How many jobs, how much earned?

First findings from the Annual Survey of Hours and Earnings linked to PAYE data from HMRC

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This Data Insight explores the number of jobs and the earnings that employees receive over the course of a year. It presents information from the Annual Survey of Hours and Earnings (ASHE) linked to Pay-As-You-Earn (PAYE) data from HM Revenue and Customs (HMRC) for 2014-2019 in Great Britain.

Summary

The new ASHE linked to PAYE dataset – covering England, Scotland, and Wales – allows us to track all episodes of paid employment for a large sample of individuals, along with the earnings they receive throughout the entire duration of those episodes. This uses the same administrative data that the government relies on for taxation purposes, providing unique insights into the nature of employment and earnings variability in Great Britain.

The new dataset holds substantial potential for researchers and policymakers, allowing evidence gaps to be filled and supporting more robust policy evaluation.[1] In this Data Insight, we explore the prevalence of earnings and job instability for employees over the course of their working years. Our findings demonstrate that a substantial minority of workers not only hold several jobs in a year but also experience many weeks without a job, especially among those on relatively low rates of pay.

Background

Previously, if somebody wanted to understand how much people work over the course of the year in the UK, they would rely on work history data collected from household surveys, such as the UK Household Longitudinal Study. While valuable in many ways, these data sources are limited in several ways. For example, the sample sizes are often small, and relying on people's memory can lead to mistakes in how work spells and hours are recorded (Jacobs, 2002). Further, this data only records earnings periodically, usually for jobs that survey respondents hold at the time of the interview.

For the first time, as part of the ADR England-funded Wage and Employment Dynamics project, researchers now have access to HMRC's PAYE micro-data for the 1% of employees in the UK who are also eligible for the ASHE. This data, accessible to accredited researchers via the Office for National Statistics (ONS) Secure Research Service, offers new insights into patterns of employment and earnings for individuals across the entire 2014-2019 period.

[1] Please see the Data Explained for this. The data can be accessed by accredited researchers via the ONS Secure Research Service.

What we did

This Data Insight provides a glimpse of the potential offered by this new dataset, by presenting some simple descriptive information on employment and earnings patterns for individuals in the ASHE-PAYE linked data. We have focused on the subset of individuals in each tax year over the period 2014-2019 who are observed with at least one employee job in the year. This means that at least one payslip for a job can be found in the HMRC-PAYE data for a given tax year for an individual in the 1% population who is eligible to appear in ASHE. Further, we carry out some analysis for the subset of those people who also have a record in ASHE for the same year, because they held a job on the ASHE survey reference date and their employer responded to that survey.[2] Employees observed in ASHE have been linked to the PAYE data through an encrypted National Insurance Number.[3] We chose to limit our analysis to the working age population of Great Britain, namely those aged 16-64 years on the ASHE survey reference date in April of the tax year.

Our analysis has two parts. The first examines employment patterns. The second examines the gross earnings linked to those employment patterns. We examine employment patterns after aggregating information for each individual employee on an annual basis, then we pool all the person-year observations for the five available tax years. We use these person-year observations to describe what the sample looks like on two dimensions of working-age people's years that are not available comprehensively or accurately from other datasets for Great Britain.

First, we look at the extent to which people are employed by different employers in a given year. People may work for different employers either consecutively, by moving from one employer to another, or because they work for multiple employers at the same time. Then we look at the extent to which people work for only part of the year, either because there are gaps between their jobs or because they had casual or seasonal jobs. We examine these patterns of multiple job holding and interrupted employment by gender and age.

Turning to the second part of our analysis, which deals with employee earnings, we show how annual employment patterns are associated with individuals' gross annual earnings (using PAYE Real Time Information) and hourly pay rates (using ASHE data on hours and earnings). We then disaggregate these patterns based on the industry the individual works in according to their main job observation from ASHE.

[2] Although employers are required under statute to complete ASHE for eligible employees that they employ, employer non-response is non-trivial. See Forth et al (2024) where we develop sampling weights to account for non-response, both cross-sectionally and longitudinally. However, we have not developed weights for the ASHE-PAYE Real Time Information sample, so these first findings are unweighted.

[3] In principle, all of those who appear in ASHE in a given year should also appear in the PAYE records. However, we were unable to identify approximately 20% of ASHE observations in the PAYE Real Time Information records.

Finally, we look at the proportions of people paid at their respective age-dependent wage floor, the national minimum/living wage rate, according to their main ASHE job in April, and how this varies by gender and the number of different jobs (employers) and weeks they worked over the rest of the tax year. To determine whether a job is paid at the national minimum or living wage, we use the same definition of an hourly wage as the Low Pay Commission and ONS when they analyse the ASHE datasets, and we consider whether the derived hourly wage rate for an individual is no more than five pence above their relevant age-dependent minimum wage.

What we found

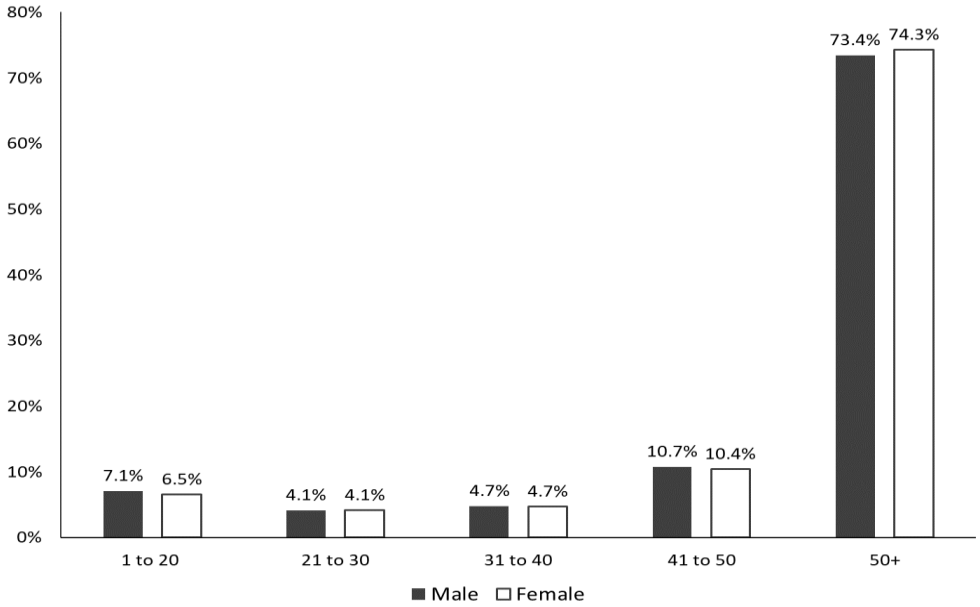
One in ten working-age people are in paid employment for fewer than 31 weeks a year

We begin by examining the number of weeks that men and women, aged 16-64, were in an employee job over the course of a year, conditional on having at least one job (recorded in a PAYE payslip).

Figure 1 and the final column of Table 1 show the percentages of person-year observations in the ASHE-PAYE linked data that are observed holding at least one job for different ranges of weeks over the course of a tax year. On average, in a given tax year over the period 2014/15 to 2018/19, roughly three-quarters of men (73.4%) and women (74.3%) aged 16-64 in Great Britain, who had at least one job, were in paid employment for nearly the whole year (50+ weeks). However, around one-in-ten (11.2% of men and 10.6% of women) were in paid employment for less than 31 weeks in a year.

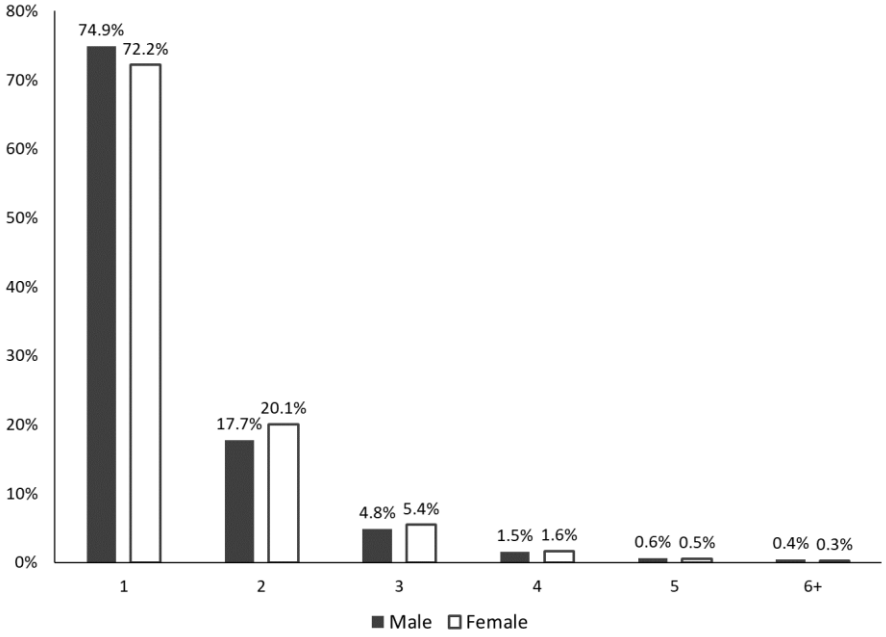
Figure 2 and the remainder of Table 1 show a further breakdown according to the numbers of different employers that those individuals with at least one job worked for over the course of a year. Around three-quarters of employees (74.9% of men and 72.2% of women) had a single employer; one-fifth of women (20.1%) and one-sixth of men (17.7%) had two employers over the course of a year, while the remaining 7-8% had at least three different employers.

Figure 1: Weeks with at least one employee job during a tax year, ages 16-64, Great Britain, 2014/15-2018/19



Notes: author calculations using HMRC PAYE. The analysis sample contains 687,099 and 685,442 male and female person-year observations, respectively. See also Table 1.

Figure 2: Number of different employee jobs held during a tax year, ages 16-64, Great Britain, 2014/15-2018/19



Notes: author calculations using HMRC PAYE. The analysis sample contains 687,099 and 685,442 male and female person-year observations, respectively. See also Table 1.

Table 1: Weeks with a job, and number of jobs held during a tax year, ages 16-64, Great Britain, 2014/15-2018/19

(a) Male employees

Male	Number of jobs						
Weeks with a job	1	2	3	4	5	6+	Total
1 to 20	5.7%	1.1%	0.2%	0.1%	0.0%	0.0%	7.1%
21 to 30	2.6%	1.0%	0.3%	0.1%	0.0%	0.0%	4.1%
31 to 40	2.6%	1.3%	0.5%	0.2%	0.1%	0.1%	4.7%
41 to 50	6.2%	2.7%	1.1%	0.4%	0.2%	0.1%	10.7%
50+	57.8%	11.7%	2.7%	0.8%	0.3%	0.2%	73.4%
Total	74.9%	17.7%	4.8%	1.5%	0.6%	0.4%	100.0%

(b) Female employees

Female	Number of jobs						
Weeks with a job	1	2	3	4	5	6+	Total
1 to 20	5.5%	0.9%	0.1%	0.0%	0.0%	0.0%	6.5%
21 to 30	2.7%	1.0%	0.3%	0.1%	0.0%	0.0%	4.1%
31 to 40	2.6%	1.3%	0.5%	0.2%	0.1%	0.0%	4.7%
41 to 50	5.9%	2.8%	1.1%	0.4%	0.1%	0.1%	10.4%
50+	55.4%	14.0%	3.5%	0.9%	0.3%	0.2%	74.3%
Total	72.2%	20.1%	5.4%	1.6%	0.5%	0.3%	100.0%

Notes: author calculations using HMRC PAYE. The analysis sample of person-years that are observed with at least one employee job (payslip) during a tax year contains 687,099 and 685,442 observations for men and women, respectively.

Those aged under 31 are more likely to hold more than one job during the year

Appendix Tables A1-A3 repeat the Table 1 analysis for three different age groups (16-30, 31-45 and 46-65) respectively, which approximately split the sample into thirds. Those aged under 31 are more likely to hold more than one job during the year and are also much more likely to work for only part of the year. However, there are few differences across the two older age groups.

One might imagine that employment stability, as indicated by the percentage of time one spends in employment throughout the year, as well as the number of employers one works for, may be related to the gross hourly earnings in a person's main job. This could be due to a variety of reasons. First, if an employee is low paid in their main job, they may need to supplement those earnings with additional jobs. Another possibility is that higher paid jobs are more stable than lower paid jobs.

Male employees receive 20 percent more than women in gross hourly earnings

Tables 2a and 2b, therefore, show mean gross hourly earnings (nominal, excluding overtime), for men and women separately, according to both the weeks spent in employment over the year and multiple job holding. The tables reveal several important 'facts' about hourly earnings in Great Britain for those aged 16-64 who have had at least one job in the year. There is a substantial raw gender wage gap. Across all employees in the sample, male employees receive 20 percent more than women in gross hourly earnings (£15.21/£12.63). Although some literature indicates that much of the gender pay gap arises due to lower work experience among women compared with men, the gap is apparent regardless of the number of weeks the employee is in a job over the course of the year. Indeed, it is largest among those who are in continuous employment for 50 or more weeks of the year.

Hourly earnings rise with employment stability

Among both men and women, hourly earnings rise with employment stability, as indicated by the number of weeks worked in the year. This is consistent with the idea that more stable jobs are 'better' jobs, and the idea that workers accumulate job-specific skills over time that they can convert into higher earnings. The table also indicates that hourly earnings fall with the number of jobs held. This is consistent with the idea that those with the lowest earnings in their main job are driven to seek additional employment elsewhere.

Table 2: Hourly wage by gender, weeks with a job, and number of jobs held during a tax year, ages 16-64, Great Britain, 2014/15-2018/19

(a) Male employees

Male	Number of jobs						
Weeks with a job	1	2	3	4	5	6+	Total
1 to 20	12.40	10.72	10.12	8.74			12.09
21 to 30	13.40	10.72	9.54	9.33			12.41
31 to 40	13.15	11.26	10.13	9.25	8.87	8.32	11.91
41 to 50	14.69	12.55	10.69	9.83	9.98	9.31	13.58
50+	16.08	14.38	12.29	11.87	11.96	12.06	15.63
Total	15.80	13.84	11.71	11.03	10.95	10.76	15.21

(b) Female employees

Female	Number of jobs						
Weeks with a job	1	2	3	4	5	6+	Total
1 to 20	10.80	10.66	9.62				10.75
21 to 30	11.20	10.60	9.52				10.94
31 to 40	10.88	10.21	10.34	9.09	9.45	10.38	10.54
41 to 50	12.06	11.09	10.26	9.47	10.00	9.59	11.53
50+	13.21	12.09	11.25	10.66	10.54	11.00	12.88
Total	13.00	11.85	10.99	10.29	10.31	10.62	12.63

Notes: author calculations using the ASHE-HMRC PAYE. The analysis sample of person-years that have an ASHE job observation in the corresponding tax year contains 326,998 and 356,956 observations for men and women, respectively. The blank cells are omitted for statistical disclosure reasons.

People who have multiple jobs and low numbers of working weeks are more reliant on the statutory minimum wage

A policy that provides some protection against earnings variability is the national minimum wage, first introduced in 1999, and subsequently supplemented by the national living wage offering higher rates to over-25s from 2016. Table 3 shows the percentages of people working at the statutory wage floor relevant to their age in their main job in ASHE. The table shows how this varies by gender, weeks with an employee job during the year, and the number of different jobs the employee held in the year. It is apparent that those who work fewer weeks and those with a larger number of employers over the course of the year are more reliant on the statutory minimum wage to maintain their hourly earnings. For example, only 5% of men working at least 50 weeks per year earn the statutory minimum, compared to 14% of men working between 1 and 20 weeks in the year. The equivalent figures for women are 8% and 19%.

Some industry sectors are associated with less stable employee earnings

Finally, we turn to industry wage differentials. For many years, studies have indicated that earnings vary substantially according to the industry where an employee works (Krueger and Summers, 1988). There is substantial variance in industry earnings at the 2-digit level of the Standard Industrial Classification (SIC) of UK industries (see Appendix Table A4). **Error! Reference source not found.**Figure 3 plots the average nominal gross hourly wage (excluding overtime) by 2-digit industry for jobs recorded in ASHE at the start of the tax year, against the average nominal gross annual earnings that the people working in those industries at the start of the year went on to accumulate from all jobs in that year, according to HRMC PAYE data. The axes in Figure 2 are drawn on a log scale. Results are presented separately for men (panel a) and women (panel b).

The large sample size of ASHE, pooled over five years, allows us to do this analysis. However, we still exclude industries where there were fewer than 100 employee observations over the five-year sample period for either of the pay statistics. We also dropped some outliers in ASHE that reported hourly earnings in excess of £1,000 before calculating any averages.

We see there is a strong relationship between the two different industry-related measures of average pay from the two different data sources: people working in industries with high average hourly wages towards the start of a tax year tend to go on to have high average employee earnings over the whole tax year. The correlation between an industry's average hourly wage and the average annual wages of the people working in the industry is 0.96 for women and 0.95 for men. That this correlation is less than one implies that there are some industries where employees are less likely to earn consistent hourly wages for the whole year – perhaps because they have gaps in employment, or because they don't work full-time for the whole year.

The diagonal dashed lines in Figure 3 plot the implied gross nominal annual earnings in an industry sector if a person worked at the average hourly wage for their gender and industry for 1,950 hours (approx. a full working year, at 37.5 hours per week and 52 weeks a year). This gives us some indication of which industry sectors tend to be associated with a person going on to earn relatively more or less, per available working hour, than they were earning per hour actually worked in the April reference period in their main job.

Comparing annual earnings and hourly pay in education suggests unstable employment in this sector

Comparing between the male and female plots, many more of the industry-level averages of nominal annual gross hourly earnings for women lie well below the dotted line than for men. Since the results above show that working-age women tend to have at least one employee job in similar numbers of weeks over the year as men do, this is likely to be driven by the greater prevalence of part-time work among women.

There are some notable industry sectors among men where the people working in their main job in April go on to have much higher annual earnings, on average, than what those hourly wage rates from ASHE would imply for a "full" year of work. These include Water Collection, Treatment and Supply (36), Information Service Activities (63), and Activities Auxiliary to Financial Services and Insurance (66). There are a number of reasons as to why this might occur. They may do more working hours, have a higher likelihood of promotion in the course of a year, or work in other jobs during the year at a higher rate of pay. By contrast, there are some notable industries where men working there in their main job in April go on to have much lower annual earnings, on average, than what those hourly wage rates from ASHE would imply for a "full" year of work. These include Air Transport (51) and Education (85). This suggests that, in these industries, people work fewer hours over the year, or that they hold multiple jobs over the year, some of which are lower paid.

Table 3: Percentage of workers paid at the national minimum/living wage according to their ASHE job, by weeks with a job, and number of jobs held during a tax year, ages 16-64, Great Britain, 2014/15-2018/19

(a) Male employees

Male	Number of jobs						
Weeks with a job	1	2	3	4	5	6+	Total
1 to 20	13.56	17.76	16.56	22.22			14.26
21 to 30	11.53	15.49	19.39	12.16			13.14
31 to 40	12.72	14.48	15.89	19.02	17.48	23.08	14.11
41 to 50	6.46	10.55	13.99	15.51	16.00	13.62	8.54
50+	4.43	7.61	10.62	11.85	12.67	15.25	5.24
Total	5.04	8.67	12.00	13.44	14.71	15.97	6.10

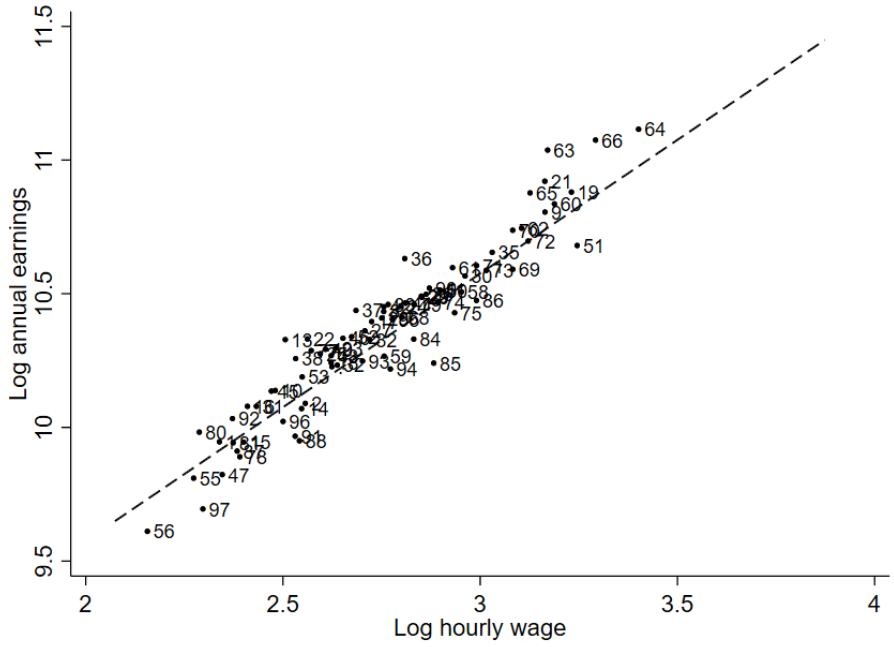
(b) Female employees

Female	Number of jobs						
Weeks with a job	1	2	3	4	5	6+	Total
1 to 20	19.12	16.37	12.62				18.73
21 to 30	15.12	17.16	16.67				15.75
31 to 40	15.37	16.82	14.59	19.77	10.23	16.67	15.83
41 to 50	11.06	13.86	14.52	17.51	16.78	22.38	12.43
50+	6.90	10.16	12.05	13.90	15.78	16.42	7.84
Total	7.73	11.07	12.70	15.17	15.70	17.88	8.77

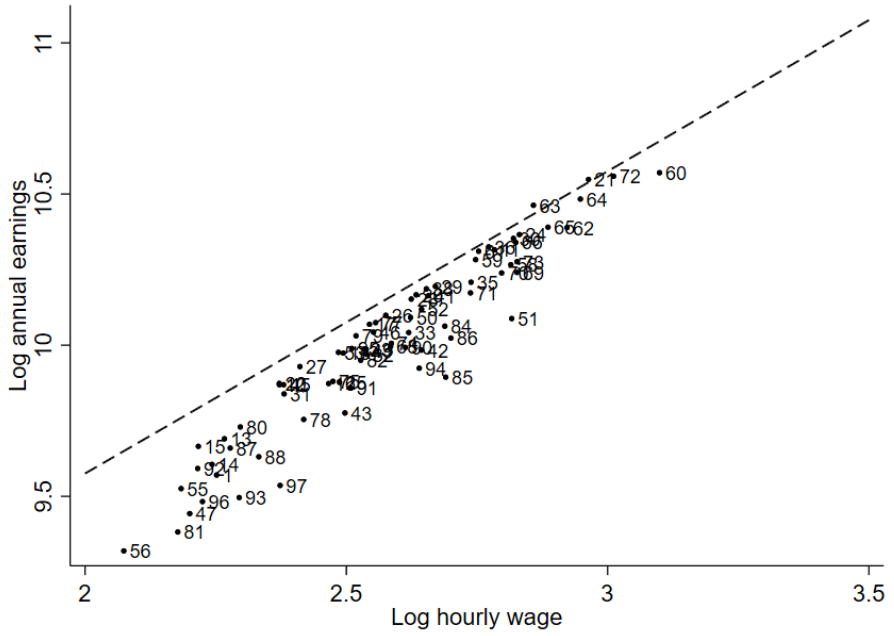
Notes: author calculations using ASHE-HMRC PAYE. The analysis sample of person-years that have an ASHE job observation in the corresponding tax year contains 326,184 and 353,090 male and female observations, respectively. The blank cells are omitted for statistical disclosure reasons.

Figure 3: Average annual nominal gross hourly earnings (ASHE) and annual gross nominal earnings (HMRC), by industry sector, ages 16-64, Great Britain, 2014/15-2018/19

(a) Male employees



(b) Female employees



Notes: author calculations using ASHE-HMRC PAYE. Labels give the 2-digit SIC code for an industry. The statistics and employee sample sizes are shown in Appendix Table 4, along with the SIC names of the industry sectors. The diagonal dashed lines plot the implied average earnings in an industry sector if a person worked at the average hourly wage multiplied by 1,950 hours (approx. a full working year, at 37.5 hours per week and 52 weeks a year).

Why it matters

We have only presented descriptive information on employment and earnings patterns from the new ASHE-HMRC Real Time Information data, and further data improvements are expected. However, these first findings provide some insight into what can be learned from tax-based information on employment spells and earnings, when combined with information on the demographic and job-related characteristics contained in the Annual Survey of Hours and Earnings (ASHE).

There are no other data sources that can provide such precise and detailed information on employment patterns over the course of a year, both within and across employers, as well as on the gross earnings over the course of a year from all employee jobs.
We have briefly illustrated the power of such data, focusing on those with at least one job over the course of a year. Our findings highlight how common earnings and job instability are for a minority of workers; the prevalence of multiple job holding over the course of a year; and the value of the national minimum wage and national living wage in providing a degree of earnings security – particularly for those whose employment patterns are least stable.

What next?

These datasets are now available to accredited researchers via the Office for National Statistics Secure Research Service and can support far more sophisticated analyses than those presented here. The dataset can be enhanced, for example, by including weights to account for missing responses, linking it to business survey and administrative records, and leveraging the full employer-employee longitudinal nature of the ASHE. We will also be providing a suite of other similar data, including HMRC self-assessment return data linked to ASHE for the ASHE-eligible population. This will enable analysts to assess the importance of self-employment as well as earnings.

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Appendix

Table A1: Weeks with a job, and number of jobs held during a tax year, ages 16-30, Great Britain, 2014/15-2018/19

(a) Male employees

Male	Number of jobs						
Weeks with a job	1	2	3	4	5	6+	Total
1 to 20	8.2%	1.8%	0.4%	0.1%	0.0%	0.0%	10.6%
21 to 30	4.0%	1.8%	0.6%	0.2%	0.1%	0.1%	6.8%
31 to 40	4.0%	2.3%	1.0%	0.4%	0.2%	0.1%	7.9%
41 to 50	5.9%	4.0%	1.8%	0.7%	0.3%	0.2%	12.9%
50+	42.5%	13.9%	3.8%	1.1%	0.4%	0.2%	61.8%
Total	64.6%	23.8%	7.6%	2.5%	0.9%	0.7%	100.0%

(b) Female employees

Female	Number of jobs						
Weeks with a job	1	2	3	4	5	6+	Total
1 to 20	7.8%	1.5%	0.3%	0.0%			9.7%
21 to 30	4.1%	1.8%	0.6%	0.2%			6.7%
31 to 40	3.9%	2.4%	0.9%	0.3%	0.1%	0.1%	7.7%
41 to 50	5.6%	4.3%	1.9%	0.7%	0.2%	0.1%	12.9%
50+	40.2%	16.0%	4.9%	1.4%	0.4%	0.2%	63.0%
Total	61.6%	26.1%	8.5%	2.6%	0.8%	0.4%	100.0%

Notes: Notes: author calculations using HMRC PAYE. The analysis sample of person-years that are observed with at least one employee job (payslip) during a tax year contains 223,728 and 228,385 observations for men and women, respectively. The blank cells are omitted for statistical disclosure reasons, if they contain fewer than 100 observations in the dataset.

Table A2: Weeks with a job, and number of jobs held during a tax year, ages 31-45, Great Britain, 2014/15-2018/19

(a) Male employees

Male	Number of jobs						
Weeks with a job	1	2	3	4	5	6+	Total
1 to 20	4.3%	0.8%	0.2%	0.0%	0.0%	0.0%	5.4%
21 to 30	1.9%	0.6%	0.2%	0.1%	0.0%	0.0%	2.9%
31 to 40	1.9%	0.9%	0.4%	0.1%	0.1%	0.1%	3.4%
41 to 50	5.9%	2.3%	0.9%	0.4%	0.1%	0.1%	9.8%
50+	63.4%	11.6%	2.5%	0.7%	0.2%	0.2%	78.6%
Total	77.3%	16.3%	4.1%	1.3%	0.5%	0.4%	100.0%

(b) Female employees

Female	Number of jobs						
Weeks with a job	1	2	3	4	5	6+	Total
1 to 20	4.4%	0.6%	0.1%	0.0%			5.1%
21 to 30	2.1%	0.6%	0.2%	0.1%			3.0%
31 to 40	2.1%	0.9%	0.3%	0.1%	0.0%	0.0%	3.5%
41 to 50	6.0%	2.4%	0.8%	0.3%	0.1%	0.1%	9.6%
50+	61.0%	13.7%	3.0%	0.8%	0.2%	0.1%	78.8%
Total	75.6%	18.2%	4.4%	1.2%	0.4%	0.2%	100.0%

Notes: author calculations using HMRC PAYE. The analysis sample of person-years that are observed with at least one employee job (payslip) during a tax year contains 235,928 and 228,872 observations for men and women, respectively. The blank cells are omitted for statistical disclosure reasons, if they contain fewer than 100 observations in the dataset.

Table A3: Weeks with a job, and number of jobs held during a tax year, ages 46-64, Great Britain, 2014/15-2018/19

(a) Male employees

Male	Number of jobs						
Weeks working	**1**	**2**	**3**	**4**	**5**	**6+**	**Total**
1 to 20	4.7%	0.6%	0.1%	0.0%			5.4%
21 to 30	1.9%	0.5%	0.1%	0.1%			2.6%
31 to 40	1.9%	0.7%	0.3%	0.1%	0.0%	0.0%	3.0%
41 to 50	6.8%	1.8%	0.6%	0.2%	0.1%	0.1%	9.6%
50+	67.2%	9.6%	1.8%	0.5%	0.2%	0.1%	79.3%
Total	82.5%	13.2%	2.9%	0.8%	0.3%	0.2%	100.0%

(b) Female employees

Female	Number of jobs						
Weeks working	**1**	**2**	**3**	**4**	**5**	**6+**	**Total**
1 to 20	4.3%	0.5%	0.1%				4.8%
21 to 30	2.0%	0.5%	0.1%				2.7%
31 to 40	1.8%	0.7%	0.2%	0.1%	0.0%	0.0%	2.9%
41 to 50	6.1%	1.8%	0.6%	0.2%	0.1%	0.0%	8.8%
50+	65.1%	12.4%	2.5%	0.6%	0.2%	0.1%	80.9%
Total	79.3%	15.9%	3.5%	0.9%	0.3%	0.2%	100.0%

Notes: author calculations using HMRC PAYE. The analysis sample of person-years that are observed with at least one employee job (payslip) during a tax year contains 227,443 and 228,185 observations for men and women, respectively. The blank cells are omitted for statistical disclosure reasons, if they contain fewer than 100 observations in the dataset.

Table A4: SIC 2-digit key, statistics, and sample sizes for Figure 3

2 digit SIC code	Industry	Gender (0=female, 1=male)	Annual earnings (£)	Hourly pay (£)	Obs. for earnings	Obs. for hourly wage
1	Crop and animal production, hunting and related service activities	0	£14,335	£9.50	1209	1193
10	Manufacture of food products	0	£19,326	£10.72	3737	3644
11	Manufacture of beverages	0	£30,208	£16.17	341	339
13	Manufacture of textiles	0	£16,161	£9.65	455	444
14	Manufacture of wearing apparel	0	£14,846	£9.42	357	354
15	Manufacture of leather and related products	0	£15,763	£9.18	111	109
16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	0	£19,404	£11.78	250	247
17	Manufacture of paper and paper products	0	£23,602	£12.73	406	395
18	Printing and reproduction of recorded media	0	£21,461	£12.11	682	672
20	Manufacture of chemicals and chemical products	0	£26,023	£13.92	797	793
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	0	£38,120	£19.36	554	546
22	Manufacture of rubber and plastic products	0	£19,410	£10.71	912	889
23	Manufacture of other non-metallic mineral products	0	£21,753	£12.61	405	402
24	Manufacture of basic metals	0	£31,761	£16.96	370	367
25	Manufacture of fabricated metal products, except machinery and equipment	0	£19,475	£12.02	1040	1034

26	Manufacture of computer, electronic and optical products	0	£24,317	£13.14	691	682
27	Manufacture of electrical equipment	0	£20,524	£11.15	550	541
28	Manufacture of machinery and equipment n.e.c	0	£25,658	£13.79	830	824
29	Manufacture of motor vehicles, trailers and semi-trailers	0	£26,758	£14.44	584	581
30	Manufacture of other transport equipment	0	£31,360	£16.77	633	631
31	Manufacture of furniture	0	£18,748	£10.81	421	418
32	Other manufacturing	0	£21,370	£12.67	650	644
33	Repair and installation of machinery and equipment	0	£22,972	£13.73	357	350
35	Electricity, gas, steam and air conditioning supply	0	£27,129	£15.47	1326	1319
36	Water collection, treatment and supply	0	£30,493	£15.99	287	285
38	Waste collection, treatment and disposal activities; materials recovery	0	£26,543	£14.20	466	461
41	Construction of buildings	0	£25,942	£14.25	1675	1658
42	Civil engineering	0	£21,671	£14.06	836	834
43	Specialised construction activities	0	£17,603	£12.15	2215	2202
45	Wholesale and retail trade and repair of motor vehicles and motorcycles	0	£19,327	£10.80	2583	2571
46	Wholesale trade, except of motor vehicles and motorcycles	0	£23,001	£12.83	9719	9607
47	Retail trade, except of motor vehicles and motorcycles	0	£12,618	£9.03	49894	49511
49	Land transport and transport via pipelines	0	£21,628	£12.64	2361	2333
50	Water transport	0	£24,141	£13.77	124	123
51	Air transport	0	£24,055	£16.72	963	955
52	Warehousing and support activities for transportation	0	£24,806	£14.07	2515	2487
53	Postal and courier activities	0	£21,513	£12.00	1425	1413
55	Accommodation	0	£13,706	£8.88	5510	5427
56	Food and beverage service activities	0	£11,153	£7.96	19431	19251
58	Publishing activities	0	£28,753	£16.69	1635	1605
59	Motion picture, video and television programme production, sound recording and music publishing activities	0	£29,230	£15.60	714	706
60	Programming and broadcasting activities	0	£38,973	£22.18	505	504
61	Telecommunications	0	£30,055	£15.69	1701	1690
62	Computer programming, consultancy and related activities	0	£32,501	£18.58	3332	3309
63	Information service activities	0	£34,994	£17.43	590	574
64	Financial service activities, except insurance and pension funding	0	£35,721	£19.06	7471	7423
65	Insurance, reinsurance and pension funding, except compulsory social security	0	£32,545	£17.92	1398	1379
66	Activities auxiliary to financial services and insurance activities	0	£30,943	£16.85	4538	4478
68	Real estate activities	0	£21,931	£13.26	5044	4995
69	Legal and accounting activities	0	£28,023	£16.89	8528	8404
70	Activities of head offices; management consultancy activities	0	£27,974	£16.40	4466	4420
71	Architectural and engineering activities; technical testing and analysis	0	£26,188	£15.45	3194	3167
72	Scientific research and development	0	£38,522	£20.31	1290	1278

73	Advertising and market research	0	£29,037	£16.89	1557	1547
74	Other professional, scientific and technical activities	0	£22,165	£13.28	1362	1350
75	Veterinary activities	0	£19,543	£11.87	1236	1205
77	Rental and leasing activities	0	£23,734	£12.88	1027	1021
78	Employment activities	0	£17,230	£11.23	8208	8104
79	Travel agency, tour operator and other reservation service and related activities	0	£22,722	£12.41	1437	1411
80	Security and investigation activities	0	£16,806	£9.95	607	607
81	Services to buildings and landscape activities	0	£11,873	£8.82	6488	6434
82	Office administrative, office support and other business support activities	0	£20,952	£12.52	4413	4358
84	Public administration and defence; compulsory social security	0	£23,460	£14.71	14966	15271
85	Education	0	£19,818	£14.73	64484	64055
86	Human health activities	0	£22,553	£14.88	48153	47662
87	Residential care activities	0	£15,674	£9.75	15743	15426
88	Social work activities without accommodation	0	£15,228	£10.30	15751	15487
90	Creative, arts and entertainment activities	0	£21,864	£13.64	673	663
91	Libraries, archives, museums and other cultural activities	0	£19,111	£12.28	854	850
92	Gambling and betting activities	0	£14,649	£9.17	1599	1569
93	Sports activities and amusement and recreation activities	0	£13,305	£9.92	3975	3945
94	Activities of membership organisations	0	£20,409	£14.01	2839	2835
95	Repair of computers and personal and household goods	0	£21,790	£12.31	293	285
96	Other personal service activities	0	£13,128	£9.25	4524	4447
97	Activities of households as employers of domestic personnel	0	£13,850	£10.73	1500	1490
1	Crop and animal production, hunting and related service activities	1	£20,872	£10.37	2333	2330
2	Forestry and logging	1	£24,101	£12.89	191	190
8	Other mining and quarrying	1	£33,980	£15.73	400	398
9	Mining support service activities	1	£49,283	£23.67	216	213
10	Manufacture of food products	1	£25,295	£11.95	7098	7034
11	Manufacture of beverages	1	£36,815	£18.13	755	755
13	Manufacture of textiles	1	£30,591	£12.25	697	690
14	Manufacture of wearing apparel	1	£23,632	£12.77	157	158
15	Manufacture of leather and related products	1	£20,846	£11.02	127	126
16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	1	£23,838	£11.13	1221	1221
17	Manufacture of paper and paper products	1	£32,724	£15.25	1162	1159
18	Printing and reproduction of recorded media	1	£28,065	£13.76	1576	1580
19	Manufacture of coke and refined petroleum products	1	£53,114	£25.31	173	173
20	Manufacture of chemicals and chemical products	1	£35,828	£17.32	1483	1480
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	1	£55,319	£23.66	684	682

22	Manufacture of rubber and plastic products	1	£30,670	£12.96	3175	3164
23	Manufacture of other non-metallic mineral products	1	£29,623	£13.92	1668	1661
24	Manufacture of basic metals	1	£34,645	£16.42	1606	1605
25	Manufacture of fabricated metal products, except machinery and equipment	1	£29,014	£13.39	5788	5752
26	Manufacture of computer, electronic and optical products	1	£36,238	£17.51	2190	2187
27	Manufacture of electrical equipment	1	£31,614	£14.99	1672	1668
28	Manufacture of machinery and equipment nec	1	£33,168	£15.65	3871	3865
29	Manufacture of motor vehicles, trailers and semi-trailers	1	£35,992	£17.30	3883	3873
30	Manufacture of other transport equipment	1	£38,806	£19.33	3376	3366
31	Manufacture of furniture	1	£23,839	£11.39	1406	1391
32	Other manufacturing	1	£27,806	£13.98	1086	1079
33	Repair and installation of machinery and equipment	1	£34,886	£15.90	1635	1633
35	Electricity, gas, steam and air conditioning supply	1	£42,399	£20.70	2997	2996
36	Water collection, treatment and supply	1	£41,422	£16.59	726	730
37	Sewerage	1	£34,115	£14.66	264	264
38	Waste collection, treatment and disposal activities; materials recovery	1	£28,492	£12.58	2108	2102
41	Construction of buildings	1	£35,054	£16.63	5132	5115
42	Civil engineering	1	£34,587	£15.73	3578	3565
43	Specialised construction activities	1	£28,811	£13.77	9695	9665
45	Wholesale and retail trade and repair of motor vehicles and motorcycles	1	£25,229	£11.83	9641	9627
46	Wholesale trade, except of motor vehicles and motorcycles	1	£30,744	£14.18	18114	18083
47	Retail trade, except of motor vehicles and motorcycles	1	£18,463	£10.44	35284	35245
49	Land transport and transport via pipelines	1	£29,508	£13.57	11013	10956
50	Water transport	1	£36,745	£18.15	162	162
51	Air transport	1	£43,498	£25.68	932	934
52	Warehousing and support activities for transportation	1	£30,920	£14.50	6689	6667
53	Postal and courier activities	1	£26,608	£12.79	5516	5506
55	Accommodation	1	£18,221	£9.71	4339	4330
56	Food and beverage service activities	1	£14,934	£8.64	16876	16851
58	Publishing activities	1	£36,566	£19.15	1568	1567
59	Motion picture, video and television programme production, sound recording and music publishing activities	1	£28,752	£15.74	766	764
60	Programming and broadcasting activities	1	£50,817	£24.24	642	642
61	Telecommunications	1	£40,041	£18.72	3686	3690
62	Computer programming, consultancy and related activities	1	£46,400	£22.30	7718	7736
63	Information service activities	1	£62,157	£23.83	961	961
64	Financial service activities, except insurance and pension funding	1	£67,194	£30.01	6577	6579
65	Insurance, reinsurance and pension funding, except compulsory social security	1	£52,952	£22.79	1427	1431
66	Activities auxiliary to financial services and insurance activities	1	£64,521	£26.91	4479	4483

68	Real estate activities	1	£33,285	£16.48	3929	3934
69	Legal and accounting activities	1	£39,800	£21.81	5294	5288
70	Activities of head offices; management consultancy activities	1	£46,050	£21.81	4578	4578
71	Architectural and engineering activities; technical testing and analysis	1	£40,341	£19.90	6221	6217
72	Scientific research and development	1	£44,231	£22.68	1600	1600
73	Advertising and market research	1	£39,645	£20.40	1562	1563
74	Other professional, scientific and technical activities	1	£35,145	£18.04	1483	1484
75	Veterinary activities	1	33823.55	18.82178	205	205
77	Rental and leasing activities	1	29357.77	13.08682	2633	2631
78	Employment activities	1	19737.37	10.91918	9832	9791
79	Travel agency, tour operator and other reservation service and related activities	1	34874.8	16.98913	745	745
80	Security and investigation activities	1	21643.25	9.852776	3124	3114
81	Services to buildings and landscape activities	1	20799.24	10.73661	6398	6382
82	Office administrative, office support and other business support activities	1	30594.01	15.1783	4551	4538
84	Public administration and defence; compulsory social security	1	30648.78	16.9707	14027	14503
85	Education	1	28018.54	17.85284	25766	25781
86	Human health activities	1	35423.39	19.89398	12566	12563
87	Residential care activities	1	20160.48	10.8448	4008	3999
88	Social work activities without accommodation	1	20952.33	12.70132	3528	3522
90	Creative, arts and entertainment activities	1	37091.52	17.65446	591	593
91	Libraries, archives, museums and other cultural activities	1	21316.31	12.56329	652	652
92	Gambling and betting activities	1	22770.21	10.71893	1580	1579
93	Sports activities and amusement and recreation activities	1	28239.51	14.90365	4134	4120
94	Activities of membership organisations	1	27404.44	15.99331	1817	1844
95	Repair of computers and personal and household goods	1	33023.89	16.07378	664	664
96	Other personal service activities	1	22527.74	12.18266	1912	1908
97	Activities of households as employers of domestic personnel	1	16239.83	9.94351	312	311

Notes: author calculations using ASHE-HMRC PAYE. See Figure 3.

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