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Why did Britain's households get richer? Decomposing UK household income growth between 1968 and 2008–09

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Non-technical summary

Average UK household income has almost doubled in real terms over the past forty years. This paper asks 'From where has the growth in household income for working-age households come?'; it does not look at growth in the income of pensioner households. With four decades of micro-data on household incomes, and relatively simple methods, the paper decomposes changes in household income by income source and by household size, and further breaks down changes in employment income by household member and into separate employment, hours and hourly wage effects. In all instances, the goal is to answer the question, 'How much of the change in mean household income is a result of a change in this factor?'.

The analysis was performed for the Resolution Foundation Commission on Living Standards, a wide-ranging investigation into the material well-being of low- to middle-income Britain. The paper therefore also examines the low- to middle-income group and how the experience of this group has differed from that of the rest of the population (a 'low- to middle-income' (LMI) household is one between the 10^{th} to 50^{th} percentile of the gross income distribution that receive less than 50% of their income from benefits, including tax credits). It also looks at individuals in the richest 10% of households.

Employment income has been the main driver of household income growth for working-age households, and increases in hourly wages the main source of this growth and of the way it has fluctuated over time. Since 1968, male employment has fallen and female employment has risen, and, since 1990, men have worked fewer hours a week and women more, both combining to produce a major shift in the gender composition of employment income. Rises in employment taxes particularly rose 1972 and 1975 and between 2003–04 and 2007–08. Income from social security benefits rose considerably between 1973 and 1980 and between 1990 and 2002–03, and tax credits became important from 2000–01 onwards. Self-employment income and unearned income both grew particularly strongly in the 1980s. LMI households have seen a major shift in the sources of their income; having been dominated by the earnings of a (generally male) earner, LMI households today receive large portions of their income from female employment and from the benefit and tax credit system. This greater diversity of income sources may reduce the risk of negative income shocks, but in turn mean that LMI households are now more dependent on external support.

Why did Britain's households get richer? Decomposing UK household income growth between 1968 and 2008–09[1]

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Abstract

Average real UK household income has almost doubled over the past forty years. With four decades of micro-data on household incomes, and relatively simple decomposition methods, we document the contribution to this growth in the mean net household income of working-age households from different income sources, and break down further changes in employment income by household member and into separate participation, hours and hourly wage effects. We also perform such analyses for the mean income of the richest working-age households, and among a group defined by having a low household income but a strong connection to the labour market.

Keywords: income distribution, employment, wages

JEL codes: D31, E24

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1. Introduction

Average household income has almost doubled over the past forty years. A number of factors have been identified as being behind this, including increases in wages, a greater number of women in work and a rise in the generosity of state benefits and tax credits. Although many of these drivers of household income have been analysed individually, there has been comparatively little study of the relative importance of each factor. This is particularly true for low- to middle-income households, for which we know wage and benefit changes have been substantially different from those for higher-income households.

This paper therefore documents what factors lay behind the rise in average household income growth over the period 1968 to 2008–09.

With four decades of micro-data on household incomes, and relatively simple methods, we decompose changes in household income by income source and by household size, and we further break down changes in employment income by household member and into separate employment, hours and hourly wage effects. In all instances, our goal is to answer the question, 'How much of the change in income is a result of a change in this factor?'. We examine changes in household income for the whole sample of working-age households and for those categorised by the Resolution Foundation as 'low- to middle-income'.[2] We also examine these changes for those in the 10th–50th percentiles of gross income and for individuals in the richest 10% of households; these results are presented in Appendix B.

The paper builds on previous work undertaken by the Resolution Foundation that sought to understand income growth (and its absence) amongst low- to middle-income households. Plunkett (2011) considered how a range of income sources – including wages, benefits and taxes – have affected households' total income, whilst Whittaker and Savage (2011) sought to understand the recent slowdown in low-earner wage growth. This paper also complements work that focused on decomposing changes in the distribution of household income, including Jenkins (1995) and Brewer, Muriel and Wren-Lewis (2009). Indeed, we apply a similar decomposition methodology to one of those used by Brewer et al. but here we focus directly on income growth whereas they looked at inequality.

[2] In this paper, we consider low- to middle-income households to be those that lie between the 10th and 50th percentiles of the distribution of gross household income receiving less than 50% of their gross income from benefits (including tax credits). This is slightly different from the usual definition used (which requires households to receive no more than 20% of their gross income in *means-tested* benefits), but leads to a population that is broadly the same.

This paper is organised as follows. Section 2 describes the data used, which are principally based on the Households Below Average Income (HBAI) data series. Section 3 describes the decomposition methodology. The results are presented in Section 4, which is divided into two subsections: results for all working-age households and results for 'low- to middle-income' households. Section 5 concludes by summarising the results and suggesting their possible policy implications.

2. Data

We base our analysis on the 'Households Below Average Income' (HBAI) data series, produced by the Department for Work and Pensions and used by DWP to provide annual snapshots of Britain's income distribution. The HBAI series is derived from two large cross-sectional household surveys: the Family Expenditure Survey (FES) for the years between 1968 and 1993 and the Family Resources Survey (FRS) for the years between 1994–95 and 2008–09. The FES provides a representative sample of around 7,000 households per year, and the introduction of the FRS provides a substantially larger sample size of around 24,000 households per year. Our data cover all the years from 1968 to 2008–09.[3]

We use the normal measure of income provided in the HBAI data sets, which is weekly net disposable household income summed across all individuals living in the same household.[4] Incomes are measured net of taxes and benefits – i.e. after all direct taxes (income tax, National Insurance contributions and council tax) have been deducted from income, and all state benefits and tax credits have been added. Incomes are then adjusted ('equivalised') to take into account the size and composition of households, using the modified OECD equivalence scale.[5] All financial values in this paper are expressed in 2008–09 prices, inflated using a variant of the RPI.[6]

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[3] HBAI data sets also exist for the years 1961 to 1967, but we do not use these, for two reasons. First, the FES sample size was considerably smaller prior to 1968 (around 3,000 households, compared with 7,000 households from 1968 onwards). Although this smaller sample size need not prevent us using the data, there is a second problem with these early years: in both 1964 and 1967, data are only available for the first two quarters of the year (giving an effective sample size of just 1,500 households in 1964). The resulting data sets thus give an incomplete picture of incomes in those years.

[4] Further information on the HBAI measurement of income can be found at http://campaigns.dwp.gov.uk/asd/index.php?page=hbai_arc#hbai.

[5] For more information, see the OECD document 'What are equivalence scales?' (http://www.oecd.org/dataoecd/61/52/35411111.pdf). By using a constant equivalence scale, we are abstracting from any changes in equivalence scales over time – see Banks and Johnson (1994) for a

Our initial sample includes all individuals in the HBAI sample that live in Great Britain.[7] Since the processes determining the income of pensioners are very different from those for people of working age, we remove all households where the household head is above working age, i.e. heads of 65 or over for men and 60 or over for women.[8] We then 'trim' the income distribution by removing the top and bottom 1%. In trimming the income distribution in this way, we certainly do not wish to downplay the importance of the 'tails' of the distribution to overall trends. Nor, however, do we wish our results to be driven by changes in the worst-measured parts of the income distribution. Our decision to trim only the top and bottom 1% of the distribution represents a trade-off between these two concerns. We use the trimmed income distribution in all decompositions contained in this paper.

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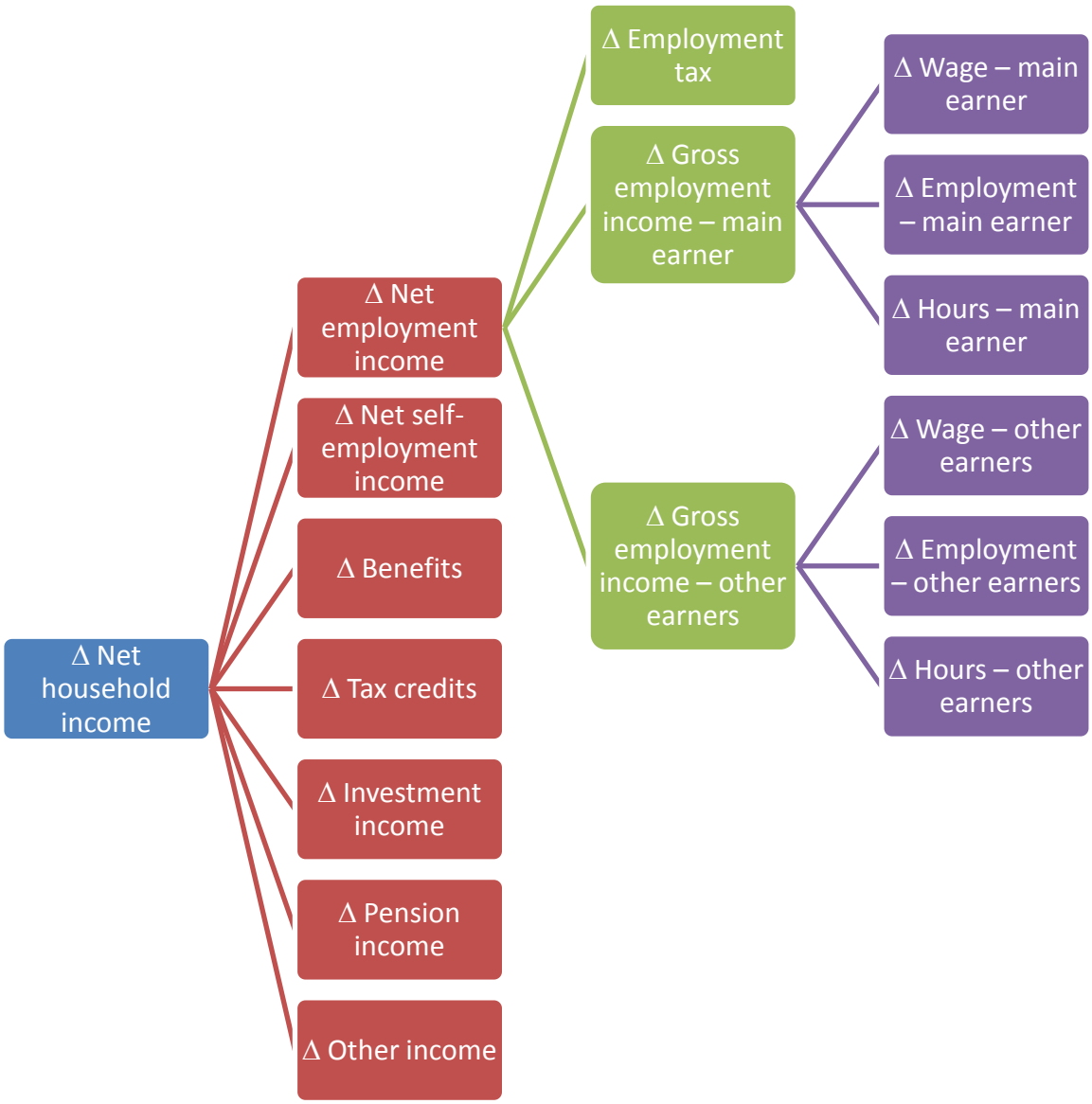
discussion of the effect of choosing different equivalence scales in different years. The OECD modified equivalence scale was calculated based on analysis in 1994.

[6] The deflator accounts for the fact that council tax payments have been deducted from income.

[7] Data from Northern Ireland are not available consistently across the four decades, and so we exclude it.

[8] The definition of head of household we use is that in the Family Resources Survey. The head of household is the person, or husband of the person, who owns the accommodation or pays the rent. When two members of different sex have equal claim, the male is taken as head of household; when two members of the same sex have equal claim, the elder is taken as head of household. There are some attractions to setting the main earner as the head of household, but it is not possible to construct such a variable for all the years of the data.

Figure 1. Decomposition of changes in net household income

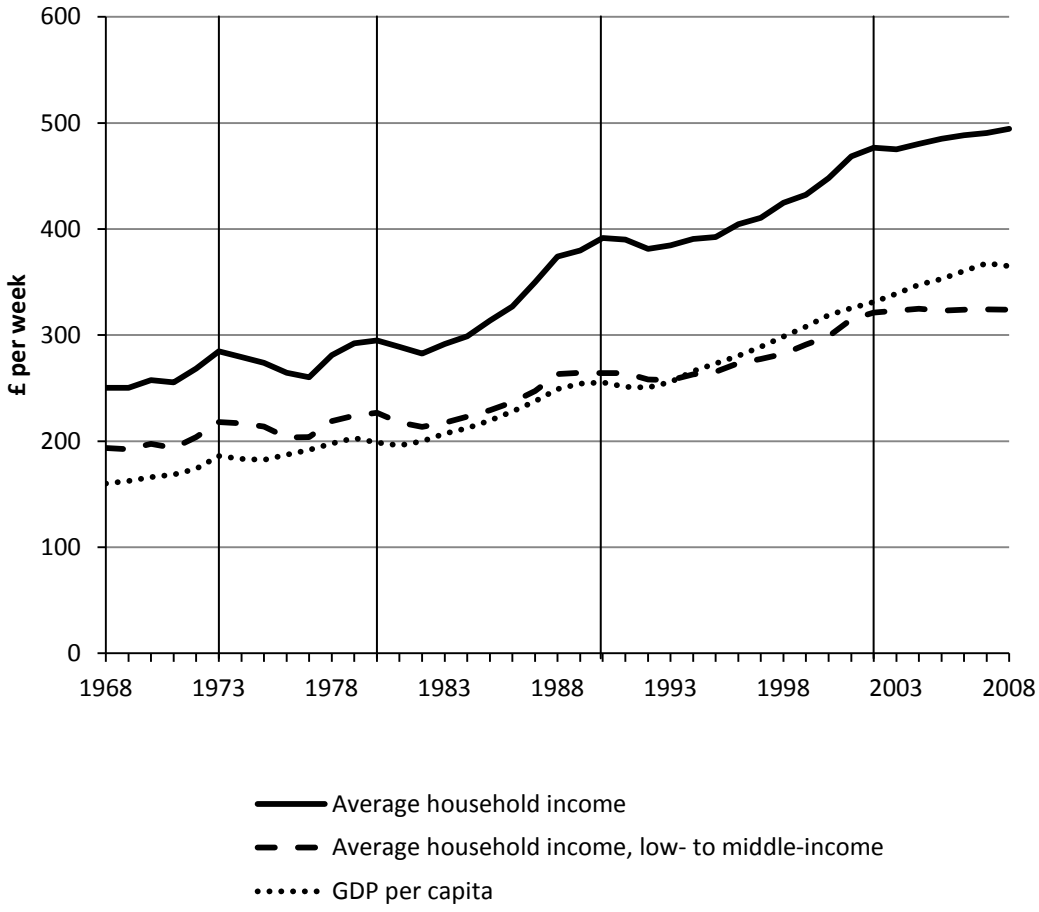


The HBAI data sets divide household net income into the following sources, all of which are net of taxes: employment, self-employment, investment, pension, benefits, deductions and other. We then use data from the underlying FES and FRS surveys to divide several of these sources further. First, in order to estimate the earnings share of each individual, we use individual-level measures of net earnings from the underlying FES/FRS data to establish what share of earnings income comes from each individual, and we split total household net earnings into that earned by the main earner (i.e. the person with the greatest gross employment income) and that earned by other household members. Since the FES and FRS contain data on gross employment income, these data are also used to estimate the average employment tax rate that each

household faces, and this tax rate is used to estimate a measure of the total employment tax paid by each household.[9] We also use data from the FRS to estimate the share of each household's benefit income that is received in the form of tax credits; this is then used to create a tax credit income source from 2000–01 onwards.[10]

Figure 1 demonstrates how the data allow us to break down the changes in total household income. The precise decomposition can be found in Section 3.

Figure 2. Average net equivalent household income, 1968 to 2008–09



Note: Years from 1994 onwards are financial years, e.g. 1994 means 1994–95.
Source: Average household income is based on authors' calculations using Family Expenditure Survey and Family Resources Survey. The bottom and top 1% of the distribution have been trimmed from the sample. GDP per capita is from the World Development Indices.

[9] Since the data on net earnings exist in a consistent form only at the household level, we cannot construct consistent individual-level tax rates for the entire period.

[10] Though tax credits were introduced during the 1999–2000 financial year, they were not recorded consistently within the FRS during this year.

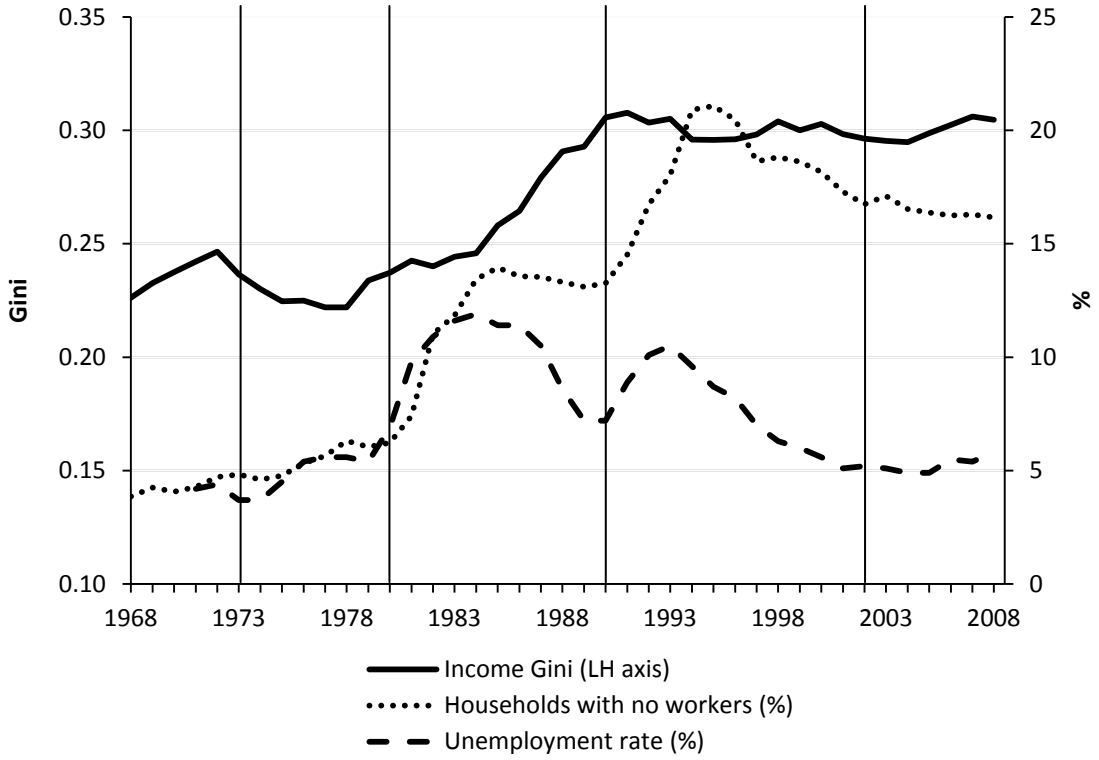
As background to our detailed results in Section 4, Figure 2 shows how mean net equivalised household income (hereafter, 'average household income' or 'household income') has changed over the period we analyse.

We have carried out the decompositions of income growth for all adjacent years from 1968 to 2008–09, but when presenting results it is useful to focus on specific subperiods. We therefore divide our four decades into five subperiods, with each subperiod beginning with a fall in average household income and ending just before another fall. These subperiods are also shown in Figures 2 and 3, with the latter figure showing trends in other key macroeconomic variables since 1968.

The five subperiods can be characterised as follows:

- 1968 to 1973: A period of slow household income growth, with unemployment and income inequality staying relatively unchanged.

Figure 3. Macroeconomic trends, 1968 to 2008–09



Note: Years from 1994 onwards are financial years, e.g. 1994 means 1994–95.
Source: The Gini coefficient for income and the share of households with no workers are based on authors' calculations using Family Expenditure Survey and Family Resources Survey. The bottom and top 1% of the distribution have been trimmed from the sample. Unemployment is the ILO unemployment rate for those aged 16–64 from the Office for National Statistics.

- 1973 to 1980: A substantial decline in household income followed by a recovery, with little overall growth over the cycle. Unemployment grew over the period, whilst income inequality dipped slightly but remained close to 1973 levels.
- 1980 to 1990: After an initial dip in average income, a period of rapid household income growth. Unemployment and the percentage of households without work grew rapidly in the first half of the decade, with only the former falling back by 1990. This subperiod also contained a very large rise in income inequality.
- 1990 to 2002–03: A period of very low income growth followed by a period of steady income growth. This subperiod saw a recession at the beginning, followed by a period of steady GDP per capita growth and decline in unemployment. Income inequality remained largely unchanged.
- 2002–03 to 2008–09: A very small dip in household incomes followed by a gradual rise mainly concentrated amongst the upper half of the income distribution. This was accompanied by a slight increase in inequality and unemployment.

Table 1. Breakdown of households by number of adults and workers

	Percentage of all households		*Percentage of LMI households*	
	1968	*2008–09*	*1968*	*2008–09*
1 adult, 0 workers	2%	10%	0%	2%
1 adult, 1 worker	8%	20%	7%	25%
2+ adults, 0 workers	2%	6%	1%	3%
2+ adults, 1 worker	34%	17%	47%	29%
2+ adults, 2+ workers	54%	47%	45%	42%

Over the period that we consider, there have been substantial changes in the composition of households, both in terms of number of adults and in terms of number of workers: see Table 1. There has been a large increase in the percentage of households that contain only one adult, rising from 10% to 30%. There has also been a notable ‘polarisation’ of work amongst households, with both an increase in households with no workers (4% to 16%) and an increase in multiple-worker households amongst those households that have more than one adult (from 60% to 67%). This is in line with work that has studied trends in household employment, including Gregg and Wadsworth (2008). The increase in workless households is less notable amongst the low- to middle-income group since many workless households fall in the bottom decile or receive at least 50% of their income through benefits, and so are not included in the LMI group.

3. Methodology

This section sets out the decomposition method used in this paper. A decomposition approach allows us to build up a rich data set that breaks down annual changes in household income by population group and by income source over a period of forty years. These data can then be aggregated in a variety of ways, which provides a great deal of flexibility compared with a simulation approach. The approach also allows us to consider the influence of many sources simultaneously without being path-dependent.[11]

We begin with the following identity for the net income of household *h*:

$$(1) \qquad Y_h \equiv E_h^{ME} + E_h^{Oth} - ET_h + SE_h + I_h + B_h + TC_h + P_h + O_h - D_h ,$$

where the variables are defined as follows:

E^{ME} = gross employment income of the main earner;[12]
E^{Oth} = gross employment income of all other household members;
ET = employment income taxation;
SE = net household self-employment income;
I = net household investment income;
B = net household benefit income;
TC = household tax credit income;
P = net pension income;
O = other household income;
D = deductions. These deductions from income include council tax liabilities, student loan repayments, private pension contributions, maintenance payments, and contributions to children studying at university.

All of these components can then be 'equivalised' using the OECD equivalence scale, and this allows us to present the changes in average equivalised household income in the following way:

$$(2) \qquad \Delta\overline{Y} = \Delta\overline{E^{ME}} + \Delta\overline{E^{Oth}} - \Delta\overline{ET} + \Delta\overline{SE} + \Delta\overline{I} + \Delta\overline{B} + \Delta\overline{TC} + \Delta\overline{P} + \Delta\overline{O} - \Delta\overline{D} ,$$

[11] Our methodology therefore contrasts with the income distribution decompositions of Bourguignon, Ferreira and Lustig (2004), for example, which allow for more subtle effects (such as the impact of wage changes on hours worked) but are analytically complex and require running multiple decompositions to control for path-dependence.

[12] Decomposing by 'main earner' and 'other earners' allows us to focus on, amongst other things, the effects of changes in the number of multiple-earner households. An alternative decomposition would be to split employment income by the gender of the earner. For employment income split in this way, see the results in Appendix A.

where $\Delta x = (x)_{t=1} - (x)_{t=0}$.

Suppose we divide the population into *G* mutually exclusive groups such that $\overline{Y} = \sum_{g=1}^{G} \mu_g \overline{Y_g}$, where $\overline{Y_g}$ is the average income of group *g* and μ_g is the share of the total population contained in group *g*. We can then use the formula $\Delta(xy) = \tilde{y}\Delta x + \tilde{x}\Delta y$, where $\tilde{x} = \frac{(x)_{t=0} + (x)_{t=1}}{2}$, to decompose changes in average income in the following way:

$$\begin{aligned} \Delta\overline{Y} &= \sum_{g=1}^{G} \Delta\left(\mu_g \overline{Y_g}\right) \\ &= \sum_{g=1}^{G} \tilde{\mu}_g \Delta\overline{Y_g} + \sum_{g=1}^{G} \Delta\mu_g \tilde{\overline{Y}}_g. \end{aligned} \tag{3}$$

The two terms in equation (3) can then respectively be interpreted as a 'within group' effect and a 'group population change' effect. The former represents the change in income that results from income changes within each of the groups, and the latter represents the portion of income change resulting from changes in the relative sizes of the different groups. In the decompositions presented below, the group generally used in this way is the size of the household (one adult, or two or more adults).

Individual income sources can be decomposed in a similar way. For the employment income sources, we can group households according to the hours worked by the relevant household member(s). We then arrive at the following decomposition:

$$\Delta\overline{E} = \sum_{g=1}^{G} \tilde{\mu}_g \Delta\overline{E_g} + \sum_{g=1}^{G} \Delta\mu_g \tilde{\overline{E}}_g . \tag{4}$$

The first term in (4) can be viewed as largely a 'wage effect' and the second term as an 'hours effect'. In choosing the groups, we require them to be sufficiently wide that the sampling error is not too large and sufficiently narrow to capture significant changes in hours worked. We therefore divide households according to which hours band the relevant household member falls into:

- 0 hours;
- greater than 0 hours but less than or equal to 20 hours;
- greater than 20 hours but less than 35 hours;
- greater than or equal to 35 hours but less than 40 hours;
- 40 hours;
- greater than 40 hours but less than 50 hours;

- greater than or equal to 50 hours.

In households with more than one earner other than the main earner, we take the average number of hours worked by all other earners. The bands above were chosen on the basis of the distribution of hours worked, which is shown in Table 2.

Table 2. Distribution of households by hours employed in 2008–09

Hours band	*% of households with main earner in hours band*	*% of households with other earners in hours band*
H = 0 or no relevant earner	24%	59%
$0 < H \leq 20$	6%	7%
$20 < H < 35$	7%	8%
$35 \leq H < 40$	28%	12%
H = 40	12%	4%
$40 < H < 50$	13%	4%
$H \geq 50$	9%	6%

We also carry out a similar decomposition with a simpler split (dividing households into those with no hours worked and those with some hours worked). In this case, we label the group population change effect as the 'employment effect', since it measures the change in income resulting from changes in employment. Since this is included in the 'hours effect' described above, we subtract out the employment effect so that the 'hours effect' simply measures the effect of changes in hours worked amongst those employed.

We carry out the analysis for the full sample and for a smaller subgroup. This subgroup is an approximation of the group labelled by the Resolution Foundation (2010) as 'low- to middle-income'. Here we consider households that lie between the 10^{th} and 50^{th} percentiles of the distribution of gross household income and receive less than 50% of their gross income from benefits (including tax credits). Note that since we are using repeated cross-sectional data rather than a panel, the composition of this group changes over time. Indeed, the group size falls from containing 39% of the population to 33% of the population as more households cross the 50% benefit income threshold. Changes in the income of this group are therefore made up of both the income changes of households that remain 'low- to middle-income' and changes in which households fall into this category. In Appendix B, we also present decompositions of income growth for two further subgroups: households that lie between the 10^{th} and 50^{th} percentiles and households that lie between the 90^{th} and 99^{th} percentiles.

4. Results

This section presents the main results. We first consider growth in average household income for the entire population. We then focus more specifically on those households between the 10th and 50th percentiles receiving less than 50% of their income from benefits (including tax credits), and compare this group with those in other percentiles.

4.1 All working-age households

Figure 4 shows the composition of average net household income at the start and end of our period of study.[13] Figure 5 is the same, only rather than splitting net employment income into income earned by the main earner and income earned by other earners, the split is by gender.

Net income from the main earner's employment is by far the biggest income source at both the beginning and the end of the period. However, its share has fallen notably, as has the share of household income coming from employment income of other earners. As a result, average household income is more diversified in 2008–09 than in 1968, with more than a quarter of household income now not coming directly from employment. From Figure 5, we can see that the fall in the share of income from employment is due to a fall in men's earnings. Indeed, the share of household income stemming from women's employment has substantially increased, rising from 15% in 1968 to 26% in 2008–09.

[13] Note that this is net income before deductions are subtracted since it is convenient to show only the positive sources of net household income in these charts.

Figure 4. Shares of each income source in total net equivalent household income, 1968 and 2008–09

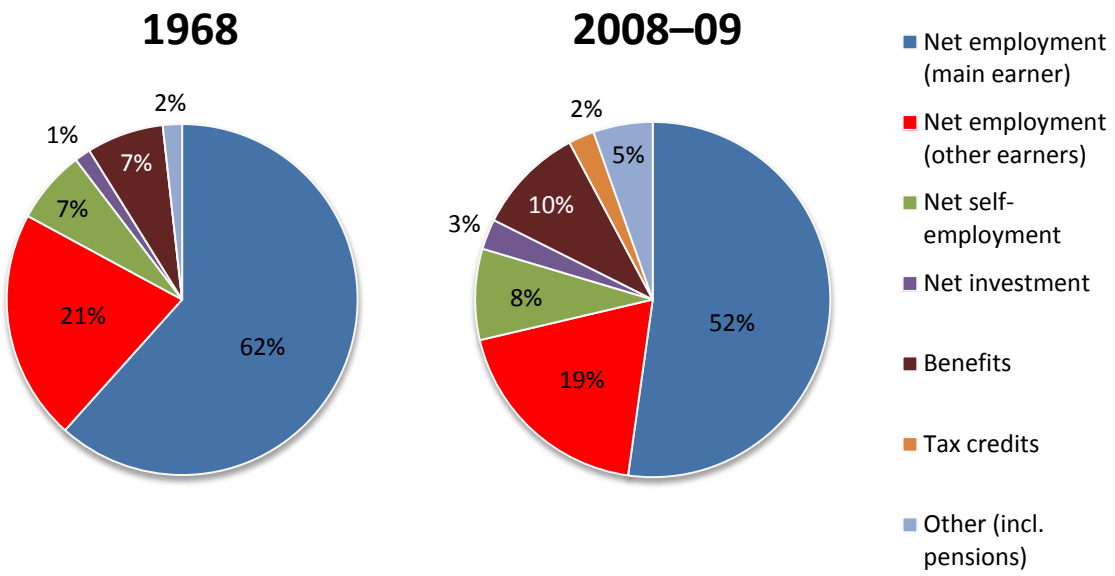


Figure 5. Shares of each income source in total net equivalent household income, 1968 and 2008–09, by gender

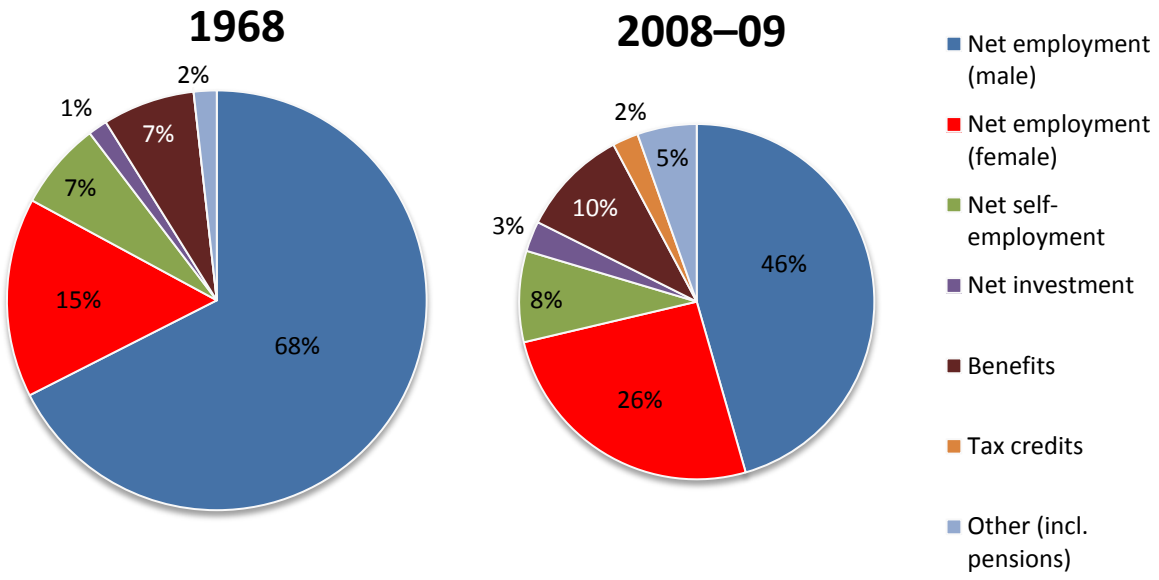
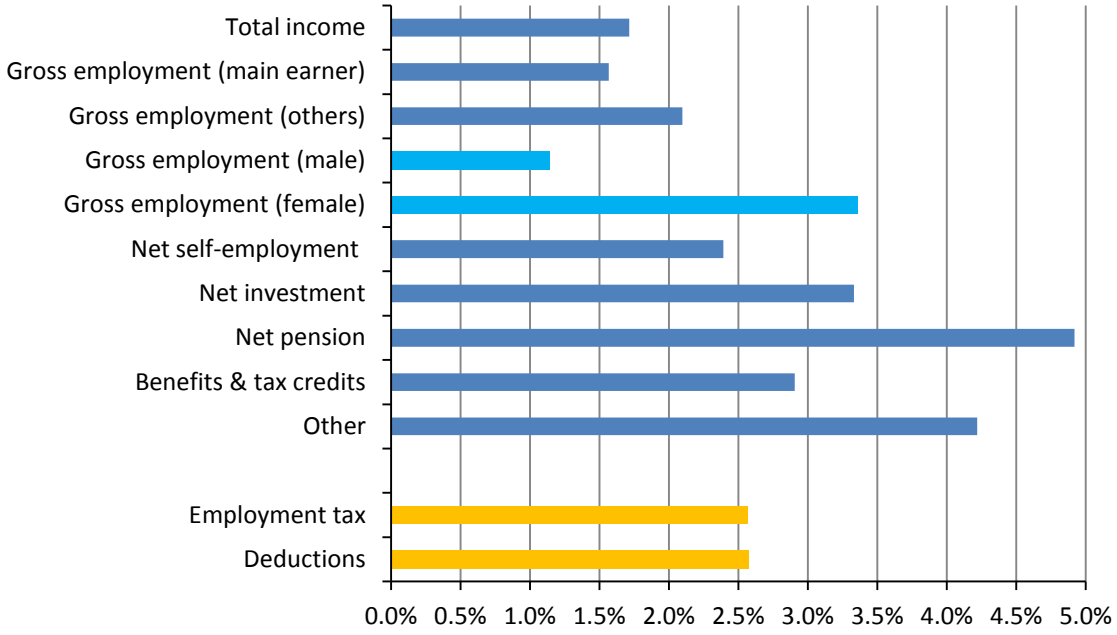


Figure 6. Average annual growth rates of net equivalent household income, 1968 to 2008–09, by income source



For the share of household income coming from the main earner's employment income to have fallen, it must have grown at a slower rate than other income sources. This is confirmed by Figure 6, which shows the annualised growth rate of each income source over the period 1968 to 2008–09.

In fact, the main earner's gross employment income has grown at the slowest rate of all of our income sources, at around 1.5% a year. Employment income from other household members and income from self-employment have grown a little faster, at over 2% a year. We can see that the contrast between genders is even starker, with male gross employment income growing at an average rate of around 1% and female gross employment income growing at 3.4% on average. The highest growth rates have come from the smallest sources, including pensions, investments and 'other' income sources. Employment tax has grown at a faster rate than gross employment income, implying that average tax rates have risen over the period, although our decompositions do not tell us whether this is due to more people entering higher tax brackets, discretionary changes to income tax and National Insurance contributions, or other factors.

Figure 7 presents the results of the decomposition of the total change in average household income since 1968 using the method set out in Section 3. Each segment above the horizontal axis represents a positive contribution towards household income over the period, and each block below represents a negative contribution. The total

change in net household income is therefore the sum of the contributions above the horizontal axis minus the contributions below the horizontal axis. The scale is £ per week, inflated to 2008–09 values and 'equivalised' using the OECD equivalence scale (see Section 2 for details).

Figure 7. Breakdown of net equivalent household income growth, 1968 to 2008–09

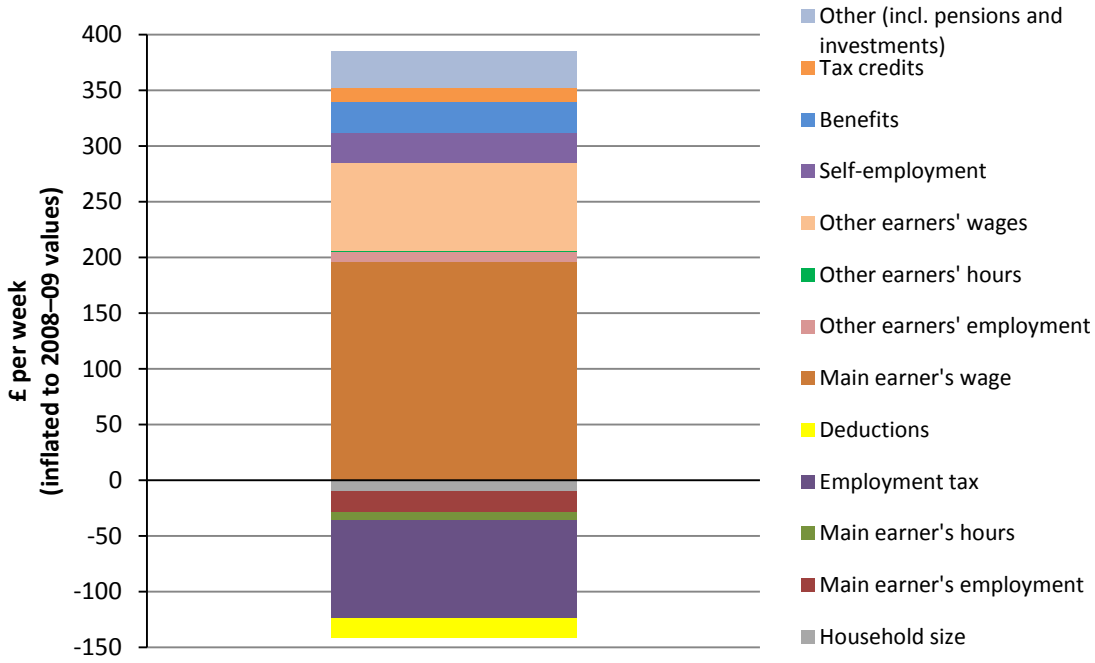


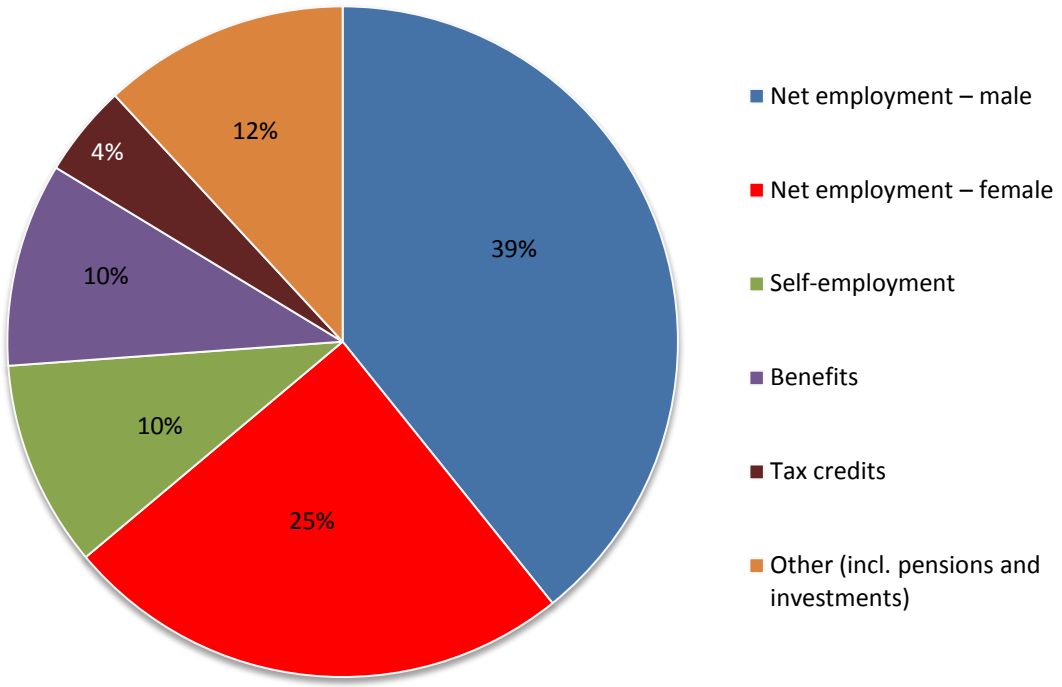
Figure 7 shows the absolute size of each income source's contribution, but it is also useful to display the share each income source holds in explaining the total change. This is displayed in pie chart form in Figure 8. Since we cannot display sources that have contributed negatively over the period, we focus on net employment income and ignore changes in household size and deductions. For variation, this figure splits employment earnings by gender rather than by main/other earner.

Figure 7 shows that growth in the hourly wages of the main earner was the largest source of income growth over the period 1968 to 2008–09. However, this was partially offset by a fall in the main earner's employment and hours worked. For other household members, there was both a substantial rise in wages and a rise in employment. From Table 7 in Appendix A, we can see that this most likely reflects the greater participation of women in the workforce. This greater participation of women and fall in employment amongst men meant that the contributions of employment income from men and women were fairly similar, as can be seen in Figure 8. Overall, a quarter of the total growth in household net incomes was the result of a rise in net female employment income.

Figure 7 also shows us that changes in household size have had a negative effect on household income. This is due to households getting smaller, on average: the number of households with two or more adults has fallen, and the number of single-adult households has risen.

To consider how this household income growth has differed across family types, we carry out the same decomposition for four separate groups: single adults without children, single adults with children, households with two or more adults and no children, and households with children and two or more adults. The results are presented in Figure 9. Unlike Figure 7, where growth was presented in absolute values (i.e. £ per week), here growth is presented as a percentage of the average income of households of that type in 1968. This is in order to make comparison across the groups easier.

Figure 8. Breakdown of net equivalent household income growth, 1968 to 2008–09 (excluding changes in household size and deductions), by gender



Note: Net employment income growth is divided between genders in the same proportion as gross employment income growth (since our data on tax payments are at the household level), i.e. we assume that employment tax growth is distributed across genders in the same way as employment income growth.

Figure 9. Breakdown of net equivalent household income growth, 1968 to 2008–09, by household type

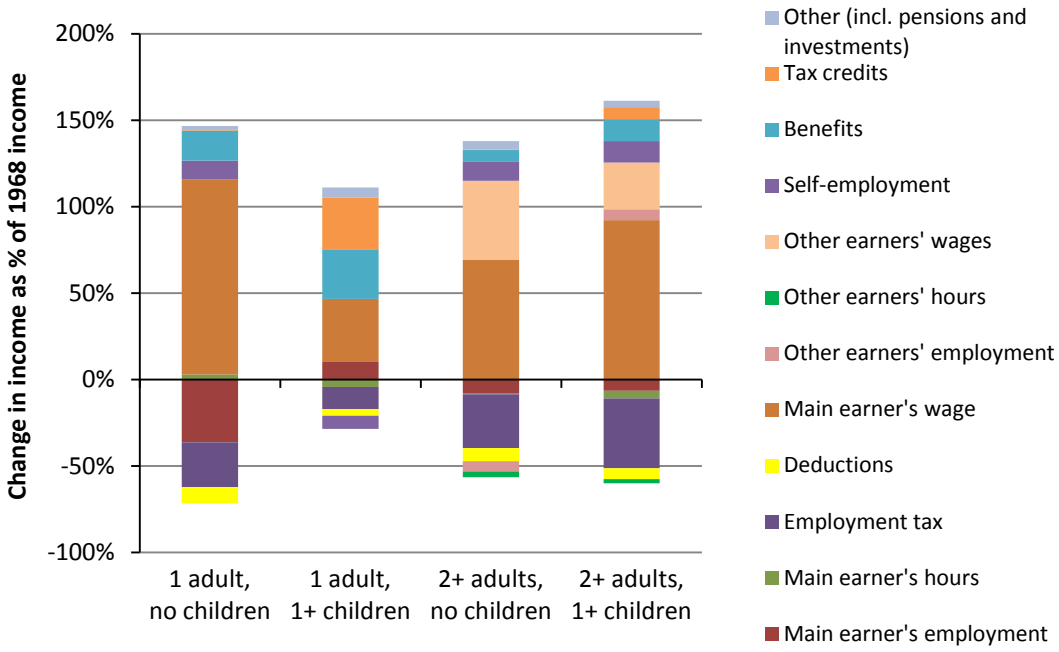


Figure 9 shows that the composition of growth has varied substantially across household types. Households with a single adult and no children recorded the lowest total growth (75%). Despite high growth in wages, the net employment income of this group fell due to a substantial fall in employment. This is in contrast to single households with children, where employment rose slightly. This latter group also gained the most (in relative terms) from the introduction of tax credits; tax credits and income from benefits are responsible for over two-thirds of the rise in income for this group since 1968.

For households with more than one adult, a rise in employment income made up the bulk of the income growth. For households without children, a substantial share of this came from a rise in the hourly wages of secondary earners. Households with two or more adults and no children experienced a fall in income through a fall in the employment of secondary earners, but multi-adult households with children recorded a gain.

Turning back to the full sample of working-age households, we can also compare different subperiods within our overall window of 1968 to 2008–09. Table 3 gives the breakdown of changes in each of the subperiods set out in Section 2; these data are also presented as a series of stacked bar charts in Figure 10. Table 4 gives a breakdown for the average annual percentage growth rates.

Table 3. Average annual changes in net equivalent household income, £ per week

			Gross employment (main earner)			Gross employment (other earners)										
	Total	**HH size**	Employment effect	Hours effect	Wage effect	Employment effect	Hours effect	Wage effect	**Employment tax**	**Net self-employment**	**Net pension**	**Net investment**	**Benefits**	**Tax credits**	**Other**	**Deductions**
1968 to 1973	6.8	–0.4	0.3	–0.4	7.7	1.3	–0.5	2.6	–4.4	0.7	0.1	0.2	0.1	0.0	0.0	–0.3
1973 to 1980	1.5	–0.1	–0.4	–0.3	1.6	0.8	0.2	1.3	–3.1	–0.3	0.1	0.2	1.6	0.0	0.1	–0.2
1980 to 1990	9.6	–0.3	–1.8	0.1	6.8	–0.2	0.0	2.3	–1.4	2.4	0.6	0.8	0.5	0.0	0.4	–0.4
1990 to 2002–03	7.1	–0.3	0.0	–0.2	5.1	0.0	0.2	2.2	–1.5	0.3	0.4	–0.2	0.9	0.4	0.5	–0.7
2002–03 to 2008–09	2.9	0.0	0.2	–0.1	2.9	–0.4	–0.1	1.1	–1.9	–0.2	0.0	0.4	–0.1	1.2	0.2	–0.4
1968 to 2008–09	6.1	–0.2	–0.5	–0.2	4.9	0.2	0.0	1.9	–2.2	0.7	0.3	0.3	0.7	0.3	0.3	–0.4

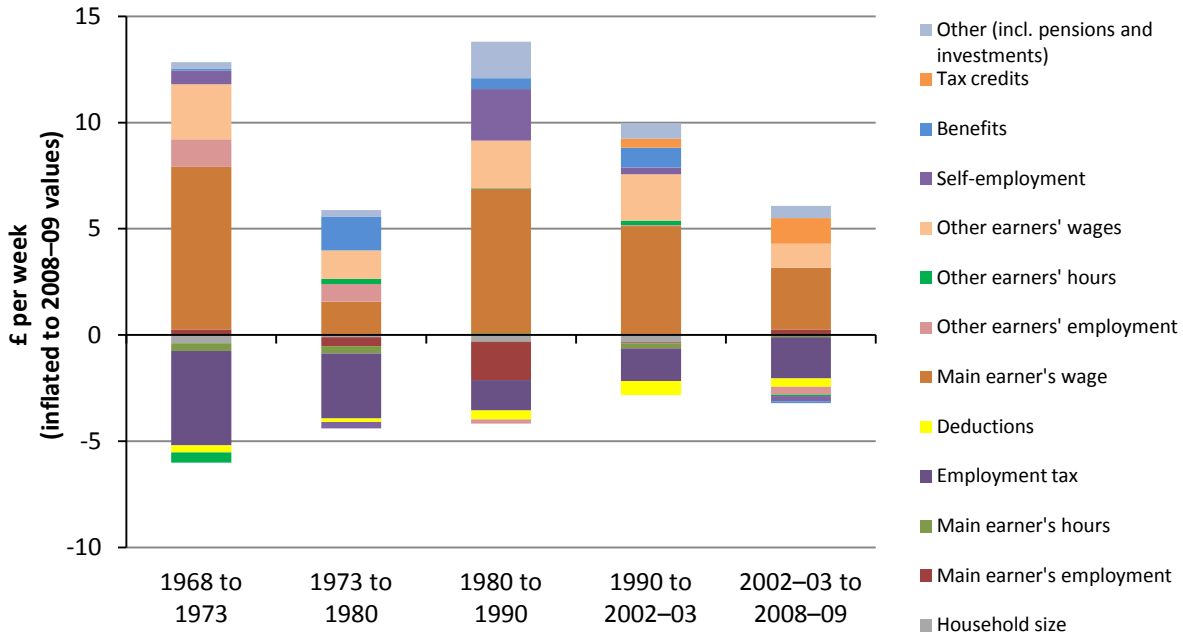
Notes: Values are the annual increase in £ per week (inflated to correspond to 2008–09 values, and equivalised using the OECD equivalence scale). Cells are coloured according to their relative importance, with red being the largest positive contribution, orange being the second and yellow being the third.

Table 4. Average annual growth rate in net equivalent household income, %

	Total	Gross employment (main earner)	Gross employment (other earners)	Net self-employment	Net pension	Net investment	Benefits	Other	Employment tax	Deductions
1968 to 1973	2.6%	3.6%	4.6%	3.5%	5.2%	4.3%	0.4%	1.2%	7.6%	3.1%
1973 to 1980	0.5%	0.3%	2.8%	–1.5%	2.2%	3.2%	6.8%	2.5%	3.8%	1.4%
1980 to 1990	2.9%	1.9%	2.0%	8.7%	11.4%	8.5%	1.6%	6.9%	1.4%	2.9%
1990 to 2002–03	2.0%	1.8%	2.4%	0.9%	4.6%	–1.5%	2.6%	5.5%	1.6%	3.8%
2002–03 to 2008–09	0.6%	0.8%	0.5%	–0.5%	–0.3%	3.4%	–0.2%	1.3%	1.5%	1.5%
1968 to 2008–09	1.7%	1.6%	2.1%	2.4%	4.9%	3.3%	2.3%	4.2%	2.6%	2.6%

Notes: Values are the annualised real growth rates over the period. Cells are coloured according to their relative importance, with red being the largest positive contribution, orange being the second and yellow being the third.

Figure 10. Average annual change in net equivalent household income by period, subdivided by source



Let us now consider the most notable changes in income sources within each of our periods.

1968 to 1973: Strong wage growth along with a rise in female employment

This period is notable for having the fastest annual growth rate in gross income from employment, which is due to large rises in wages for all household members and a substantial rise in the employment of earners other than the main earner. Table 7 in Appendix A tells us that this employment rise was largely the result of increased female participation in the workforce. However, the period also has the greatest rise in the amount households pay in employment tax, with taxes consuming 41% of the rise in gross employment income.

1973 to 1980: Low growth in male wages and large rises in both taxes and benefits

This period saw the slowest growth in household incomes of the five periods. This is partly explained by the very small rise in the main earner's gross employment income, with low growth in hourly wages being partially cancelled out by a fall in employment and hours worked. In contrast, other household members' gross employment income continued to grow through rises in employment, hours worked and hourly wages. Indeed, Table 7 in Appendix A shows us that women's wages were a more important source of income growth than men's wages. However, gains in all earners' gross

employment income were more than cancelled out by the large rise in employment taxes that took place during this period, most strikingly between 1972 and 1975.

This period also saw a rise in income from benefits, which rose for households both with and without children, and for households with or without anyone active in the labour market. This rise was most substantial during the late 1970s.

1980 to 1990: Strong growth in wages and self-employment income, but a large fall in male employment

During the 1980s, the rate of wage growth of all household members returned to levels similar to those seen in 1968 to 1973. However, unlike in this earlier period, the effect of changes in employment was to lower average household income substantially, with the employment of both the main and other earners falling over the period. Table 7 in Appendix A tells us that this fall in employment was concentrated amongst men, with women's employment rising slightly over the period. Employment taxes grew relatively slowly, taking only 20% of the total rise in gross household employment income.

Besides the large fall in male employment, perhaps the most notable property of this period was the large growth in the relatively small components of average household income. Growth in net self-employment income was particularly impressive, accounting for around a quarter of the total income growth in this period. Indeed, 87% of the growth in self-employment income between 1968 and 2008–09 occurred in the 1980s.[14] Similarly, net incomes from pensions and from investments both grew at very high rates. Average household income from benefits also rose in this period, largely due to a rise in the number of households without any active workers.

1990 to 2002–03: Medium wage growth with a rise in benefits

The 1990s and early 2000s saw a fairly moderate rise in average household income, mainly led by growth in the wages of the employed. There was little change resulting from movements in employment or hours worked over this period.

Households' average income from benefits rose markedly over the period. As in the 1980s, the rise in benefits mainly accrued to households without an active worker. However, unlike in the 1980s, this was not due to a rise in the number of such households, but due to these households receiving a greater amount of benefits, on

[14] This should not be over-interpreted, given the relative ease of shifting income from employment to self-employment and the existence of tax incentives to do just that.

average. The introduction of tax credits mainly benefited families with a worker and at least one child in the household.

This period also saw the largest average annual rise in deductions, concentrated between 1993 and 2000: this most likely reflects the large real-terms rises in council tax bills over this period. Income from investments fell over the period, possibly due to the fall in nominal interest rates.

2002–03 to 2008–09: Low wage growth with a rise in taxes and tax credits

This period saw slow growth in average household net income, mainly explained by slow growth in employment income for all household members. This in turn can be explained by slow growth in hourly wages; the effect of changes in employment and hours worked was very small. The increase in employment taxes was large, consuming over half of the gains in gross employment income.

Average income from benefits fell slightly over the period, but average income from tax credits increased substantially. Indeed, increases in tax credit income accounted for around 40% of the increase in average net household income over the period 2002–03 to 2008–09. These tax credit increases generally accrued to families with children.

Summary

For all working-age households, increases in hourly wages have been the largest force driving growth in household income over the past four decades, and fluctuations in the rate of wage growth have been a major factor in determining the pattern of household income growth. Wage growth was strongest between 1968 and 1973 and between 1980 and 1990, but has slowed since 1990. The source of employment income has also steadily changed over time, as male employment has fallen and female employment has risen. Both effects occurred throughout the period, though the rise in women's employment has slowed over time and the fall in male employment was most concentrated in the 1980s. Since 1990, changes in hours worked have had a greater effect than changes in employment, with men working fewer hours and women working more.

Other sources of income have also played an important role. Rises in employment taxes have generally accompanied rises in gross employment income, but there were particularly large rises between 1972 and 1975 and between 2003–04 and 2007–08. Income from social security benefits rose considerably between 1973 and 1980 and between 1990 and 2002–03, and tax credits became an important component of household income from 2000–01 onwards. A rise in self-employment income was a

major factor in household income growth in the 1980s, but this income source had minimal impact in other periods. Similarly, most of the growth in income from investments and pensions occurred during that decade.

4.2 Low- to middle-income households

In this subsection, we carry out the same analysis on a particular subset of the population – low- to middle-income households. These are households that lie between the 10th and 50th percentiles when ranked in order of gross income and receive less than 50% of their gross income from benefits (including tax credits).

As we saw in Figure 2, the income of this group has generally not grown as rapidly as that of the population on average. Figure 11 displays the components of household income in 1968 and 2008–09 for LMI households. Figure 12 is the same except that, rather than splitting net employment income into income earned by the main earner and income earned by other earners, the split is by gender.

By the end of the period, low- to middle-income households are receiving their income from a more diverse range of sources than in 1968 to an extent that is even more pronounced than for the whole population. In 1968, net employment income from the main earner accounted for 70% of total income, but this had fallen to 51% by 2008–09. In 1968, low- to middle-income households were more dependent on employment income from the main earner than the population average, due to a lower portion of income coming from other earners, but the situation had reversed by 2008–09. From Figure 12, we can see that the change is even starker when we break down by gender. In 1968, net employment income from men accounted for 71% of total income, but this had almost halved by 2008–09, falling to 40%. A striking change is the large increase in the share of income of low- to middle-income households that comes from benefits and tax credits.

Figure 11. Shares of each income source in total net equivalent household income, low- to middle-income households, 1968 and 2008–09

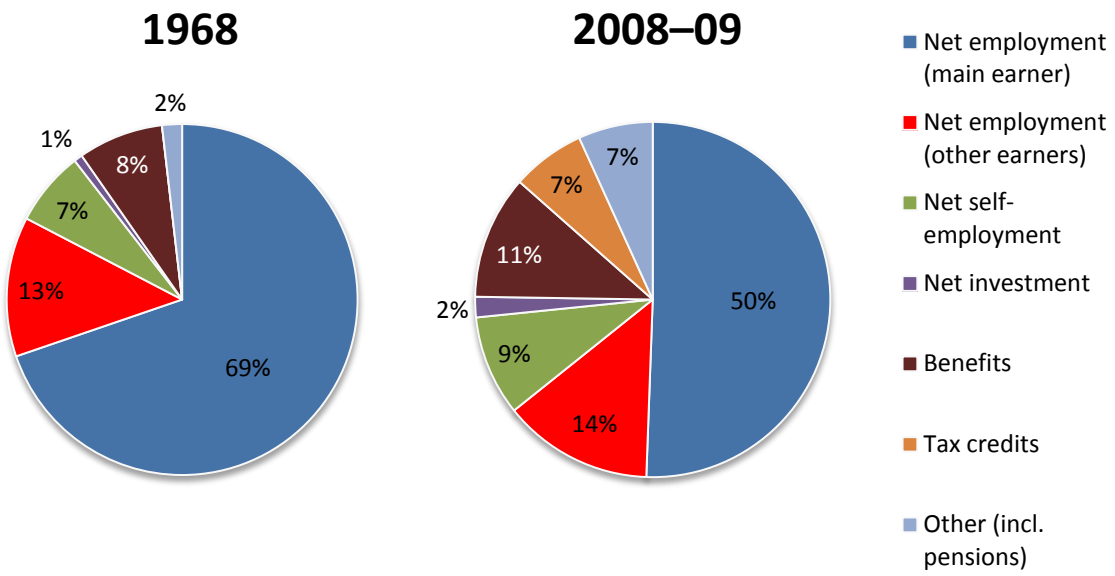


Figure 12. Shares of each income source in total net equivalent household income, low- to middle-income households, 1968 and 2008–09, by gender

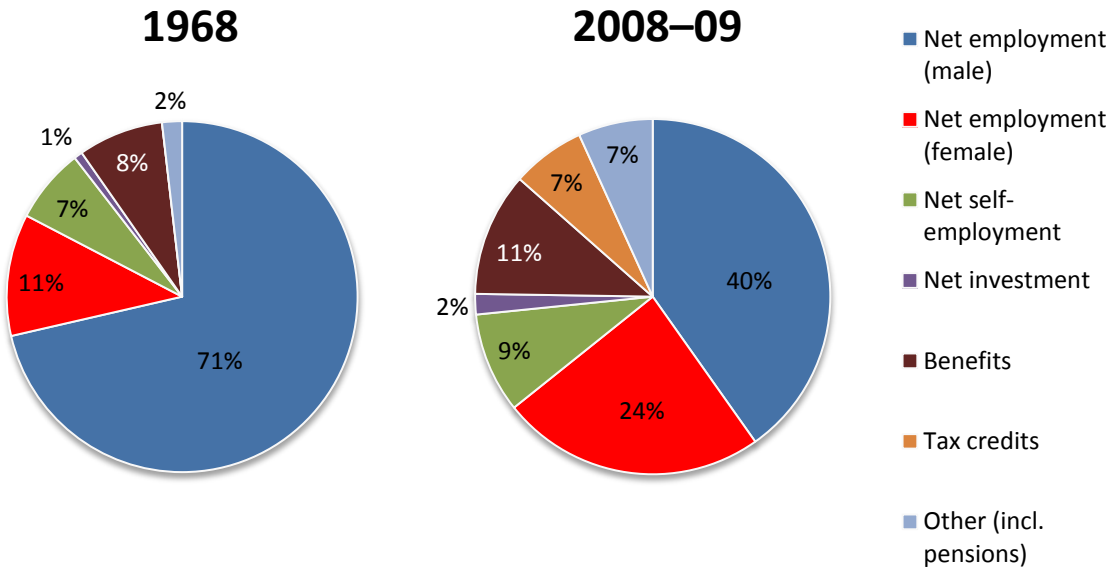


Figure 13 displays the annualised growth rate of each income source over the period 1968 to 2008–09. It shows that the rise in the share of income coming from benefits stems from two sources. First, the annualised growth rate of income from benefits for LMI households was 3.4%, which is above that for the total population on average (2.9%). Second, income from employment grew relatively slowly: gross employment income from the main earner rose at an average annual rate of 0.7%, less than half of the rate for the whole population. Also, gross employment income from other earners and net self-employment income both grew at slower rates for LMI households than for the whole population. Gross employment income growth was particularly bad for men, at an annualised rate of just 0.3%.

Figure 13. Average annual growth rates of net equivalent household income, 1968 to 2008–09, by income source, low- to middle-income households

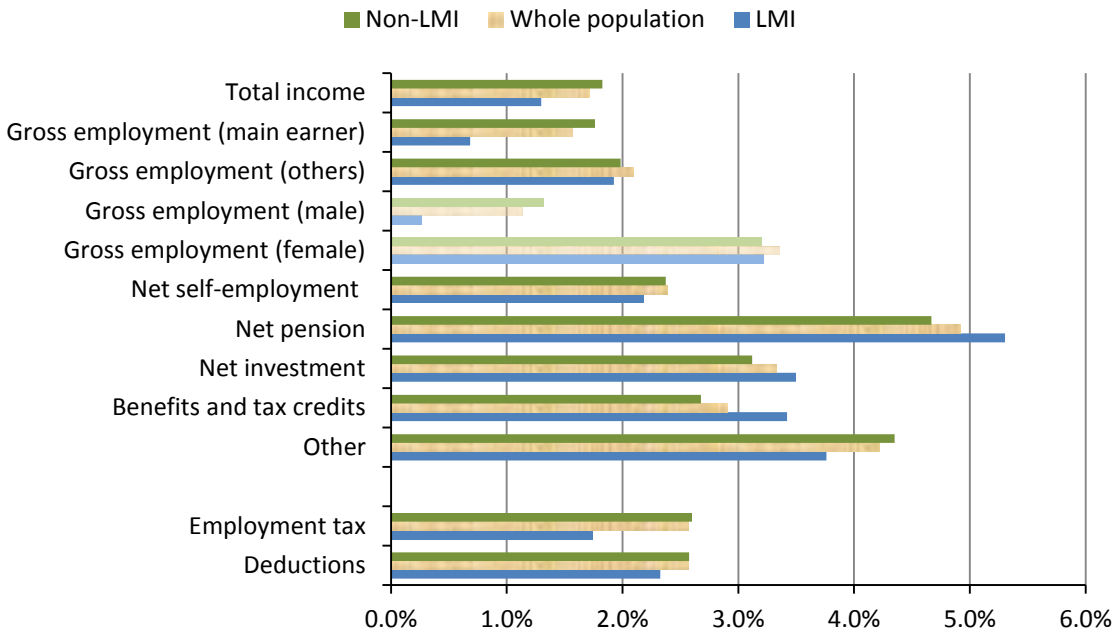


Figure 14 presents the total change in household income decomposed into its constituent parts. As before, each block above the horizontal axis represents a positive contribution towards household income over the period, and each block below represents a negative contribution. The total change in net household income is therefore the sum of the contributions above the horizontal axis minus the contributions below the horizontal axis. The scale is £ per week, inflated to 2008–09 values and 'equivalised' using the OECD equivalence scale (see Section 2 for details).

Figure 14. Breakdown of net equivalent household income growth, 1968 to 2008–09, low- to middle-income households

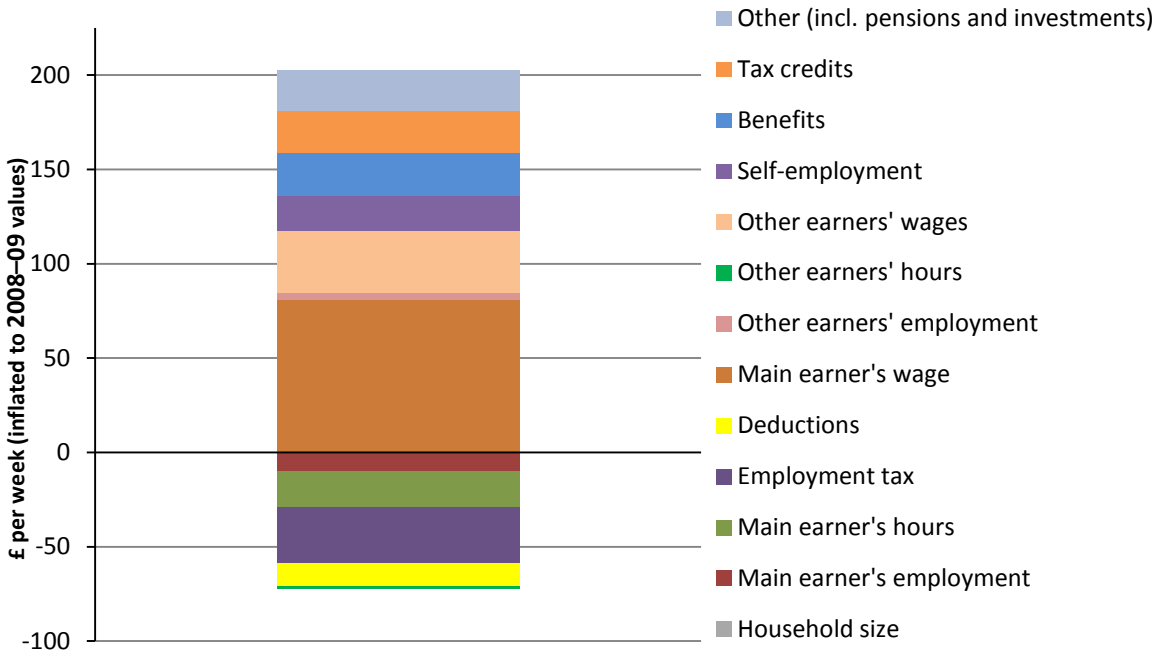
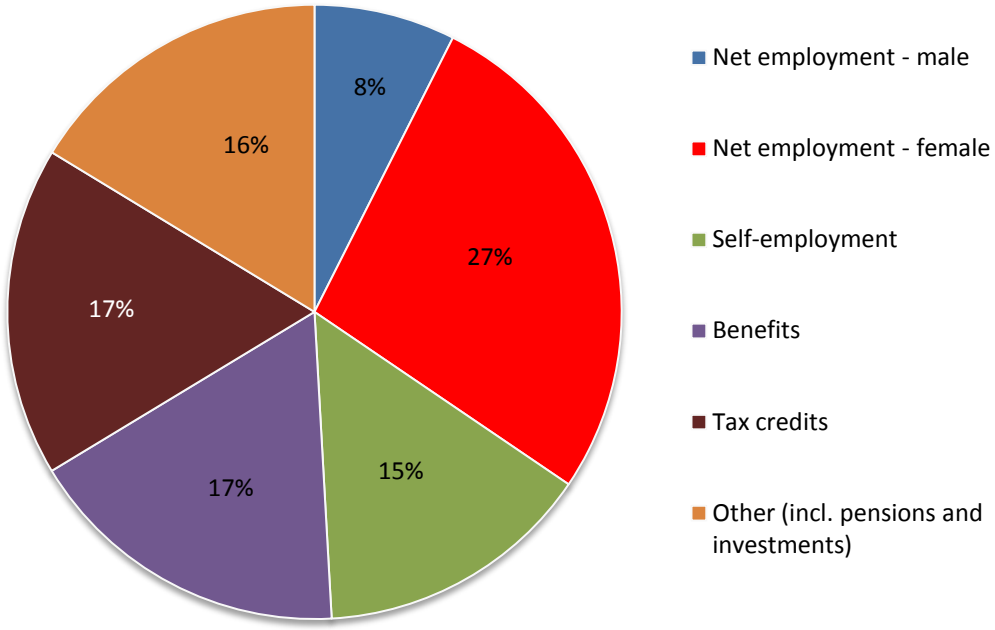


Figure 15. Breakdown of net equivalent household income growth, 1968 to 2008–09 (excluding changes in household size and deductions), low- to middle-income households, by gender



Note: Net employment income growth is divided between genders in the same proportion as gross employment income growth (since our data on tax payments are at the household level), i.e. we assume that employment tax growth is distributed across genders in the same way as employment income growth.

Figure 14 shows the absolute size of each income source's contribution, but it is also useful to display the share each income source holds in explaining the total change. This is displayed in pie chart form in Figure 15. Since we cannot display sources that have contributed negatively over the period, we focus on net employment income and ignore changes in household size and deductions. For variation, this figure splits employment earnings by gender rather than by main/other earner.

Low- to middle-income households' income growth has come from a more diverse range of sources than is the case for the whole population. Growth in the hourly wages of the main or sole earner in households was the largest source, but it was substantially less important than for the whole population: income gained from the main earner's wage growth was 62% of the total income increase over the period for LMI households, compared with 80% for the whole population. Similarly, the rise in gross employment income from other earners' wage growth was only 25% of the total rise in LMI household incomes, compared with 32% for the whole population. Figure 15 demonstrates that the vast majority (78%) of the increase in employment income that did occur came from women. Overall, 27% of the growth in net income for LMI households came from an increase in women's employment income, which is a slightly larger percentage than the average across all working-age households. As a result, employment income for LMI households has therefore become increasingly sourced from female earners: in 1968, 86% of household gross employment income came from men and 14% from women; in 2008–09, 63% came from men and 37% from women.

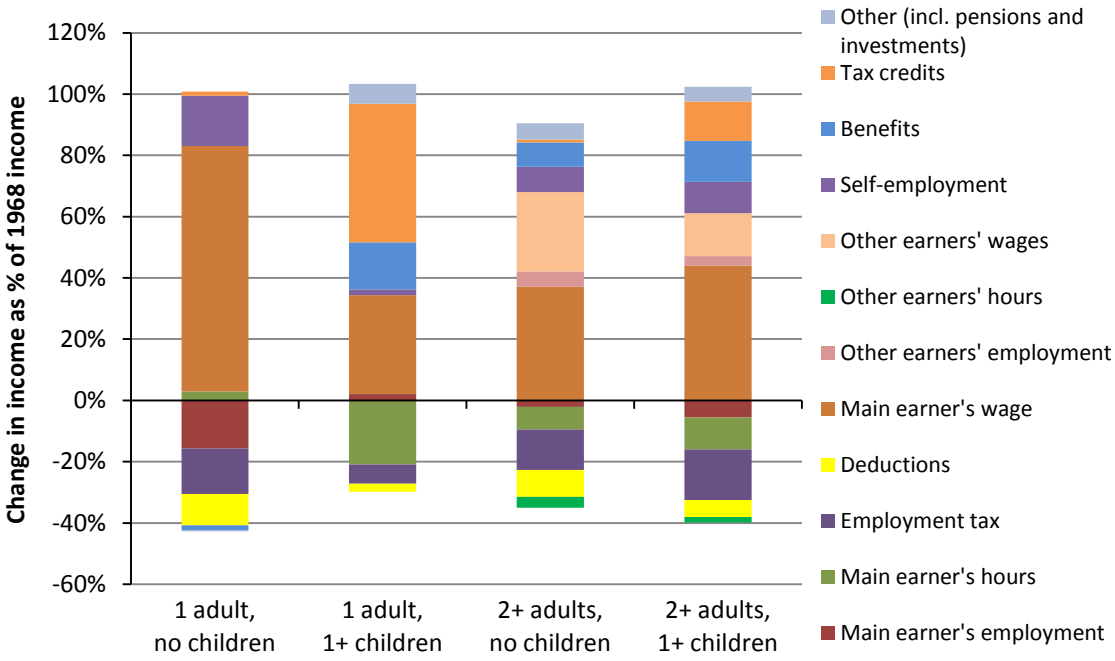
Two sources that were much more substantial for low- to middle-income households than for the population on average were benefits and tax credits, each explaining 17% of the total rise in incomes. The rise in self-employment income also explains a slightly higher proportion of total income growth than for the population on average: 15% compared with 11%. Interestingly, the LMI group appears not to have suffered a fall in incomes due to changes in household size, unlike the population as a whole.

We now carry out the same decomposition for four household types: single adults without children, single adults with children, households with two or more adults and no children, and households with children and two or more adults. The results are presented in Figure 16. Unlike Figure 14, where growth was presented in absolute values (i.e. £ per week), here growth is presented as a percentage of the average income of households of that type in 1968 to make comparison across the groups easier.

For single-adult households without children, Figure 16 paints a picture for LMI households which is similar to the one for the whole population that we saw in the last

subsection: income growth is dominated by a rise in hourly wages, but partially offset by a fall in employment. However, one notable difference from the whole population is that single-person households with low to middle incomes have not seen a rise in benefit income, unlike the population average (which we presume is because the rise in benefit income has been experienced by non-working single-adult households).

Figure 16. Breakdown of net equivalent household income growth, 1968 to 2008–09, by household type, low- to middle-income households



Single adults living with children who are low- to middle-income households also received a smaller rise in benefit income than such families in the population as a whole: the growth in benefit income was 15% of their total income in 1968, compared with 29% for the whole population. On the other hand, increases in tax credits for single LMI households with children were much higher than those for other LMI households, and increased their income by 45%. This group also saw a large fall in their hours worked (but not their rate of employment), which is not evident amongst all lone parents. Overall, therefore, tax credits explained 62% of total household income growth of single-parent LMI households between 1968 and 2008–09, despite the fact that they were only introduced in 1999.

The majority of the growth in income of LMI households with more than one adult came from employment income, and a substantial share of this came in turn from rises in the hourly wages of secondary earners, especially for households without children. Multi-adult LMI households with and without children saw a rise in the employment of other earners, but a fall in the number of hours they worked. The ones with children

also saw a notable gain in income from tax credits, which made up 21% of their total income growth between 1968 and 2008–09.

Returning to all low- to middle-income households, Table 5 gives the breakdown of changes in each of the subperiods set out in Section 2. These data are also presented as a series of stacked bar charts in Figure 17. Table 6 gives a breakdown for the average annual percentage growth rates.

We now consider the most notable changes in income sources within each of these periods.

Figure 17. Average annual change in net equivalent household income by period, subdivided by source, low- to middle-income households

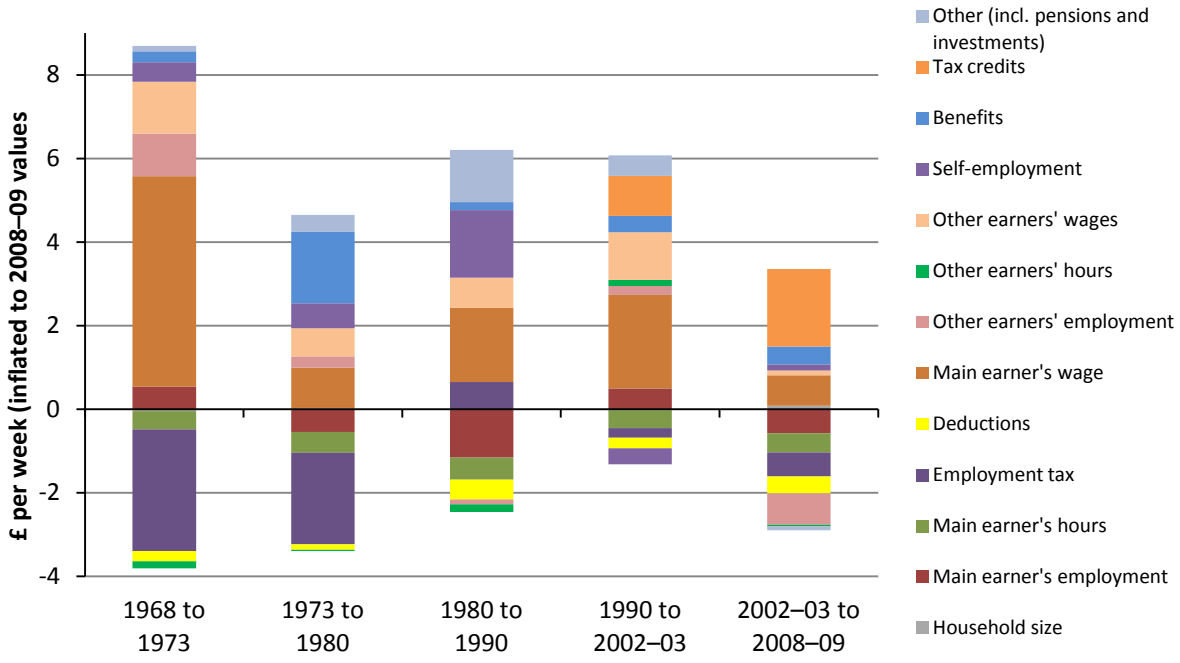


Table 5. Average annual changes in net equivalent household income, low- to middle-income households, £ per week

			Gross employment (main earner)			Gross employment (other earners)										
	Total	**HH size**	Employment effect	Hours effect	Wage effect	Employment effect	Hours effect	Wage effect	**Employment tax**	**Net self-employment**	**Net pension**	**Net investment**	**Benefits**	**Tax credits**	**Other**	**Deductions**
1968 to 1973	4.9	0.0	0.5	–0.4	5.0	1.0	–0.2	1.2	–2.9	0.5	0.0	0.1	0.3	0.0	0.1	–0.2
1973 to 1980	1.3	0.0	–0.5	–0.5	1.0	0.3	0.0	0.7	–2.2	0.6	0.1	0.2	1.7	0.0	0.1	–0.1
1980 to 1990	3.7	0.0	–1.1	–0.5	1.8	–0.1	–0.2	0.7	0.7	1.6	0.5	0.3	0.2	0.0	0.4	–0.5
1990 to 2002–03	4.8	0.0	0.5	–0.4	2.2	0.2	0.2	1.1	–0.2	–0.4	0.4	–0.1	0.4	1.0	0.2	–0.3
2002–03 to 2008–09	0.5	0.1	–0.6	–0.5	0.7	–0.8	0.0	0.1	–0.6	0.2	–0.4	0.2	0.4	1.9	0.1	–0.4
1968 to 2008–09	3.3	0.0	–0.3	–0.5	2.0	0.1	0.0	0.8	–0.7	0.5	0.2	0.1	0.6	0.6	0.2	–0.3

Notes: Values are the annual increase in £ per week (inflated to correspond to 2008–09 values, and equivalised using the OECD equivalence scale). Cells are coloured according to their relative importance, with red being the largest positive contribution, orange being the second and yellow being the third.

Table 6. Average annual growth rate in net equivalent household income, low- to middle-income households, %

	Total	Gross employment (main earner)	Gross employment (other earners)	Net self-employment	Net pension	Net investment	Benefits	Other	Employment tax	Deductions
1968 to 1973	2.4%	2.9%	6.0%	3.2%	–2.4%	5.6%	1.6%	2.2%	8.3%	2.8%
1973 to 1980	0.6%	0.0%	2.2%	3.3%	8.6%	6.7%	7.9%	3.8%	4.3%	1.4%
1980 to 1990	1.5%	0.0%	0.9%	6.1%	13.7%	7.2%	0.6%	7.2%	–1.2%	3.8%
1990 to 2002–03	2.0%	1.3%	3.2%	–1.3%	5.2%	–2.2%	1.4%	2.5%	0.5%	1.8%
2002–03 to 2008–09	0.1%	–0.1%	–1.1%	0.5%	–3.5%	2.9%	1.2%	0.8%	1.0%	2.1%
1968 to 2008–09	1.3%	0.7%	1.9%	2.2%	5.3%	3.5%	2.2%	3.8%	1.7%	2.3%

Notes: Values are the annualised real growth rates over the period. Cells are coloured according to their relative importance, with red being the largest positive contribution, orange being the second and yellow being the third.

1968 to 1973: Strong wage growth and increase in female employment

Income growth for low- to middle-income households in this period was similar to that for the whole population, and this was the period when LMI households experienced the highest average annual increase in net income. There was a very large increase in gross income from employment due to large rises in wages for all household members and a substantial rise in the employment of earners other than the main earner. From Table 8 in Appendix A, we can see that this was driven by an increase in female employment, as occurred in the population on average.

1973 to 1980: Fall in net employment income offset by a large rise in benefits

This period saw very little growth in the average income of low- to middle-income households. The gross employment income of main earners was stagnant due to falls in employment and in weekly hours worked, which cancelled out the growth in hourly wages. Moreover, there was no substantial rise in the employment rate or hours worked for other earners, unlike in the whole population. Working in the other direction, employment taxes rose substantially, by around 2.5 times the rise in gross employment income, resulting in a substantial fall in net employment income.

The fact that LMI household incomes grew at all in this period was mainly down, therefore, to two other income sources. First, benefit income grew at an average annual rate of 7.9%, a faster rate than for the whole population. This was spread across all household types, but was fastest for households without an active worker and with children. Second, net self-employment income grew by an average annual rate of over 3%; the whole population saw an annualised 1.5% fall in income from this source. These rises together meant that low- to middle-income households' income grew faster than the population average, albeit only by an annualised rate of 0.1% (and this was the only period when this was the case).

1980 to 1990: Medium wage growth more than offset by a fall in male employment

This period saw the greatest divergence in the rate of growth of income between low- to middle-income households (1.5%) and the whole population average (2.9%). Income from the main earner's employment in LMI households rose during this period, though at a far slower rate than amongst the whole population. In both cases, this growth was due to rises in hourly wages, partially offset by a fall in employment of main earners. The fall in employment of main earners for LMIs was comparable to the population average, but main earners in low- to middle-income households also experienced a fall in average hours worked, which was not seen amongst the whole population. Table 8 in Appendix A shows us that this fall in employment was

concentrated amongst men. In contrast, female employment increased substantially during the period, though the effect on household incomes was only one-sixth of the magnitude of the fall in male employment.

One mitigating factor was that the amount of employment tax paid by low- to middle-income households fell during this period: indeed, this explains 17% of the total growth in household income. As with the whole population, this was also the period when incomes from the smaller sources (investments, pensions and self-employment) grew at their fastest rates.

1990 to 2002–03: Medium wage growth, as population average, and introduction of tax credits

In this period, income of low- to middle-income households grew at a similar rate to that for the whole population. The growth rate of the main earner's employment income was lower than the population average, but the growth rate of other earners' employment income was higher. Tax credits and benefits were also important sources of growth in this period, accounting for 20% and 8% of total income growth respectively. Households with children and at least one paid worker were the main beneficiaries.

2002–03 to 2008–09: Fall in earnings but large increase in tax credits

The income of low- to middle-income households barely grew over this period: the average annual growth rate was just 0.1%. A key cause was that gross employment income from all earners fell over the period: wage growth was very low, employment fell and main earners saw a fall in their hours worked. Furthermore, despite this fall in gross employment income, employment taxes increased for households in this group, meaning that net weekly employment income fell by 4% over the period. The small amount of income growth over this period was therefore driven by other sources, principally tax credits and benefits. Together, these two sources added £14 per week to average income, when the overall increase in average income was only £3.

Summary

As with the whole population, rises in gross hourly wages have been the most important driver of growth in the income of low- to middle-income households. Total employment income has, however, suffered from a large fall in male employment, particularly during the 1980s and between 2002–03 and 2008–09. LMI households have seen a rise in female employment (which mainly took place between 1968 and 1973) being somewhat cancelled out by a fall in male employment (which mainly took place in the 1980s).

The impact of employment taxes on the income of low- to middle-income households has fluctuated substantially: in the period 1973 to 1980, the rise in employment taxes was several times the rise in gross employment income; and the amount of employment taxes paid rose, on average, between 2002–03 and 2008–09 despite households receiving less gross employment income. On the other hand, the amount paid in employment taxes fell substantially between 1980 and 1990, and barely rose between 1990 and 2002–03. These trends broadly match changes to key rates and allowances of income tax and National Insurance contributions.

Income sources other than earnings from employment have also been key drivers of growth for low- to middle-income households. Benefits and tax credits together explain around a third of the rise in income since 1968. Benefits rose in all periods, but most of the growth came between 1973 and 1980. Tax credits were a more recent phenomenon, increasing gradually since 2000–01. Income from self-employment, investments and pensions also contributed to income growth, with most of their rise taking place in the 1980s.

5. Conclusion

In this paper, we have sought to investigate the sources of the rise in average household income that has occurred in the UK over the last four decades. We have found that there are several important sources of this growth, and that these sources have varied substantially across time and across different parts of the income distribution.

Across the whole population, increases in hourly wages have been the largest force driving growth in household income over the past four decades, and fluctuations in the rate of wage growth have been a major factor in determining the pattern of household income growth. However, other factors have also played a role. A fall in male employment and a rise in female employment have shifted the source of employment income away from the main earner. Sources of income other than earnings have also contributed to the growth in average household incomes, but their impact has not been uniform across the four decades. Income from social security benefits rose considerably between 1973 and 1980 and between 1990 and 2002–03, and tax credits became an important component of household income from 2000–01 onwards. A rise in self-employment income was a major factor in household income growth in the 1980s, but this income source had minimal impact in other periods. Similarly, most of the growth in income from investments and pensions occurred during that decade.

For low- to middle-income households, the story has been different. In particular, gross male employment income has barely grown since 1968, with a growth rate of

less than a quarter of the population average. This is because male wage growth has been substantially slower for LMI households than for the total population since 1980, and what gains there were in wages were all but cancelled out by falls in male employment. Indeed, since 1980, low- to middle-income households' incomes have only grown because of rises in other income sources, most notably benefits and tax credits. Meanwhile, employment income for LMI households has become increasingly sourced from female earners, with women earning 37% of household net employment income in 2008–09, compared with 14% in 1968.

Low- to middle-income households have therefore seen a major change in the sources of their income, but the richest households have seen little change. For LMIs, the greater diversity of income sources may reduce the risk of negative income shocks. However, the changes also make these households more dependent on external sources such as the generosity of the tax–benefit system and the availability of childcare.

Since LMI households receive a smaller portion of their income from wages than the average household does, wage increases will have a relatively smaller impact on household income. For example, if everyone's net wage doubled, but all other income sources remained constant, then household incomes before deductions would increase by 71% on average, but they would only increase by 64% for LMI households. For these households to keep up with the average would therefore require an increase in income through another source, most likely increased employment or state transfers. If income from benefits did not rise, LMI households would need to increase their hours worked by around 5% on average in order to keep up.

There may also be political implications if different segments of the population are relying on differing sources for their income growth. As income sources become more polarised across the distribution, households may take different views on potential trade-offs between wage growth and the generosity of benefits.

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Appendix A: Employment income changes by gender

In the main body of the paper, we have decomposed income from employment by 'main earner' and 'other earners', allowing us to focus on differences between them in terms of changes in hours and earnings. An alternative decomposition would be to split employment income by the gender of the earner. In this way, we can focus on differences between the genders in terms of changes in hours and earnings. Such a decomposition is presented in Figure 18 and Table 7 for all working-age households and in Figure 19 and Table 8 for LMI households.

Figure 18. Average annual changes in employment income by period, all working-age households, by gender

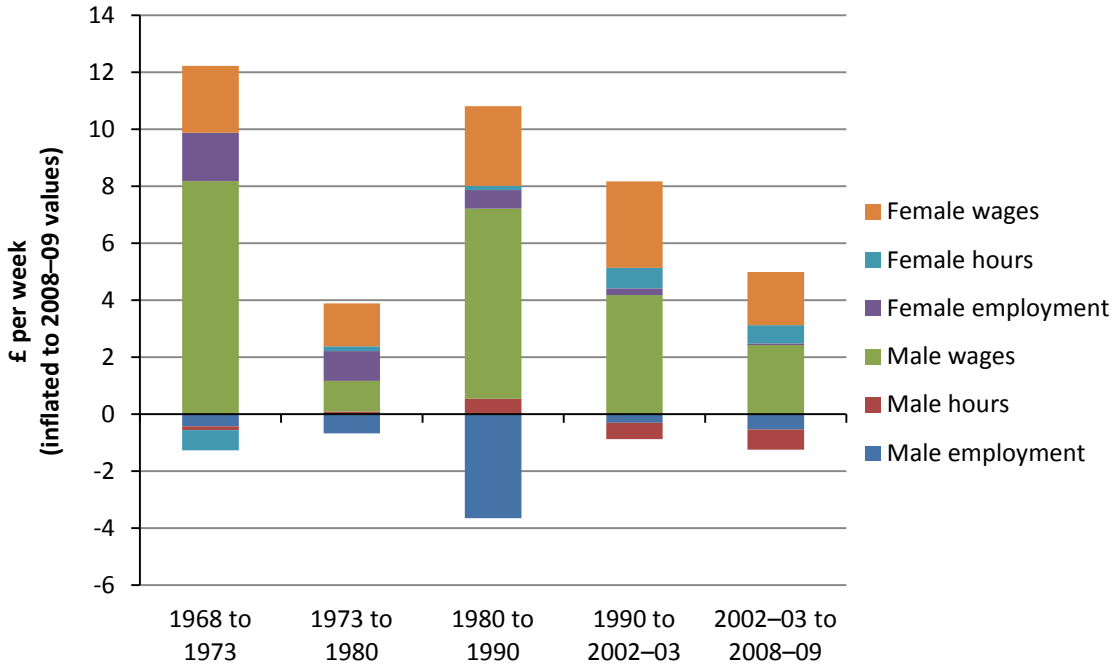


Table 7. Average annual changes in net equivalent household income, all working-age households, by gender, £ per week

			Gross employment (men)			Gross employment (women)										
	Total	**HH size**	Employment effect	Hours effect	Wage effect	Employment effect	Hours effect	Wage effect	**Employment tax**	**Net self-employment**	**Net pension**	**Net investment**	**Benefits**	**Tax credits**	**Other**	**Deductions**
1968 to 1973	6.8	–0.4	–0.4	–0.1	8.2	1.7	–0.7	2.4	–4.4	0.7	0.1	0.2	0.1	0.0	0.0	–0.3
1973 to 1980	1.5	–0.1	–0.7	0.1	1.1	1.0	0.2	1.5	–3.1	–0.3	0.1	0.2	1.6	0.0	0.1	–0.2
1980 to 1990	9.6	–0.3	–3.7	0.5	6.7	0.7	0.1	2.8	–1.4	2.4	0.6	0.8	0.5	0.0	0.4	–0.4
1990 to 2002–03	7.1	–0.3	–0.3	–0.6	4.2	0.2	0.7	3.0	–1.5	0.3	0.4	–0.2	0.9	0.4	0.5	–0.7
2002–03 to 2008–09	2.9	0.0	–0.5	–0.7	2.4	0.1	0.6	1.9	–1.9	–0.2	0.0	0.4	–0.1	1.2	0.2	–0.4
1968 to 2008–09	6.1	–0.2	–1.3	–0.1	4.5	0.6	0.3	2.4	–2.2	0.7	0.3	0.3	0.7	0.3	0.3	–0.4

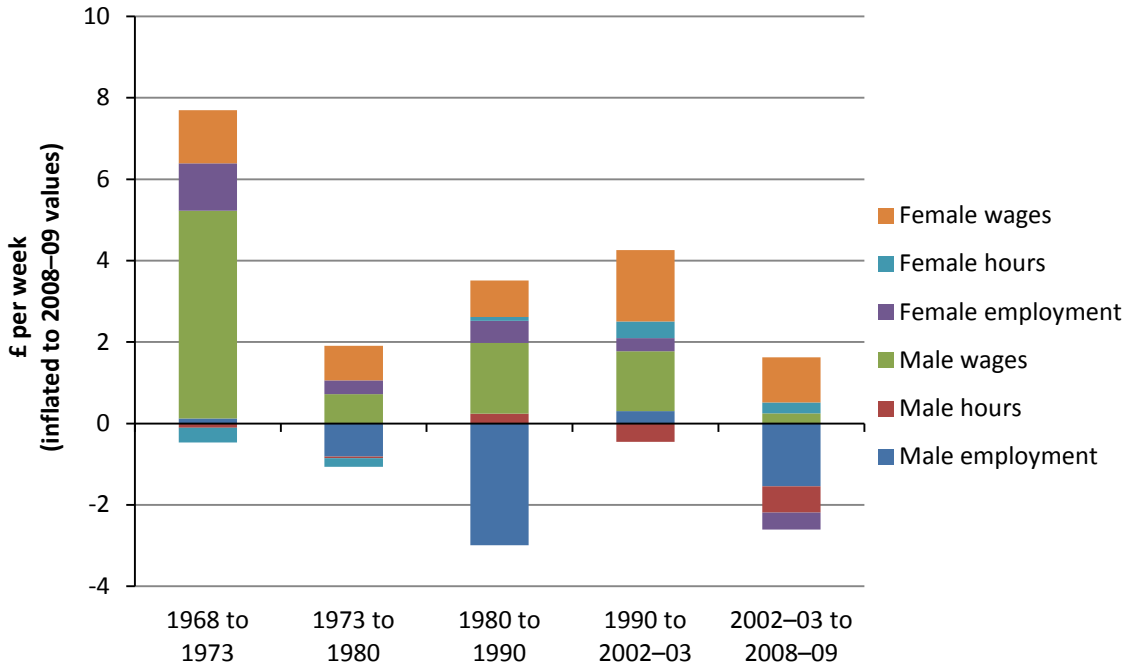
Notes: Values are the annual increase in £ per week (inflated to correspond to 2008–09 values, and equivalised using the OECD equivalence scale). Cells are coloured according to their relative importance, with red being the largest positive contribution, orange being the second and yellow being the third.

Table 8. Average annual changes in net equivalent household income, low- to middle-income households, by gender, £ per week

			Gross employment (men)			Gross employment (women)										
	Total	**HH size**	Employment effect	Hours effect	Wage effect	Employment effect	Hours effect	Wage effect	**Employment tax**	**Net self-employment**	**Net pension**	**Net investment**	**Benefits**	**Tax credits**	**Other**	**Deductions**
1968 to 1973	4.9	0.0	0.1	–0.1	5.1	1.2	–0.4	1.3	–2.9	0.5	0.0	0.1	0.3	0.0	0.1	–0.2
1973 to 1980	1.3	0.0	–0.8	0.0	0.7	0.3	–0.2	0.9	–2.2	0.6	0.1	0.2	1.7	0.0	0.1	–0.1
1980 to 1990	3.7	0.0	–3.0	0.2	1.7	0.5	0.1	0.9	0.7	1.6	0.5	0.3	0.2	0.0	0.4	–0.5
1990 to 2002–03	4.8	0.0	0.3	–0.5	1.5	0.3	0.4	1.8	–0.2	–0.4	0.4	–0.1	0.4	1.0	0.2	–0.3
2002–03 to 2008–09	0.5	0.1	–1.5	–0.6	0.3	–0.4	0.3	1.1	–0.6	0.2	–0.4	0.2	0.4	1.9	0.1	–0.4
1968 to 2008–09	3.3	0.0	–1.0	–0.2	1.7	0.4	0.1	1.2	–0.7	0.5	0.2	0.1	0.6	0.6	0.2	–0.3

Notes: Values are the annual increase in £ per week (inflated to correspond to 2008–09 values, and equivalised using the OECD equivalence scale). Cells are coloured according to their relative importance, with red being the largest positive contribution, orange being the second and yellow being the third.

Figure 19. Average annual changes in employment income by period, low- to middle-income households, by gender



Appendix B: Other income-based subgroups

10th–50th percentiles

Within the main paper, we considered 'low- to middle-income' households, which were households between the 10th and 50th percentiles that received less than 50% of their income from benefits (including tax credits). In order to see clearly the effect of removing those households that have at least 50% of their income from benefits (including tax credits), we present here the results for the simple income deciles – see Figures 20 and 21.

90th–99th percentiles

Given the particularly large rise in incomes of rich households over the period, we also provide here for reference the results for the top 10% of the income distribution (minus the top 1%, which we have trimmed out of our sample) – see Figures 22 and 23.

Figure 20. Shares of each income source in total net equivalent household income, 10th–50th percentiles, 1968 and 2008–09

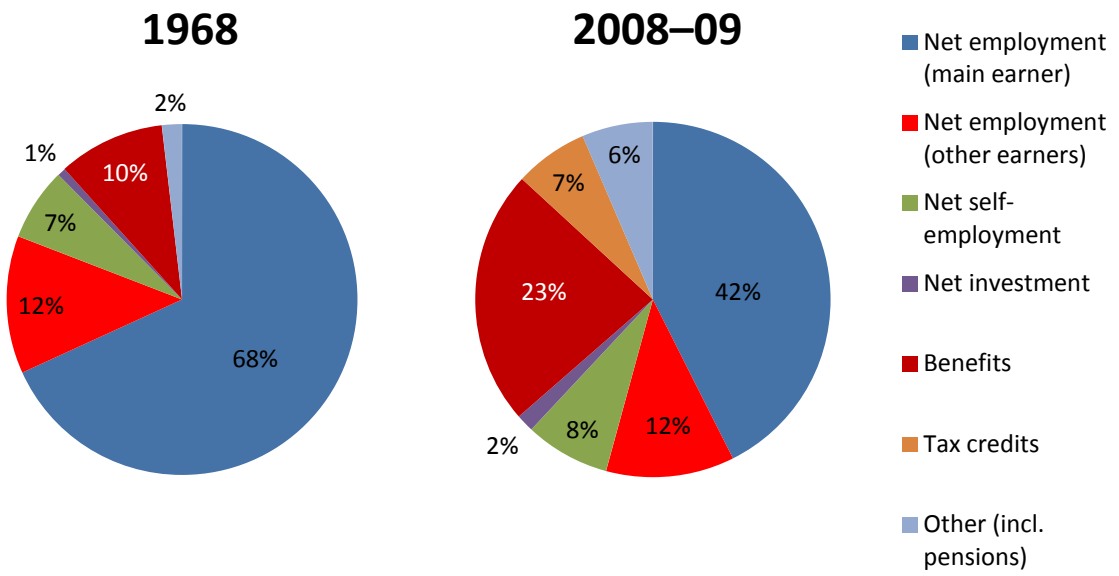


Figure 21. Average annual change in net equivalent household income by period, subdivided by source, 10th–50th percentiles

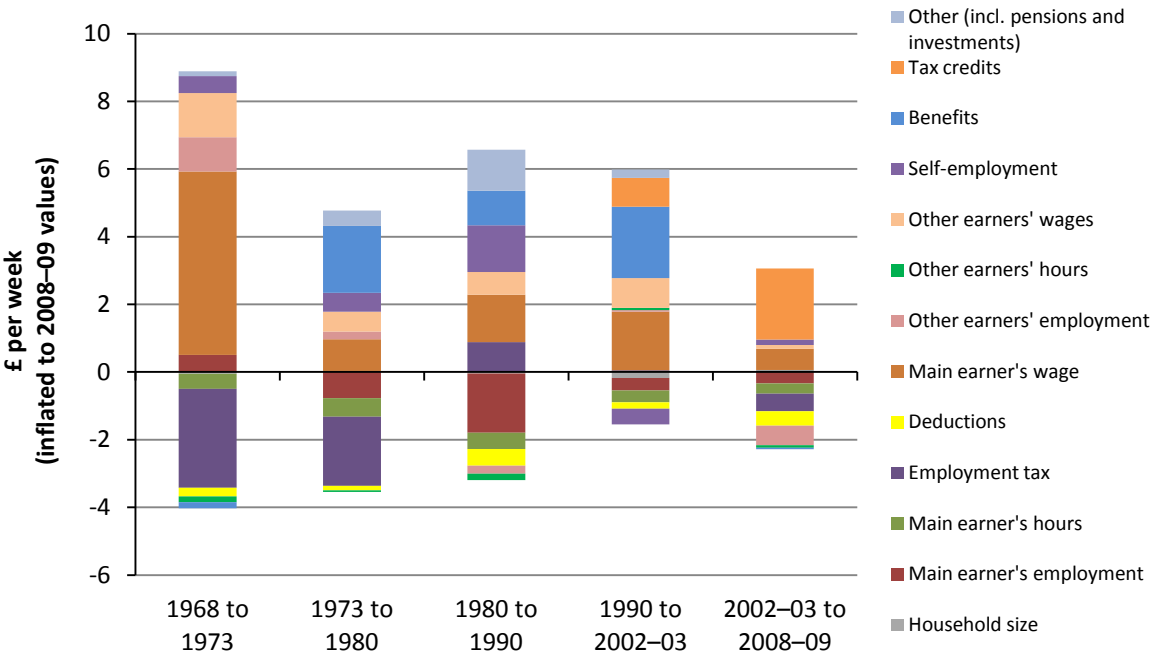


Figure 22. Shares of each income source in total net equivalent household income, 90th–99th percentiles, 1968 and 2008–09

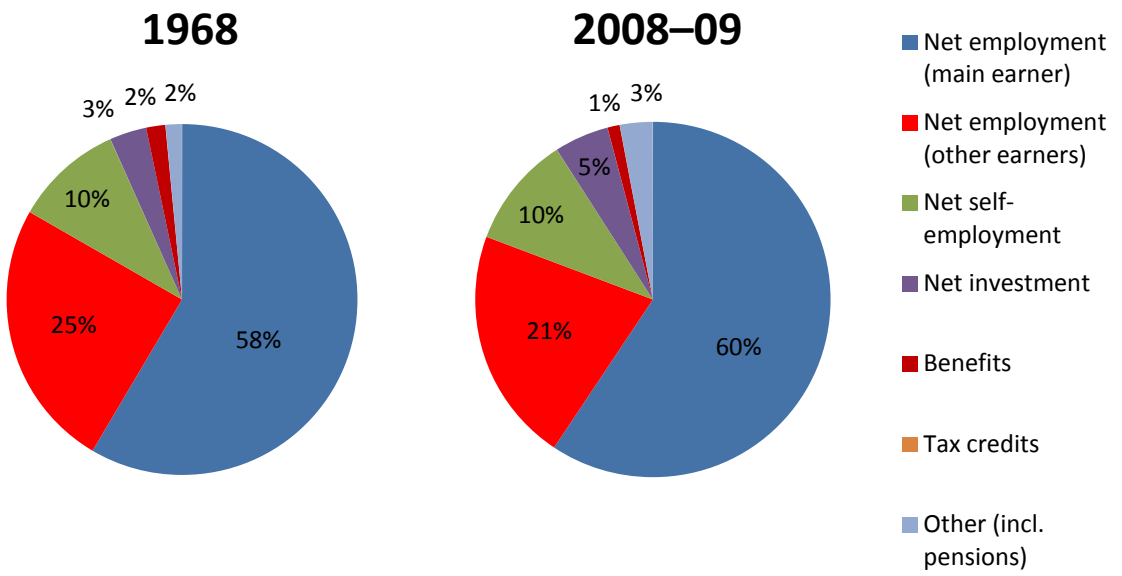
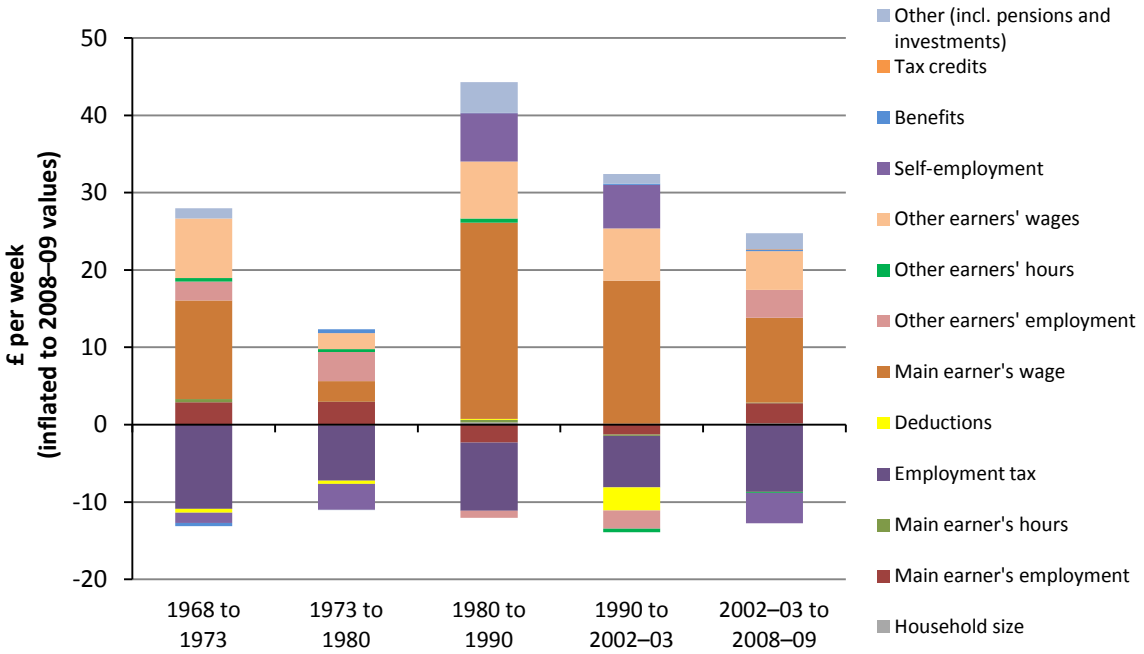


Figure 23. Average annual change in net equivalent household income by period, subdivided by source, 90th–99th percentiles



Appendix C: Value of income sources

Figure 24. Average net equivalised household income by source

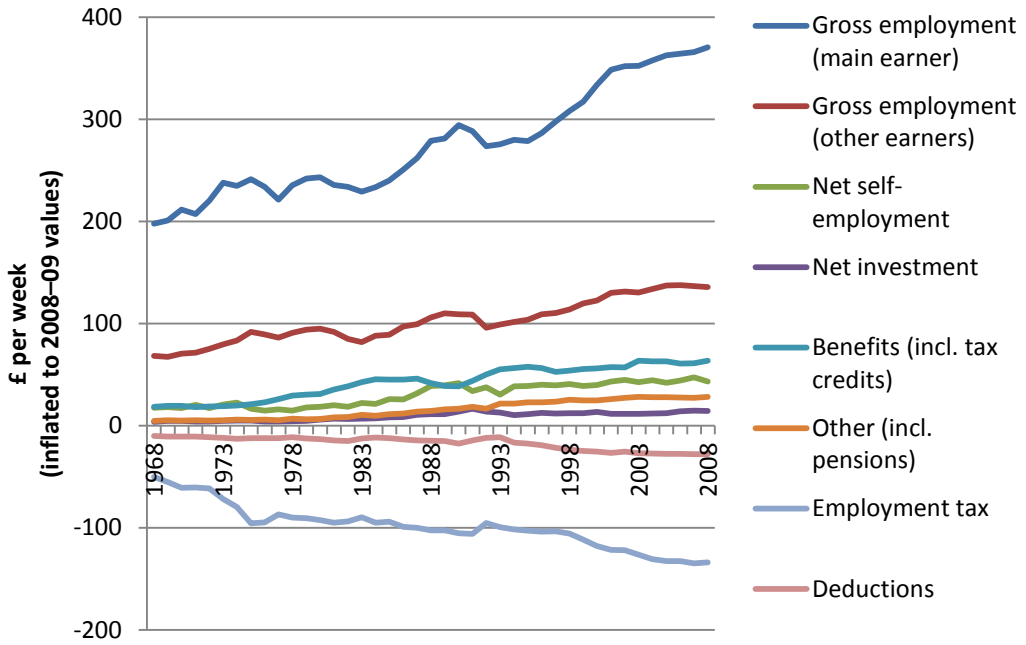


Figure 25. Average net equivalised household income by source, low- to middle-income households