therefore is more likely to be subject to slightly more significant revisions.

[Download the data](#)

London and Northern Ireland experienced higher growth than the UK average between January 2017 and early 2020, while the North East and Scotland experienced lower growth than the UK overall. Going further, since January 2019 Inner London (both West and East) experienced greater volatility in employee growth than both Outer London and the UK average. Employee growth rates for NUTS2 regions are available in the [datasets](#) published alongside this bulletin.

Since February 2020, all regions' growth rates followed a similar pattern: rapidly declining and becoming negative in April, and continuing a slower downward trend since. However, the magnitude of changes varies. Comparing February 2021 with the same period of the previous year for NUTS1 regions, decreases in payrolled employees ranged from 0.9% in Northern Ireland to 5.0% in London. Examining NUTS2 regions, Inner London generally experienced sharper decreases in 2020 than Outer London (Figure 7). North Eastern Scotland experienced a decrease of 5.5% in payrolled employees in comparison with February 2020, and Cornwall and Isles of Scilly experienced a decrease of 0.6%.

## Figure 7: Growth in payrolled employees varies across the UK

Percentage change on same month in previous year, seasonally adjusted, UK, February 2021

### Notes:

1. The latest period is based on early data and therefore is more likely to be subject to slightly more significant revisions.

Of the 693,000 decrease in payrolled employees since February 2020, 209,000 can be attributed to employees living in London, 105,000 in the South East, while only 7,000 can be attributed to employees living in Northern Ireland.

Median pay across the NUTS2 regions of the UK in February 2021 ranged from £1,648 in Cornwall and Isles of Scilly to £2,904 in Inner London West. Inner London generally differs from Outer London (Figure 8). Median pay in February 2021 for London as a whole was £2,327.

## Figure 8: Median pay varies across the UK

Median pay, seasonally adjusted, UK, February 2021



[Download the data](#)

Compared with the same month in the previous year, pay grew fastest for the NUTS1 regions in Scotland (positive 5.4%) and slowest in the North East (positive 3.4%). For NUTS2 regions, pay grew fastest in West Central Scotland (positive 5.6%) and slowest in Outer London West and the North West (positive 2.5%) (Figure 9).

Over the longer-term, on average over the past five years, pay growth was highest in Wales (at an annualised rate of positive 3.5%) and slowest in the North East (positive 3.1%). Estimates of mean pay for the regions is available in the datasets published alongside this bulletin.

### **Figure 9: Median pay increased most in West Central Scotland and least in Outer London West and North West**

Percentage change on same month in previous year, seasonally adjusted, UK, February 2021

#### **Notes:**

1. The latest period is based on early data and therefore is more likely to be subject to slightly more significant revisions.
2. Changes in growth rates are affected by changes in the base period (a year ago) as well as changes in the latest period.

[Download the data](#)

## **6 . Industry data**

The industrial sectors in this bulletin are based on the [UK Standard Industrial Classification \(SIC\) codes](#), as defined by the Office for National Statistics (ONS). These codes have been determined from both the [Inter-Departmental Business Register](#) and data from Companies House for each Pay As You Earn (PAYE) enterprise. The findings from the fourteen largest sectors are presented. The seven smaller sectors have been removed from the bulletin for presentational purposes, but their estimates are available in the [datasets](#) published alongside this bulletin.

The three largest sectors – wholesale and retail, health and social work, and education – account for more than 40% of UK employees. These three sectors combined with administrative and support services, manufacturing, professional, scientific and technical, and accommodation and food services account for more than 70% of UK employees.

Since January 2017, employee growth has not been uniform across sectors (Figure 10). Sectors such as construction, transportation and storage, and information and communication experienced higher growth than the UK average between January 2017 and early 2020, while sectors such as manufacturing, and wholesale and retail experienced lower growth than the UK overall.

All sectors highlighted experienced a decrease in employee growth around April 2020, with the smallest decrease being in health and social work.

Some sectors (such as administrative and support services) have partially recovered since April 2020 but with employee levels still below the levels in the same month in the previous year. Only public administration and defence, and health and social work now have a positive growth rate.

Sectors such as finance and insurance, and education have had steep declines in employee growth around April 2020, with numbers slowly recovering. This results in small net changes in payrolled employees in the past 12 months for these sectors.

Some sectors have seen increasingly negative growth since April 2020, notably the arts and entertainment, and accommodation and food services sectors.

When compared with the same period of the previous year, percentage changes in payrolled employees range from negative 17.7% in accommodation and food services to positive 3.4% in health and social work. Arts and entertainment has experienced a 17.7% fall in employees.

### **Figure 10: Employee growth has been very different across sectors**

Percentage change on same month in previous year, seasonally adjusted, UK, January 2017 to February 2021

#### **Notes:**

1. The latest period is based on early data and therefore is more likely to be subject to slightly more significant revisions.

Of the 693,000 decrease in payrolled employees since February 2020:

- 368,000 can be attributed to employees working in the accommodation and food services sector
- 123,000 in the wholesale and retail sector
- only 1,000 can be attributed to employees working in the construction sector

[Download the data](#)

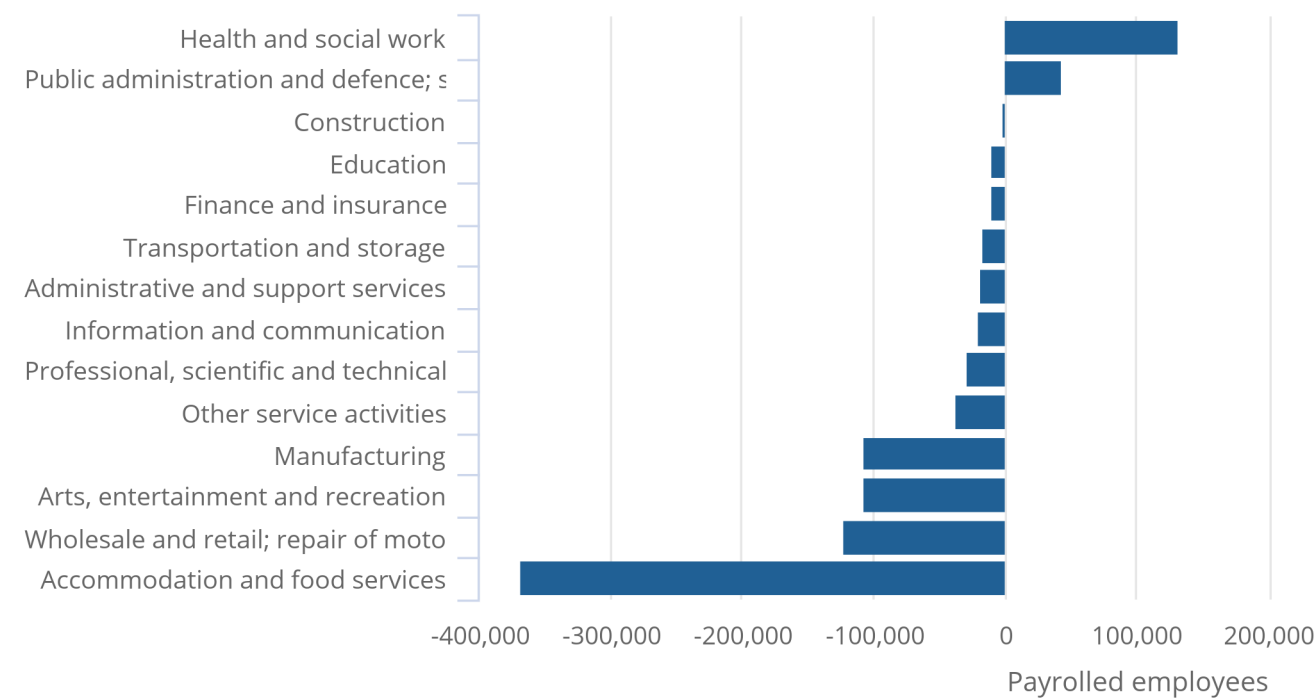
This decrease is net of an increase of 43,000 employees working in public administration, and 132,000 employees in health and social work (Figure 11).

**Figure 11: The accommodation and food services sector has seen the greatest decrease in payrolled employees since February 2020**

Payrolled employees, absolute change on February 2020, seasonally adjusted, UK, February 2021

**Figure 11: The accommodation and food services sector has seen the greatest decrease in payrolled employees since February 2020**

Payrolled employees, absolute change on February 2020, seasonally adjusted, UK, February 2021



Source: HM Revenue and Customs – Pay As You Earn Real Time Information

Notes:

1. The latest period is based on early data and therefore is more likely to be subject to slightly more significant revisions.

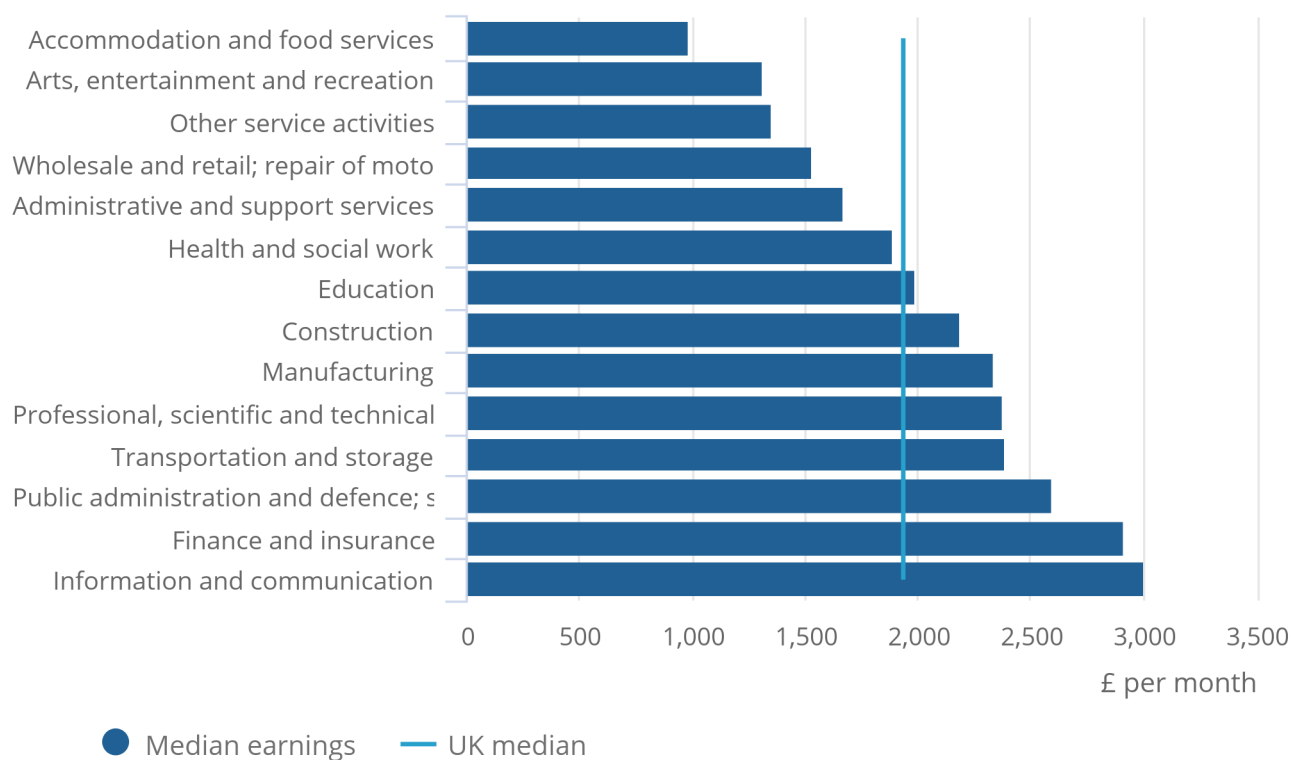
Median pay in February 2021 across the highlighted sectors ranged from £989 in the accommodation and food services sector to £3,005 in information and communication (Figure 12).

**Figure 12: Median pay varies by industry**

Median pay, seasonally adjusted, UK, February 2021

## Figure 12: Median pay varies by industry

Median pay, seasonally adjusted, UK, February 2021



Source: HM Revenue and Customs – Pay As You Earn Real Time Information

**Notes:**

1. The latest period is based on early data and therefore is more likely to be subject to slightly more significant revisions.

Compared with the same month in the previous year, median pay grew fastest in the health and social work sector (positive 6.8%) and slowest in the accommodation and food services sector (negative 7.7%) (Figure 13).

Estimates of mean pay for each sector are available in the [datasets](#) published alongside this bulletin.

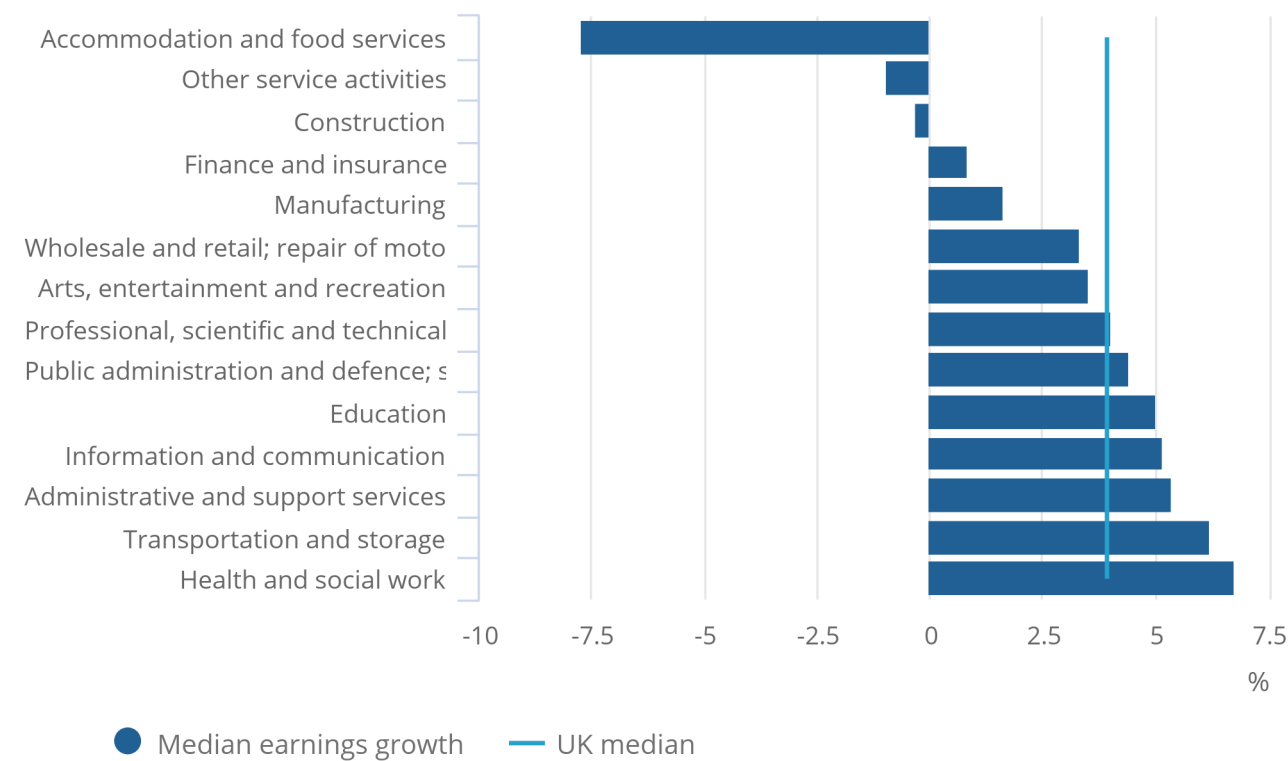
However, care needs to be taken when interpreting median pay growth. As explored in more detail in [previous bulletins](#), mean and median pay growth are influenced by the relative pay of those entering and leaving the labour market. This means if the relative pay of inflows and outflows in particular sectors differs to the UK average, median pay growth could be higher or lower in these sectors. For example, median pay growth could be lower if outflows are higher paid than average, or conversely, could be higher if outflows are lower paid than average. Similar principles apply for inflows. The low median pay growth in the arts and entertainment sector may be a consequence of unusual relative pay of inflows or outflows in that sector.

**Figure 13: Median pay increased most in health and social work and least in the accommodation and food services sector**

Percentage change on same month last year, seasonally adjusted, UK, February 2021

**Figure 13: Median pay increased most in health and social work and least in the accommodation and food services sector**

Percentage change on same month last year, seasonally adjusted, UK, February 2021



Source: HM Revenue and Customs – Pay As You Earn Real Time Information

Notes:

1. The latest period is based on early data and therefore is more likely to be subject to slightly more significant revisions.
2. The UK median is shown here for comparative purposes, but it does not represent an “average” of median pay growth across the regions. It is statistically possible, for example, for median pay growth for the UK as a whole to be higher or lower than pay growth in all constituent parts of the UK.
3. Changes in growth rates are affected by changes in the base period (a year ago) as well as changes in the latest period.

## 7 . Age data

Data is now available for six age bands. These figures are calculated based on individuals' age at the time they receive a payment.

Of the 28.3 million payrolled employees in the UK in February 2021, 95.5% are aged 18 to 64 years. Of the 693,000 fall in UK employees between February 2020 and February 2021:

- 437,000 (63.1%) were under 25 years
- 174,000 (25.2%) were aged 25 to 34 years
- 109,000 (15.7%) were aged 35 to 49 years
- only 5,000 (0.7%) were aged 65 years and over.

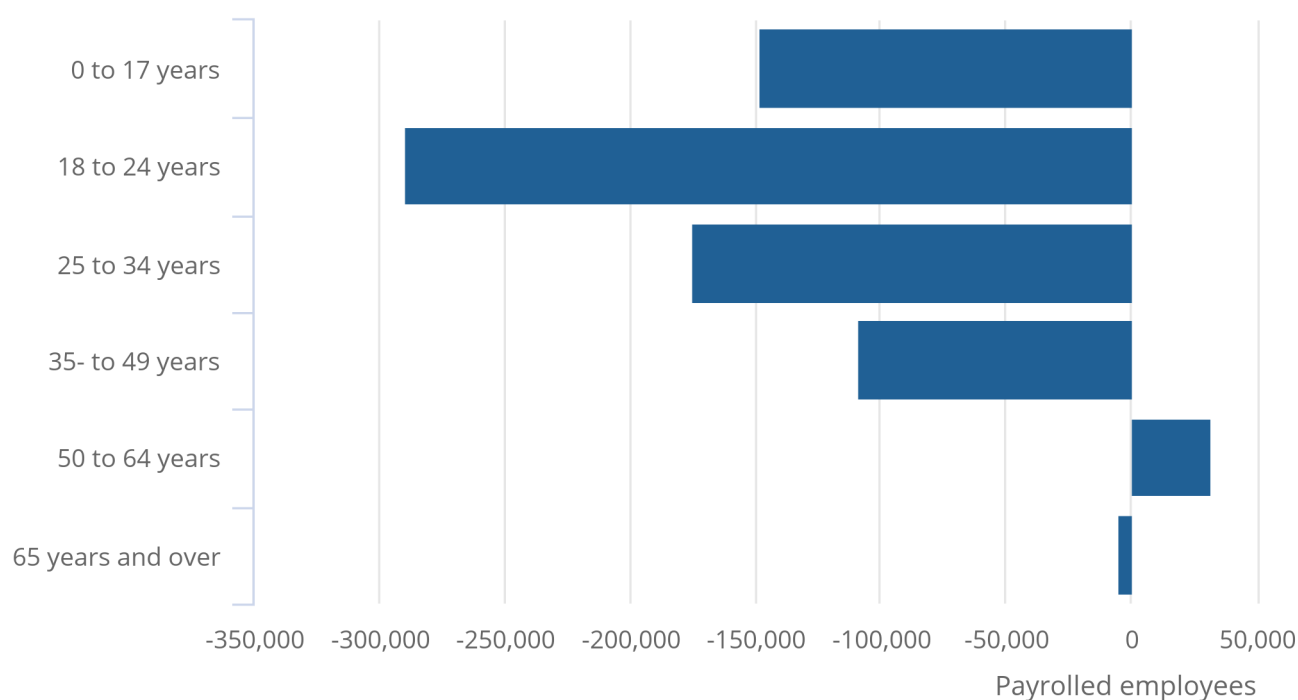
This decrease is net of an increase of 32,000 aged 50 to 64 years (Figure 14).

**Figure 14: The 18 to 24 years age group has seen the greatest decrease in payrolled employees since February 2020**

Payrolled employees, absolute change on February 2020, seasonally adjusted, UK, February 2021

## Figure 14: The 18 to 24 years age group has seen the greatest decrease in payrolled employees since February 2020

Payrolled employees, absolute change on February 2020, seasonally adjusted, UK, February 2021



Source: HM Revenue and Customs – Pay As You Earn Real Time Information

### Notes:

1. The latest period is based on early data and therefore is more likely to be subject to slightly more significant revisions.

The number of payrolled employees aged 50 years and over has increased at faster rates than the UK as a whole since 2017 (Figure 15). Since 2019, this is particularly true for those aged 65 years and over, which saw employee growth peak at 10.8% in January 2020. These periods of higher growth coincide with the [phased increase in State Pension age](#) between March 2019 and September 2020, from 65 to 66 years for both men and women. Conversely, growth in payrolled employees under 25 years has undergone long-term decline since 2017, particularly compared to the UK as a whole.



Since February 2020, annual employee growth has fallen to negative 35.1% for those aged under 18 years and negative 8.3% for those aged 18 to 24 years. These two groups have had the largest falls in employees in relative terms since the onset of the coronavirus (COVID-19) pandemic. Employee growth for those aged 65 years and over also fell sharply during April and May 2020, but recovered somewhat. Those aged 50 to 64 years saw a small rise in employee growth of 0.4% during this period.

### **Figure 15: Employee growth has fallen more sharply in younger age groups**

Percentage change on same month in previous year, seasonally adjusted, UK, January 2017 to February 2021

#### **Notes:**

1. The latest period is based on early data and therefore is more likely to be subject to slightly more significant revisions.

[Download the data](#)

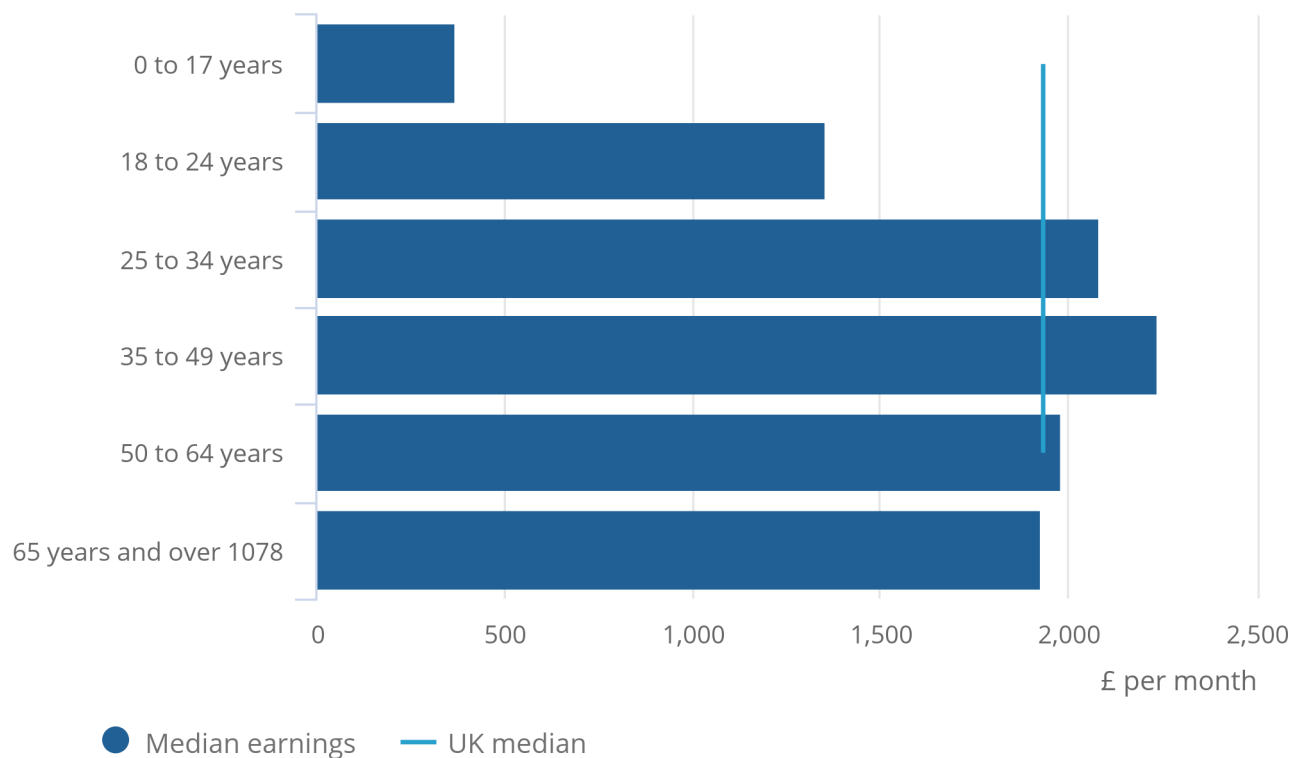
Median pay in February 2021 ranged from £370 for those under 18 years to £2,240 for those aged 35 to 49 years (Figure 16). Overall, median pay is higher in central age bands, of those studied.

**Figure 16: Median pay varies by age**

Median pay, seasonally adjusted, UK, February 2021

**Figure 16: Median pay varies by age**

Median pay, seasonally adjusted, UK, February 2021



Source: HM Revenue and Customs Pay As You Earn Real Time Information

**Notes:**

1. The latest period is based on early data and therefore is more likely to be subject to slightly more significant revisions.

## 8 . Earnings and employment data

[Earnings and employment from Pay As You Earn Real Time Information, non-seasonally adjusted](#) Dataset | Released on 23 March 2021 Earnings and employment statistics from Pay As You Earn (PAYE) Real Time Information (RTI) (Experimental Statistics), non-seasonally adjusted.

[Earnings and employment from Pay As You Earn Real Time Information, revision triangle](#) Dataset | Released on 23 March 2021 Revisions of earnings and employment statistics from Pay As You Earn (PAYE) Real Time Information (RTI) (Experimental Statistics).

[Earnings and employment from Pay As You Earn Real Time Information, seasonally adjusted](#) Dataset | Released on 23 March 2021 Earnings and employment statistics from Pay As You Earn (PAYE) Real Time Information (RTI) (Experimental Statistics), seasonally adjusted.

## 9 . Glossary

### Median monthly pay

Median monthly pay shows what a person in the middle of all employees would earn each month. The median pay is generally considered to be a more accurate reflection of the “average wage” because it discounts the extremes at either end of the scale.

### National Minimum Wage and National Living Wage

The National Minimum Wage (NMW) is a minimum amount per hour that most workers in the UK are entitled to be payrolled. There are different rates of minimum wage depending on a worker's age and whether they are an apprentice. The NMW applies to employees aged between 16 and 24 years. The government's National Living Wage (NLW) was introduced on 1 April 2016 and applies to employees aged 25 years and over.

On the Annual Survey of Hours and Earnings (ASHE) reference date in April 2020, the NMW and NLW rates were:

- £8.72 for employees aged 25 years and over
- £8.20 for employees aged 21 to 24 years
- £6.45 for employees aged 18 to 20 years
- £4.55 for employees aged 16 to 17 years
- £4.15 for apprentices aged 16 to 18 years and those aged 19 years or over who are in the first year of their apprenticeship

## Pay As You Earn

Pay As You Earn (PAYE) is the system employers and pension providers use to take Income Tax and National Insurance contributions before they pay wages or pensions to employees and pensioners. This publication relates to employees only and not pensioners. It was introduced in 1944 and is now the way most employees pay Income Tax in the UK.

## 10 . Measuring the data

### Data source and collection

The data for this release come from HM Revenue and Customs' (HMRC's) Pay As You Earn (PAYE) Real Time Information (RTI) system. They cover the whole population rather than a sample of people or companies, and they will allow for more detailed estimates of the population. The release is classed as [Experimental Statistics](#) as the methodologies used to produce the statistics are still in their development phase. As a result, the series are subject to revisions.

### Coverage

This publication covers employees payrolled by employers only. It does not cover self-employment income or income from other sources such as pensions, property rental and investments. Where individuals have multiple sources of income, only income from employers is included.

The figures in this release are for the period July 2014 to February 2021 and are seasonally adjusted.

### Upcoming changes

Future bulletins are planned to include additional statistics, such as more detailed geographic breakdowns, industry and demographic breakdowns. The focus and timing of these will be informed by user feedback. Please email [rtistatistics.enquiries@hmrc.gov.uk](mailto:rtistatistics.enquiries@hmrc.gov.uk) if you would like to offer feedback on how the contents can be improved in the future.

### Methodology

An accompanying article contains more information on the [calendarisation and imputation methodologies](#) used in this bulletin, alongside comparisons with other earnings and employment statistics and possible quality improvements in the future.

## 11 . Strengths and limitations

### Pre-release data

HM Revenue and Customs (HMRC) grants pre-release access to [official statistics](#) publications. As this is a joint release, and in accordance with the HMRC policy, pre-release access has been granted to a number of people to enable the preparation of statistical publications and ministerial briefing. Further details, including a [list of those granted access](#), can be found on [HMRC's website](#).

## Experimental Statistics status

This is a joint experimental release between HMRC and the Office for National Statistics (ONS). The existing monthly publications produced by the ONS remain the primary [National Statistics](#) for the labour market. The intention is that these new statistics will also be updated on a monthly basis.

The release is classed as [Experimental Statistics](#) as the methodologies used to produce the statistics are still in their development phase. This does not mean that the statistics are of low quality, but it does signify that the statistics are new and still being developed. As the methodologies are refined and improved, there may be revisions to these statistics.

Rather than waiting until the development work has been completed, the statistics are being published now to involve potential users in developing the statistics. We hope that this encourages users to provide us with their thoughts and suggestions on how useful the statistics are and what can be done to improve them. Comments can be sent by email to [rtistatistics.enquiries@hmrc.gov.uk](mailto:rtistatistics.enquiries@hmrc.gov.uk).

More information about [Experimental Statistics](#), including when they should be used and the differences between them and [National Statistics](#), is available.

## Strengths of the data

As Pay As You Earn (PAYE) Real Time Information (RTI) data cover the whole population, rather than a sample of people or companies, we are able to use these to produce estimates for geographic areas and other more detailed breakdowns of the population. The methods for producing such breakdowns are under development and we expect to include further statistics in a future release. These statistics can help inform decision-making across the country. They also have the potential to provide more timely estimates than existing measures.

These statistics also have the potential to replace some of those based on surveys, which could reduce the burden on businesses needing to fill in statistical surveys.

## Imputation and revisions

A limitation of the calendarisation used is that the figures for pay and numbers of employees in month  $t$  depend on payments made in month  $t$  plus 1. This means only around 80% of the data used in the calculation on month  $t$  statistics are available at the end of each month.

Rather than wait until all those remaining payment returns have been received, we have decided to produce a timelier measure of numbers of employees and median pay by imputing the values for missing returns. The data on which the statistics are based were extracted at the beginning of March 2021, which means around 1% to 2% of the data for January 2021 are imputed, while around 15% of the data for the “flash” February 2021 data are imputed. As a result, the figures in future releases will be updated as new payment returns are received, and the imputation payments can be replaced with actual data.

Starting with the December 2020 publication, we introduced a revisions policy. For each publication, we incorporate new input data only for the latest two tax years. In May of each year, new input data will be incorporated for the whole data time series. The benefit of introducing this revisions policy is that we are able to use the processing time saved to produce and publish more detailed breakdowns.

## Seasonal adjustment

The seasonal adjustment applied in this bulletin follows established best practice. This approach assumes that any seasonal patterns remain broadly consistent over time. If the seasonal pattern changes in strength, this will be represented as greater volatility in the seasonally adjusted figures. Both the seasonal and non-seasonally adjusted data sets are released alongside this bulletin.

## Differences compared with the Labour Force Survey and Average Weekly Earnings statistics

Further information about the methodology used and comparisons with the ONS's [Labour Force Survey \(LFS\)](#) and [Average Weekly Earnings](#) can be found in [New methods for monthly earnings and employment estimates from Pay As You Earn Real Time Information \(PAYE RTI\) data: December 2019](#).

[Comparison of labour market data sources](#) shows the strengths and weaknesses of these sources and other labour market data sources, including the advantages of new administrative data sources and limitations of some of our published figures.

## 12 . Related links

### [Labour market overview: March 2021](#)

Bulletin | Released 23 March 2021

Estimates of employment, unemployment, economic inactivity and other employment-related statistics for the UK.

### [Employment in the UK: March 2021](#)

Bulletin | Released 23 March 2021

Estimates of employment, unemployment and economic inactivity for the UK.

### [Labour market in the regions of the UK: March 2021](#)

Bulletin | Released 23 March 2021

Regional breakdowns of changes in UK employment, unemployment and economic inactivity.

### [Average weekly earnings in Great Britain: March 2021](#)

Bulletin | Released 23 March 2021

Estimates of growth in earnings for employees before tax and other deductions from pay.

### [Vacancies and jobs in the UK: March 2021](#)

Bulletin | Released 23 March 2021

Estimates of the number of vacancies and jobs for the UK.