

ANNUAL SURVEY OF HOURS & EARNINGS (ASHE) 2006

Background information about ASHE

The Annual Survey of Hours and Earnings (ASHE) provides information about the levels, and range of earnings and hours worked, for employees in all industries and occupations.

The ASHE survey replaced the New Earning Survey (NES) in 2004, with a new version of the ASHE questionnaire introduced in 2005. The Office for National Statistics developed ASHE to improve the methodology and accuracy of earnings data, especially around the collection of data relating to allowances and incentive pay.

The latest data was released in November 2006 and relates to employees who were employed on the 26th April 2006. This excludes employees not paid during the pay period including 26th April 2006 and those who are self-employed. The survey is based on a random 1% sample of employees (using their national insurance number). Once an employee is selected, they will remain on the panel indefinitely to maximise the consistency of the sample - this is true while they stay in the same job, but also if they move employer. Information on earnings and hours is obtained in confidence from employers, via a postal questionnaire.

However, for an area the size of Herefordshire due to the relatively small sample size, it is not advisable to look at changes over time periods of less than a 5-year period, and due to the changes in the questionnaire in 2004 we do not have earlier data to compare with.

The ASHE survey provides data on earnings for employees: gross annual, weekly and hourly pay (including and excluding overtime) and hours worked (including and excluding overtime). It also provides a breakdown of earnings by gender and full/part-time workers. This information is available down to local authority level and for parliamentary constituencies. Earnings by occupation and industry are available but only at a national level.

There are two sets of figures of earnings data for Herefordshire:

- **Work based** – all people who work in Herefordshire regardless of which county they live in, and
- **Residence based** – people who live in Herefordshire i.e. includes those who work outside the county.

Both of these data sets are useful and provide information for different purposes. Work based earnings are what people can earn in Herefordshire, providing information about levels of pay for jobs in the county whereas residence based earnings are what people living in Herefordshire earn so can give us a better view of spending power and the wider economy in Herefordshire.

In order to give a better picture of earnings a 'median' figure has been used rather than the 'mean'. Both are considered averages, but the term 'average' is more generally associated with the mean. The median provides a 'mid-point' figure for earnings such that half of all employees earn less than this amount, and half earn more. The mean can be skewed by a small proportion of high earners. For example the *mean* gross weekly earnings for Herefordshire in 2006 were £467.50 whilst the figure for *median* earnings was £390.60. Lower quartile earnings are used to show the lower end of the scale of earnings, the amount that a quarter (25%) of the population earn less than and 75% earn more than.

For the purpose of this article, general analysis and comparative statistics focus on earnings of full-time employees. Data for part-time employees is available but the difference within this category can be very large, as it includes those who work for anything up to 35 hours. The proportions of part-time workers also vary across different authorities, making it difficult to compare earnings in a meaningful way.

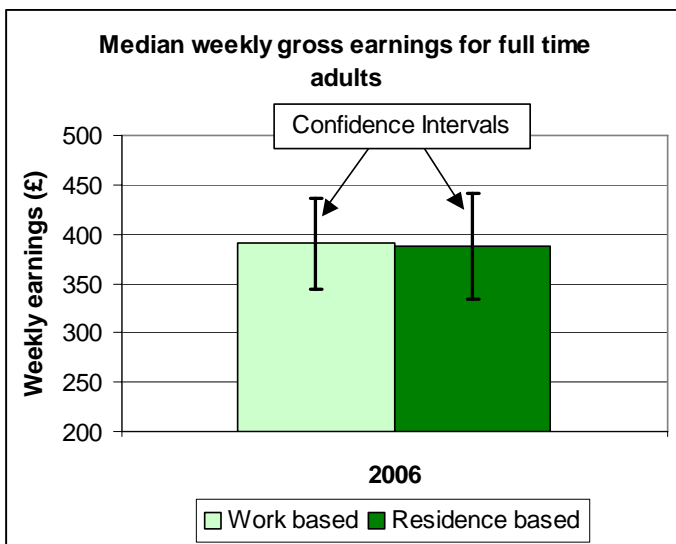
Confidence intervals

Periodically, this article will refer to confidence intervals around earnings values, below is an explanation of what a 'confidence interval' is and what it means for using these figures.

Surveying a large enough sample of employee jobs enables an estimate of the level of earnings in the county to be made; these figures are published along with coefficients of variation which enables the calculation of a confidence interval for each figure. Confidence intervals (C.I.) give an indication of the possible margin of error around these estimates. The smaller the sample size and the greater the degree of variation, the wider the C.I. will be. For example, the 2006 ASHE results states the average earnings¹ in Herefordshire were £390.60 per week and the 95% confidence interval suggests that the average earnings for all those working in Herefordshire could lie within + or - £46 of this figure.

It is important to use confidence intervals when making comparisons using results drawn from sample surveys, as differences seen between the published figures may not be statistically significant. For example, if the ranges of the confidence interval for each of the estimates overlap with each other then it is possible that the 'true values' are actually the same.

Chart 1. Confidence Intervals of 2006 work based and residence based median gross weekly earnings.



In 2006, the published figure for residence based earnings was £387.90 and the figure for work based earnings was £390.60, which suggests that work based earnings were slightly higher than residence based.

However the confidence levels around both of these figures overlap (see Chart 1) which show that statistically there is no measurable difference between earnings of those who work in Herefordshire and earnings of those who live in Herefordshire but do not necessarily work in the county.

When confidence intervals are referred to they will be shown as \pm £0.00, i.e. plus or minus however many pounds from the published figure.

¹ Work based median weekly gross earnings for full time adult workers

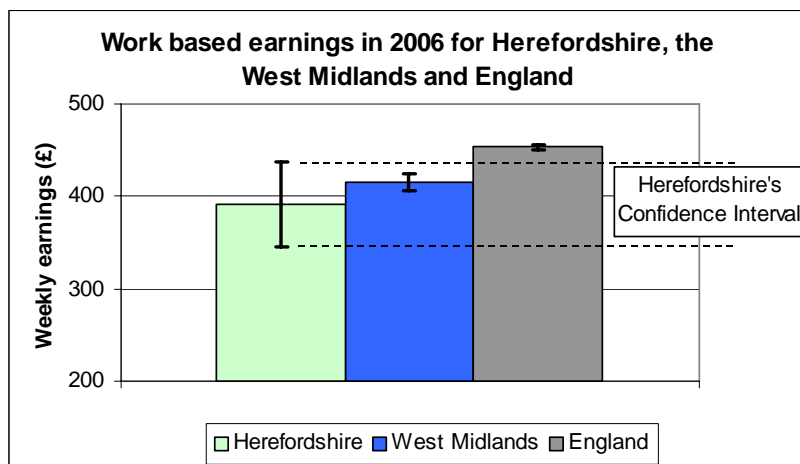
Latest results

Average WORK BASED gross earnings for full-time employees (adults only)

In 2006, the **median weekly earnings** for people who work in Herefordshire were **£390.60** (\pm £45.90).

The published figures for Herefordshire's earnings appear lower than both the equivalent earnings in the West Midlands region and England. However, taking into account the large confidence interval around Herefordshire's median weekly earnings the observed difference between Herefordshire and the West Midlands is not statistically significant. See Chart 2.

Chart 2.



In 2006, median weekly gross earnings were £415.50 (\pm £9.00) in the West Midlands region and £453.30 (\pm £2.70) in England.

In 2006, Herefordshire's work based gross **median annualised² earnings** were **£20,367.00** (\pm £2,395.20) compared with £21,665.36 (\pm £467.10) for the West Midlands and £23,636.36 (\pm £139.00) for England.

The **median hourly earnings** (excluding overtime) for people working in Herefordshire were **£9.00** (\pm £1.00) compared with £10.31 (\pm £0.20) in the West Midlands region and £11.26 (\pm £0.04) in England.

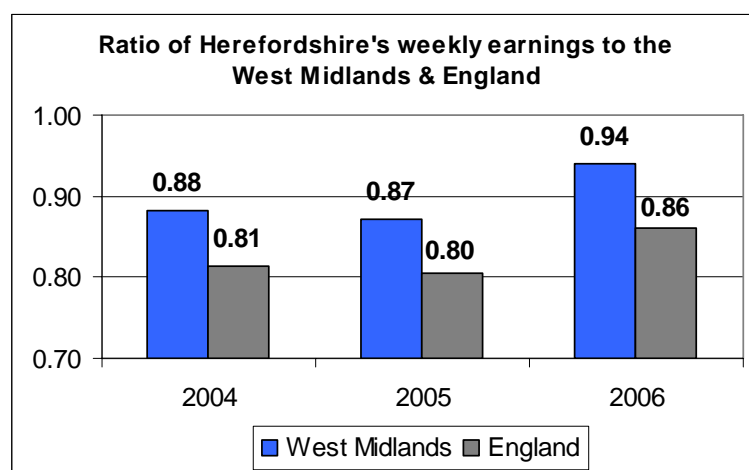
² Annual salaries are provided by ASHE but they only include earnings of those who are employed in the same job for a year whereas weekly earnings include all workers. Therefore annualised salaries were calculated using median weekly earnings, which includes more employees.

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Chart 3 presents the ratio of Herefordshire's earnings compared to regionally and nationally over the past few years allows us to monitor whether the gap between earnings in Herefordshire and elsewhere has got larger or smaller. We calculate the ratios by dividing Herefordshire's earnings by those for the comparator area to give one figure that shows the gap e.g. Herefordshire's earnings (£390.60) divided by England's earnings (£453.30) which gives a ratio of 0.86. Therefore Herefordshire's earnings are 86% of those nationally i.e. 14% lower.

The limitation of these ratios is that they do not take into account confidence intervals around the published figures. Also there may be year-on-year fluctuations of local data. However this is still the best method of tracking longer term changes in Herefordshire's earnings relative to those regionally and nationally.

Chart 3.



In 2006, the only statistically significant difference was that Herefordshire's weekly earnings were lower than England's weekly earnings as represented in Chart 3 by a ratio of 0.86. A similar pattern was seen in 2004, when statistically Herefordshire's earnings were only lower than those in England.

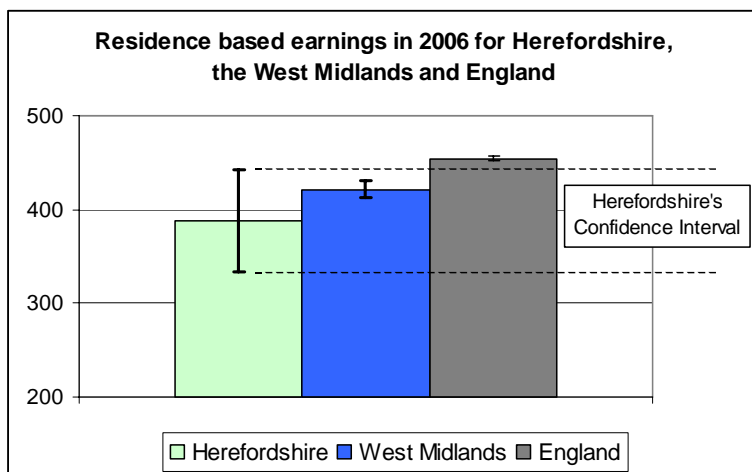
In 2005, Herefordshire's earnings were statistically lower than earnings in both the West Midlands region and England.

This suggests that the ratios for Herefordshire's earnings compared to the West Midlands region in 2004 and 2006 should be used as a guide with some caution.

Average RESIDENCE BASED gross earnings for full-time employees (adults only)

In 2006, the **median weekly earnings** for people who live in Herefordshire were **£387.90** (\pm £54.00), compared with £421.10 (\pm £9.10) in the West Midlands and £454.40 (\pm £2.70) in England.

Chart 4.



Similarly to work based earnings, Herefordshire's earnings are lower than those for England as a whole but the difference with those regionally is not statistically significant.

In 2006, Herefordshire's annualised earnings were **£20,226.21** (\pm £2,814.70) compared with £21,957.36 (\pm £473.40) for the West Midlands and £23,693.71 (\pm £139.30) for England.

Median hourly earnings (excluding overtime) in Herefordshire were **£8.99** (\pm £0.88), compared with £10.39 (\pm £0.20) in the West Midlands Region and £11.28 (\pm £0.04) in England.

The main focus of this article is to look at what people working in Herefordshire earn compared with other areas, so for the rest of this article work based earnings are used unless otherwise stated.

Comparisons within the region and with Herefordshire's neighbours (Work based)

This section compares earnings of those working in Herefordshire with earnings of those working in each of the other counties/unitary authorities in the West Midlands region. Figures for Gloucestershire and Powys are also included to give us an idea of what is happening in our neighbouring authorities. See Table 1.

Herefordshire still ranks among the lowest in terms of earnings out of all the county/unitary authorities within the West Midlands region, despite the climb above Dudley, Walsall and Shropshire between 2005 and 2006

Table 1. Median gross weekly earnings for full-time employees by County/Unitary Authority in the West Midlands

	2006		2005	2004
	Median earnings (£)	Rank	Rank	Rank
Coventry	468.7	1	2	2
Solihull	459.3	2	1	1
Warwickshire	450.7	3	4	3
Birmingham	439.9	4	3	4
Wolverhampton	427.2	5	6	5
Telford and Wrekin	420.8	6	8	8
Sandwell	402.8	7	5	10
Staffordshire	401.6	8	7	6
Worcestershire	392.1	9	9	9
Herefordshire	390.6	10	13	13
Shropshire	387.8	11	10	7
Walsall	378.4	12	12	11
Stoke-on-Trent	363.2	13	14	14
Dudley	360.9	14	11	12
<i>West Midlands region</i>	<i>415.5</i>			
Gloucestershire	431.2			
Powys	381.5			

Herefordshire had by far the largest climb in the rankings of earnings during 2006, moving from being ranked 13th in 2005 to 10th out of the 14 authorities in the region. Telford & Wrekin also experienced an increase in its ranking moving from rank 8 in 2005 to be ranked 6th in 2006. Conversely, Solihull and Dudley have actually moved down a couple of ranks over the previous year.

Distribution of earnings (Work based)

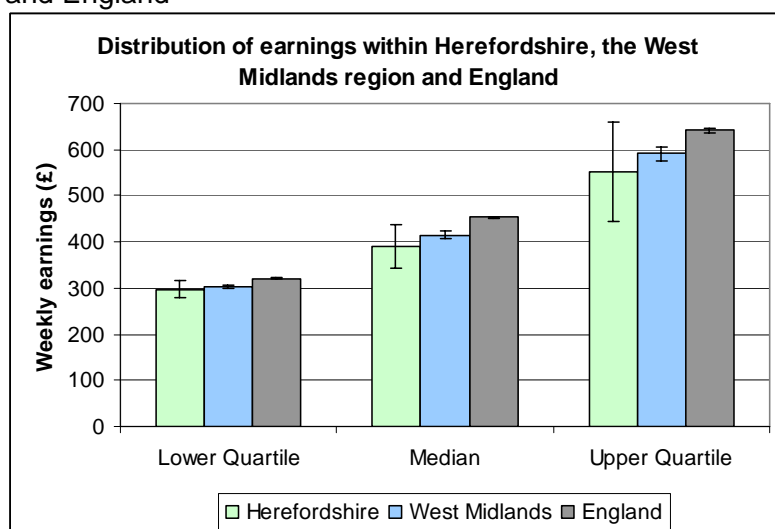
The particular points in the distribution of earnings highlighted in this section include:

- lower level earnings as measured by the lower quartile (i.e. 25% earn less than...),
- the median to show what at least half the population are earning and
- higher earnings shown by the upper quartile (i.e. the top 25% of earners earn more than...)

Table 2. Range of gross weekly earnings for full time employees (£), 2006

Area	Lower Quartile earnings 25% earned less than	Median earnings (50%)	Upper Quartile earnings 25% earned more than
Birmingham	316.20	439.90	624.10
Coventry	325.80	468.70	670.40
Dudley	269.50	360.90	527.20
Herefordshire	297.00	390.60	551.20
Sandwell	295.90	402.80	562.50
Shropshire	282.70	387.80	560.90
Solihull	321.10	459.30	628.40
Staffordshire	303.20	401.60	579.70
Stoke-on-Trent	272.50	363.20	527.00
Telford and Wrekin	308.60	420.80	584.30
Walsall	280.30	378.40	521.60
Warwickshire	328.60	450.70	632.30
Wolverhampton	303.30	427.20	592.40
Worcestershire	296.80	392.10	565.20
<i>West Midlands region</i>	302.60	415.50	591.10
England	320.30	453.30	642.00
Gloucestershire	312.50	431.20	594.10
Powys	277.40	381.50	502.20

Chart 6 depicts the differences across the quartiles between Herefordshire, the West Midlands and England



There are only 3 differences, which are statistically significant:

- Herefordshire's lower quartile earnings are lower than England's lower quartile earnings.
- And as already mentioned, Herefordshire's median earnings are lower than England's median earnings.
- Herefordshire's median's earnings are lower than median earnings in Coventry.

With the exception of those stated above, statistically there are no differences between Herefordshire's earnings and other authorities in the West Midlands region or neighbours at any point in the earnings distribution shown.

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Differences between male and female earnings (Work based)

Across the whole of the West Midlands region and England, median earnings for full-time female workers are lower than those of their male counterparts. In both of these cases, the ratio of female to male earnings was 0.79. If female and male earnings were the same the ratio would be 1.0, if females earned less the ratio is less than 1 and if females were paid more the ratio would be higher than 1. The further the ratio is from 1 the larger the gender pay gap.

Table 3. Male and female median gross weekly earnings and the female to male ratios

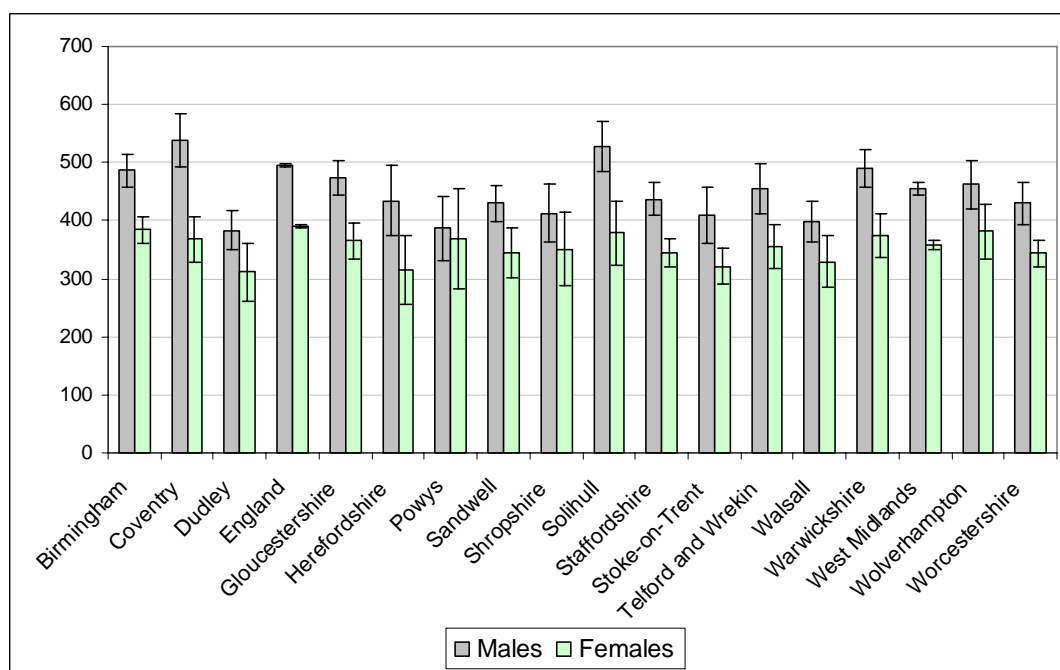
Area	Males	Females	Ratio
Coventry	538.1	368.0	0.68
Solihull	527.2	379.4	0.72
Herefordshire	434.5	314.7	0.72
Warwickshire	490.4	375.0	0.76
Gloucestershire	474.3	365.5	0.77
Telford and Wrekin	454.8	355.9	0.78
Stoke-on-Trent	408.6	320.8	0.79
England	495.0	389.6	0.79
West Midlands	454.4	358.3	0.79
Staffordshire	437.1	345.0	0.79
Birmingham	486.3	384.1	0.79
Worcestershire	430.4	343.5	0.80
Sandwell	429.7	345.0	0.80
Dudley	383.2	311.5	0.81
Wolverhampton	461.8	381.3	0.83
Walsall	397.6	329.5	0.83
Shropshire	413.2	351.2	0.85
Powys	386.5	369.2	0.96

Out of all of Herefordshire's neighbouring authorities and the other authorities in the West Midlands region, Herefordshire has one of the largest gender pay gaps with only Coventry and Solihull with higher gaps.

The areas where female earnings are statistically lower than males are:

- Birmingham
- Coventry
- England
- Gloucestershire
- Herefordshire
- Sandwell
- Solihull
- Staffordshire
- Stoke-on-Trent
- Telford and Wrekin
- Warwickshire
- West Midlands region
- Worcestershire

Chart 7. Female to male median weekly earnings for Herefordshire and comparator areas



Gender pay gaps may well in part be due to the types work that males and females tend to do and the different level of pay associated with that industry. From 2006 data was available nationally for earnings according to their industry, which is discussed further in the next section.

Earnings by industry (Work based)

Although this information is only available at a national level, it gives some insight into the level of earnings in Herefordshire when shown alongside the proportion of Herefordshire residents working in each industry. Table 4 shows national earnings by industry from ASHE 2006 along with the proportion employed in each type of industry in Herefordshire as obtained from the 2001 Census.

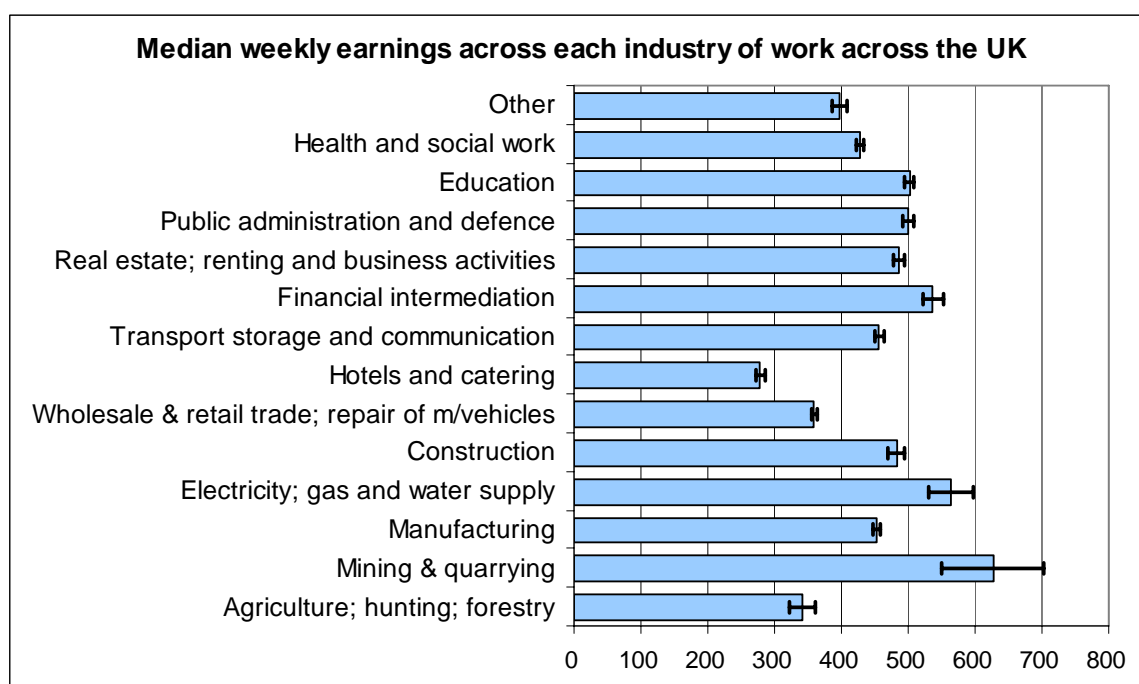
Table 4. Median weekly earnings for the UK by industry and proportion of Herefordshire residents working in those sectors.

	2006 earnings UK	% of Herefordshire residents working in each industry
Agriculture; hunting; forestry	£342.20	6.7%
Fishing	£380.40	0.0%
Mining & quarrying	£627.10	0.2%
Manufacturing	£453.00	17.4%
Electricity; gas and water supply	£564.60	0.5%
Construction	£482.10	7.7%
Wholesale & retail trade; repair of motor vehicles	£359.20	18.4%
Hotels and catering	£279.00	4.8%
Transport storage and communication	£456.20	4.7%
Financial intermediation	£537.20	1.9%
Real estate; renting and business activities	£486.80	9.5%
Public administration and defence	£500.10	5.0%
Education	£501.90	7.4%
Health and social work	£427.90	11.6%
Other	£398.40	4.3%

Taking into account confidence intervals, the 3 industries with noticeably lower earnings are 'hotels & catering', 'agriculture, hunting & forestry' and 'wholesale & retail trade; repair of motor vehicles'.

The 3 industries with higher earnings are 'mining & quarrying', 'electricity; gas & water supply' and 'financial intermediation'.

Chart 8.



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Assuming there is a similar pattern for earnings by industry in Herefordshire to that of the UK will give us an indication of what effect local industry has on Herefordshire's economy through local wages.

In 2006, the UK industry with the highest median earnings is 'mining & quarrying' at £627.10 per week, 0.2% of Herefordshire's residents were employed in this sector. The largest proportion of Herefordshire's residents were employed in 'wholesale & retail trade; repair of motor vehicles', at only £359.20 per week nationwide, this is one of the sectors with lower earnings.

17.4% of Herefordshire's residents were employed in 'manufacturing' at the time of the 2001 Census (the second largest proportion of workers), earnings for this industry nationally were £453.00 in 2006.

If earnings by industry in Herefordshire follow national patterns, the local economy is made up through small proportions of residents working in industries where earnings are high and large proportions of the workforce in sectors with lower earnings.

Hours Worked (Work based)

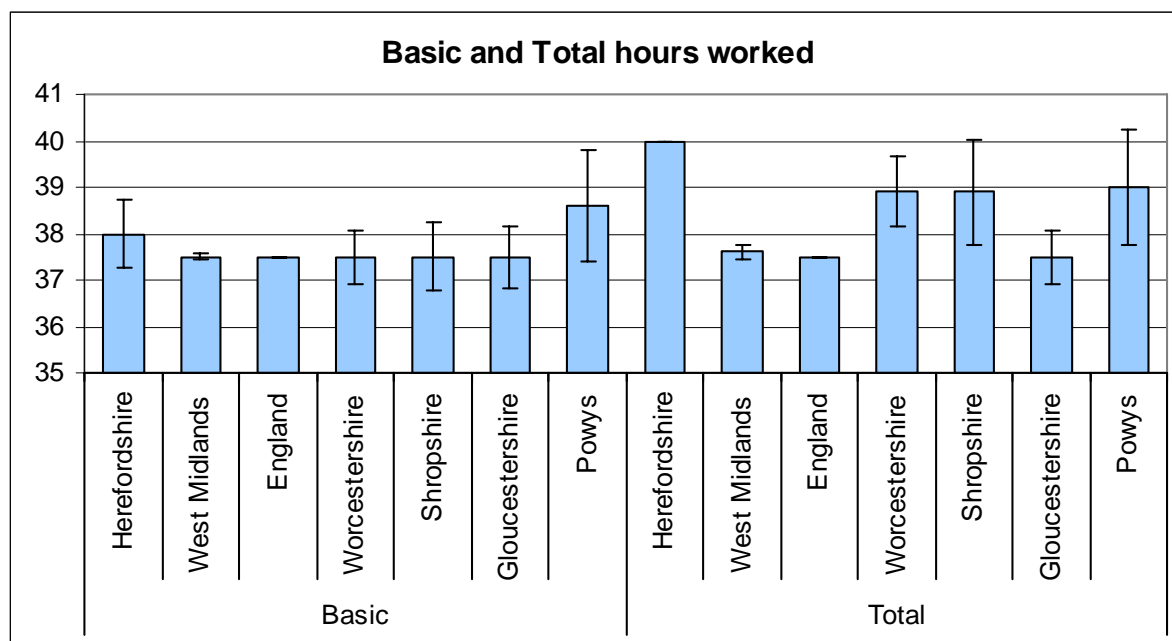
ASHE also publishes information about the number of hours worked by people working in the county³ which provides the median figures for the basic hours worked and total hours worked (i.e. including overtime) for full-time adult workers.

When looking at basic hours only, the median number of hours worked by people in Herefordshire in 2006 was 38 hours per week. This is similar to the number of basic hours worked by those in the West Midlands, England as a whole and neighbouring counties.

In terms of total hours worked (including overtime) for 2006, Herefordshire's confidence intervals were suppressed by ONS (Office for National Statistics) limiting what we can interpret from the published figures as we do not know what is statistically significant.

However, Herefordshire's total hours worked including overtime (40 hours per week) seems to be higher than the basic hours worked by people in Herefordshire unlike England where the total number of hours worked are equal to the basic hours worked (37.5 hours). It would also seem likely that Herefordshire's median of total hours worked is higher than the equivalent in the West Midlands region, England and Gloucestershire.

Chart 8.



³ This information is also available by residence based i.e. median number of hours worked by people living in the county.

Parliamentary Constituencies

There are two parliamentary constituencies in Herefordshire: 'Hereford' and 'Leominster'. 'Hereford' covers Hereford City and south down to Herefordshire's southern border, including Ross-on-Wye. 'Leominster' includes Leominster, Kington and Ledbury but also some of Worcestershire's parishes outside Herefordshire's administrative boundaries.

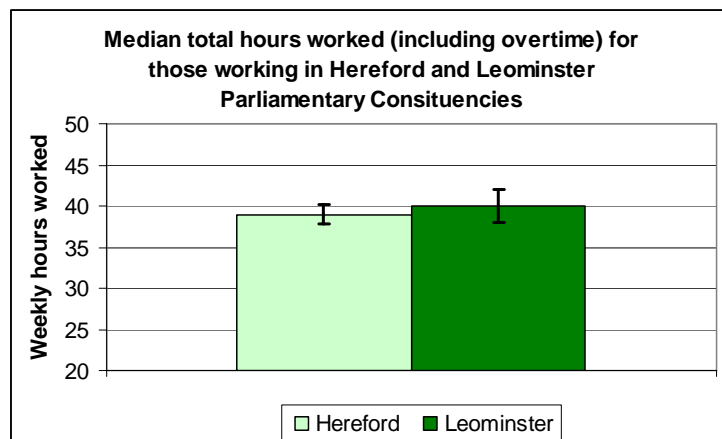
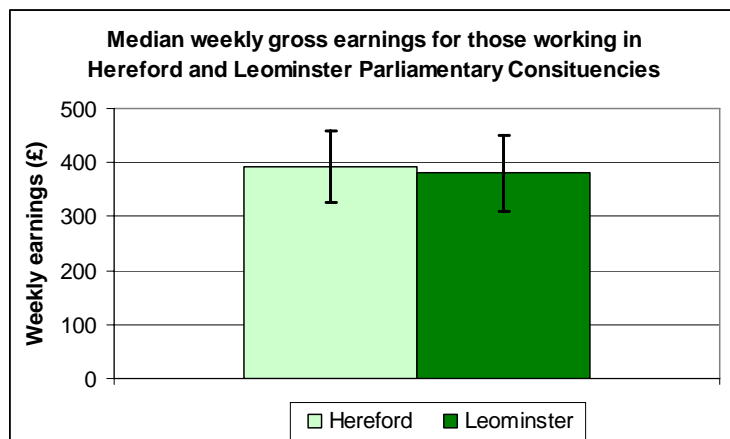
This data shows earnings for full-time adult people employed in these constituencies, i.e. what you can earn working in either Hereford or Leominster constituency.

Table 5. Summary of 2006 median weekly gross earnings and total hours worked for Herefordshire's parliamentary constituencies

	Median weekly earnings	Total hours worked
Hereford	£392.50	39
Leominster	£380.10	40

Statistically there is no difference between the median earnings or total hours worked for those working in either Hereford or Leominster Parliamentary Constituency, see Charts 9 and 10.

Charts 9 & 10



FURTHER DETAILS

The data presented in this article form only part of the statistics produced on earnings.

For further information on the data in this article, please contact the Research Team on 01432 383634 or e-mail researchteam@herefordshire.gov.uk