



Larger Families Analysis

Analysis that examines the tax burden on three
and four children families



Larger Families Analysis

1. An earlier paper¹ analysed which types of household bore the heaviest income tax burden. Using Tax and the Family's new tax benefit model tables it looked at both households with two children and households without children, one- and two-income households, owner-occupiers, and renters. This paper extends the analysis to cover families with three or four children. As in the earlier paper, it looks at the gross incomes (pre-tax) required for various households to have a median and 60% median household income and at their income tax payments.
2. The analysis is based on the Department of Work and Pension's (DWP) annual survey of household incomes Households Below Average Income- (HBAI) the foremost source of information about household income and inequality. The latest figures are for the year 2018/19². The survey captures household net income - it's disposable income - the amount of income a household has to live on each week after tax and national insurance and benefits are taken into account. It takes account of the number of people in the household and their ages. The income is rescaled (equivalised) to take account of the fact that bigger households need a bigger income to have the same standard of living. The DWP uses a modified OECD equivalisation scale when measuring incomes Before Housing Cost (BHC) and a DWP variant of this scale when measuring incomes After Housing Cost (AHC)³.
3. These official figures assume that a couple with two children needs 40% more income to have the same standard of living as a couple without children and 2.4 times the income of a single adult without children. A couple with 4 children requires 1.8 times the income of a couple without children. A single parent with two children requires almost (98%) the same income as a couple without children.
4. Equivalised household income is an appropriate tool for examining the extent to which income tax liabilities correspond to how well-off taxpayers are and whether income tax may be contributing to inequality. A tax system that did reflect how well-off taxpayers were would result in households with the same equivalised income paying broadly the same tax.
5. Because household income includes universal credit it is necessary to take account of birth dates. Universal credit payments include extra amounts for children. The current monthly amount (2020/21) for the first child is £281.25 if born before 6 April 2017 and £235.83 (if born after). For the second and any other eligible child, the amount is £235.83. Amounts are available for additional children if born before 6th April 2017 but not if born after this date. Extra amounts are available for disabled children no matter when they are born and childcare costs. The analysis does not take into account disabled children or childcare costs.
6. In this paper, we look both at renting households in Leeds and those in London and also at owner-occupiers⁴. A third of people living in households with incomes below 60% median are owner-occupiers. Universal Credit includes an amount for rent which depends on the local housing allowance and the family's needs. Two-thirds of people living in households with net income below 60% median live in rented accommodation – 35% in social housing and 32% in private housing⁵. Households in Leeds with children

A tax system that did reflect how well-off taxpayers were would result in households with the same equivalised income paying broadly the same tax.

¹ [Is Income Tax Burden Fairly Shared?](#) Draper and Spencer.

² Households below Average income 1994/95 to 2018/19 March 2020.

³ For more information on the methodology see Living Standards, poverty and inequality UK: 2020 Appendix A IFS July 2020.

⁴ Living standards, poverty and inequality in the UK: 2019 IFS 2019 Table 4.3.

⁵ Living standards, poverty and inequality in the UK: 2019 IFS 2019 Table 4.2 IFS 2019



are assumed to be paying rent of £161 per week for a small three-bedroom house in an area when this is also the local housing allowance, £207 per week for a four-bedroom house. A single adult household is assumed to be paying rent of £121 per week. A couple without children is assumed to be paying rent of £137 per week. The comparable figures for London are £442 per week for a three-bedroom house and £594 per week for a four-bedroom house.

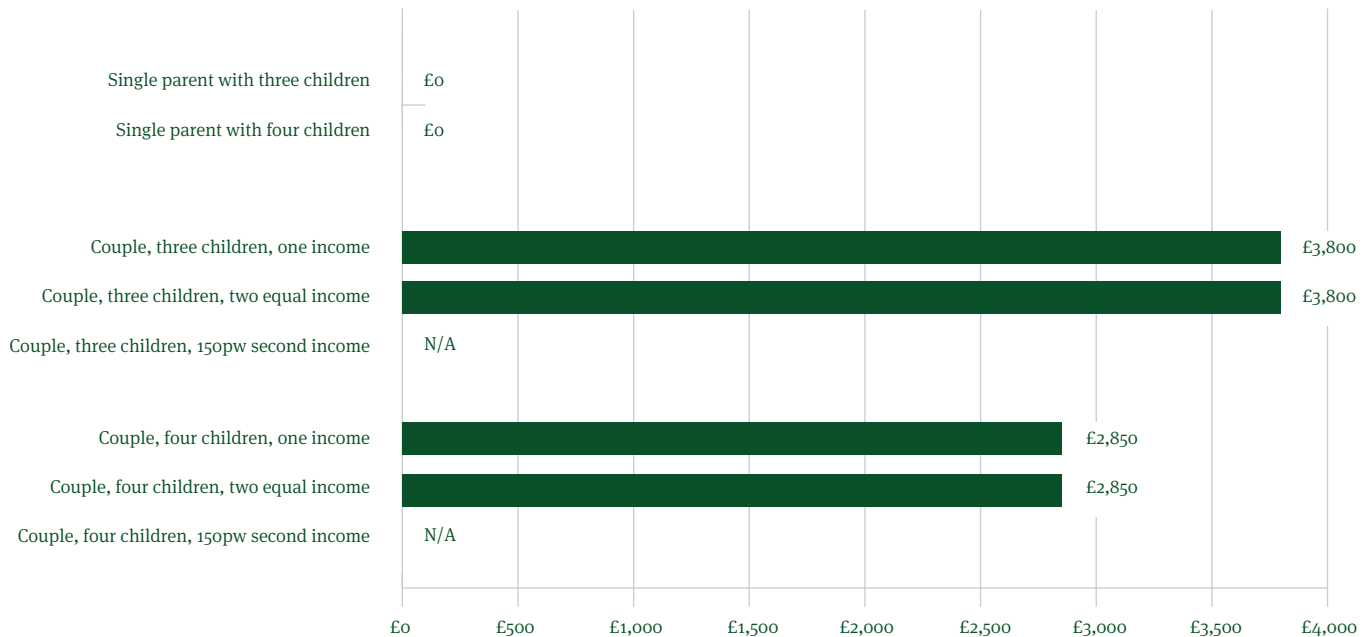
Renting

Households with 60% of median standard of living

All children born before 6th April 2017:

7. The chart below⁶ shows a household where all three or four children were born before 2017⁷, the required gross income required to stay out of poverty is drastically different. A couple with four children requires only £2,850 to maintain a standard of living, on the poverty line. This is nearly ten times less than the household where the third and fourth children were born after 2017 (see Chart 3 below). It can also be seen that a single parent doesn't require any income to live at 60% median standard of living, as their costs are fully covered by universal credit. Chart 2 shows that a single parent raising four children would have to earn over £11,000.

Chart 1: Gross income required for 60% median standard of living, for renting households in LEEDS, with 3rd and 4th children born after 2017



Third and fourth children born after 6th April 2017:

8 In comparison, the chart below shows the gross income that is required for larger households, with the third and fourth children born after 2017⁸, to be considered to have a standard of living, 60% of median. 60% median represents the relative poverty level in the UK; therefore, it represents the threshold income the household requires to stay out of poverty. From the chart, we can see that a couple with four children and only one income requires over £26,000 to just stay out of poverty, and nearly £18,000 to support three children.

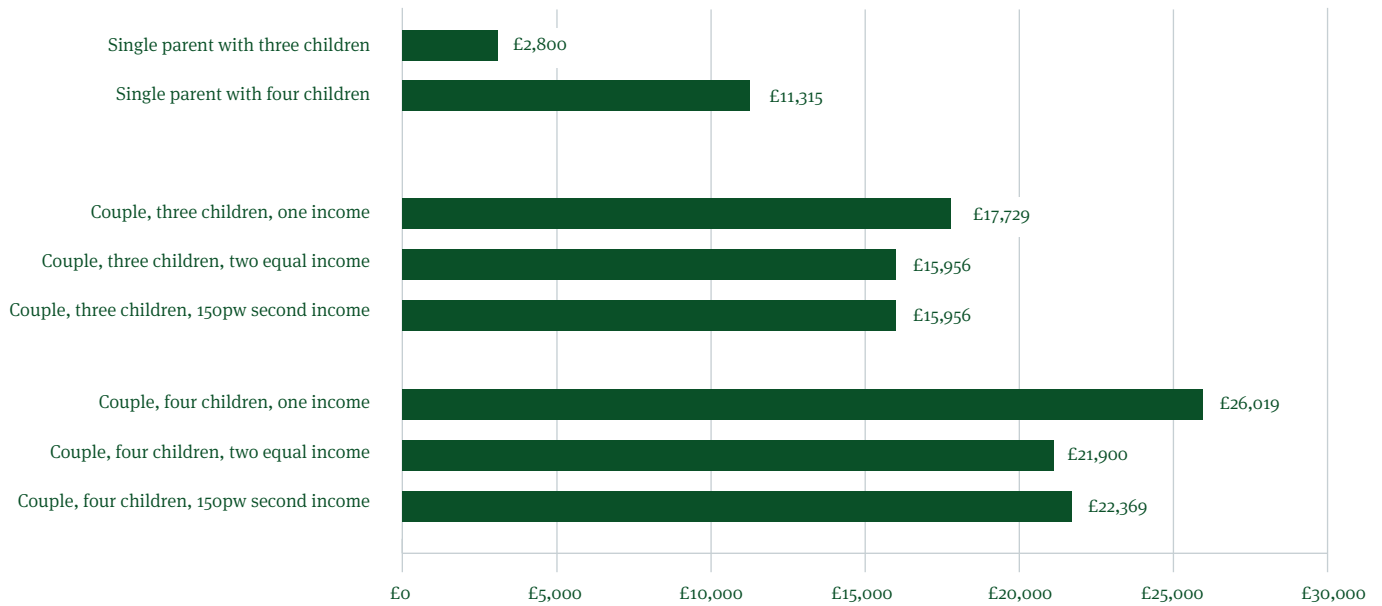
⁶ With a second income of £150 per week, households are automatically above the 60% of median standard of living level, therefore they are displayed as "NA".

⁷ All children born before 6th April 2017 are eligible for child element (£64.90 would be given for the first, all additional born before 2017 would add £54.42 each.)

⁸ See para 5.



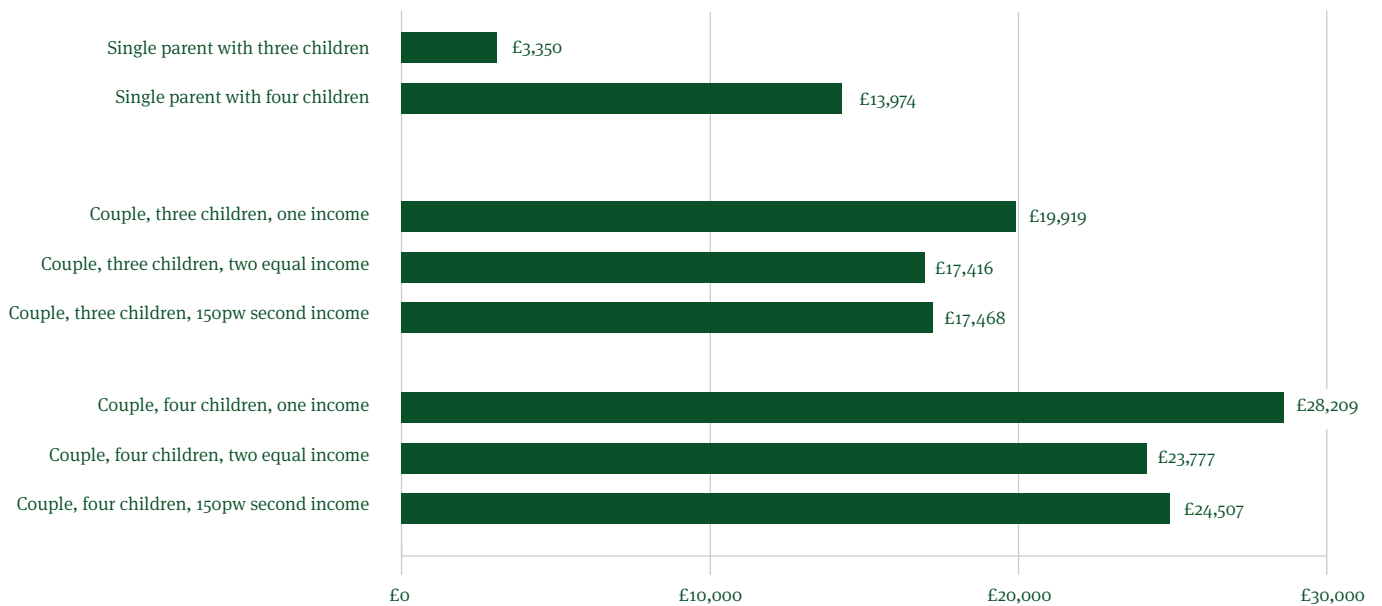
Chart 2: Gross income required for 60% median standard of living, for renting households in LEEDS, with all 4 children born before 2017



All four children born after 2017:

9 Lastly, households with all three or four children were born after 2017⁹. These households will receive the least amount of child element from universal credit and the amount they need to earn to stay out of poverty reflects this. The first child premium is not available for children born after 6th April 2017. A couple with only one earner will have to earn nearly £20,000 if they have three children, and nearly £30,000 if they have four. A single parent with four young children would have to earn £14,000 to stay out of poverty, over £2,000 more than if the first two children were born before 2017.

Chart 3: Gross income required for 60% median standard of living, for renting households in LEEDS



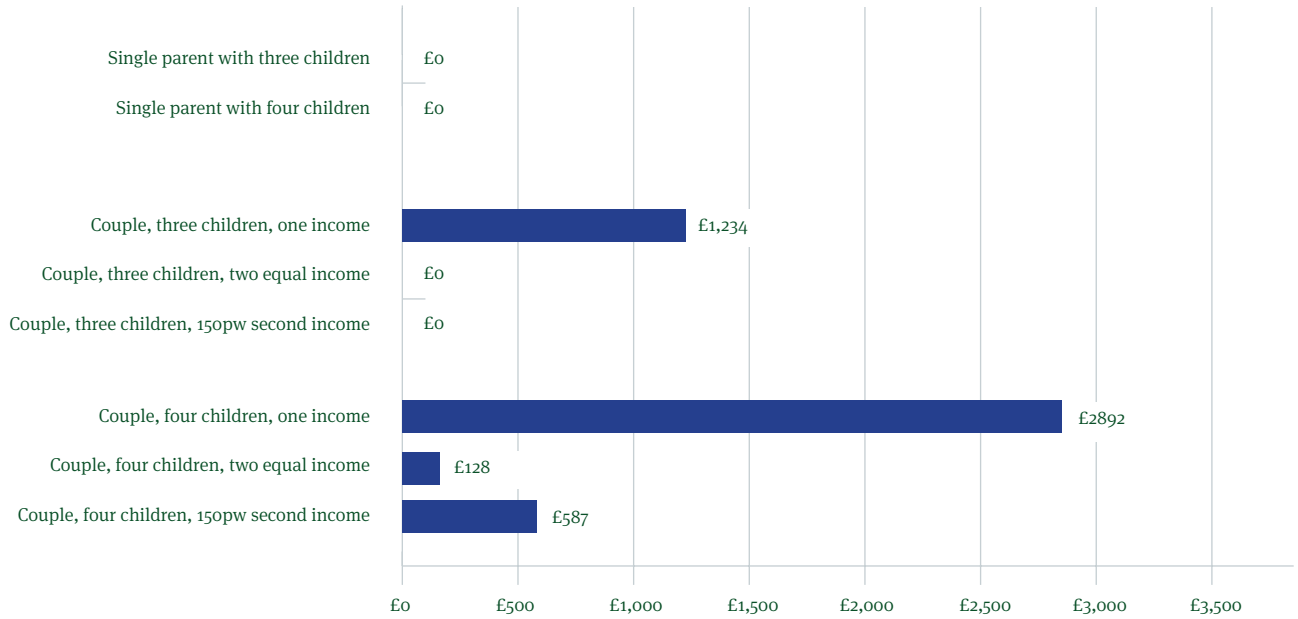
⁹ See para 5.



All four children born after 2017:

10 At these income levels, it is not surprising that the majority of households pay no income tax. However, the households who are required to earn £12,500 or more to stay out of poverty will be liable to income tax. Chart 4 shows the consequent income tax payments. The household with four children and one-earner, with all four born after 2017, are required to pay over £2,800 in income tax, even though they are on the poverty line. All families with four children born after 2017 will be paying some income tax even though their incomes are below the poverty line. Were all four children born before 2017, none of these households would be paying income tax.

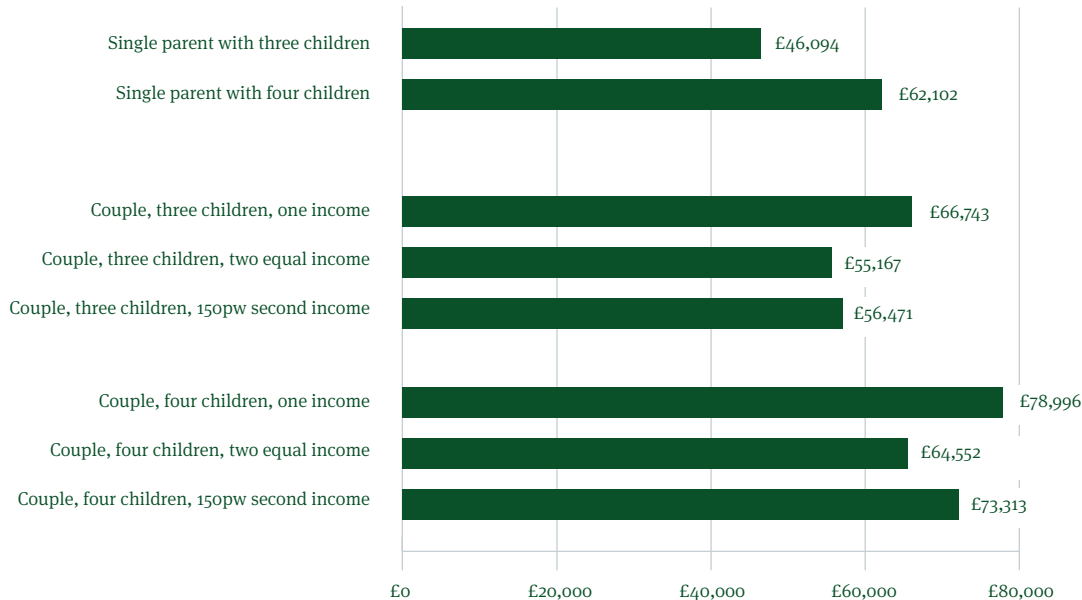
Chart 4: Income tax at 60% median level of gross income, for renting households in LEEDS, with all children born after 2017



Households with a median standard of living – LEEDS.

11 Chart 5 shows the gross income required for households with three and four children to maintain a median standard of living in Leeds, where the third and fourth were born after 6th April 2017.

Chart 5: Gross income required for a median standard of living, for renting households in LEEDS, with 3rd and 4th children born after 2017.





- 12 Larger families are required to earn substantial incomes to have an average standard of living. A couple with four children and only one earner requires nearly £80,000 and a single parent with four children requires over £60,000. These incomes will be out of reach for the majority of families, especially for single parents who would have to earn twice the UK average earnings¹⁰, while single handily raising four children.
- 13 At these high incomes, the income tax liabilities of the families are considerable. The couple earning nearly £80,000 will be required to pay £19,000 in income tax and the single parent will pay over £12,000. Chart 6 shows all the income tax liabilities.

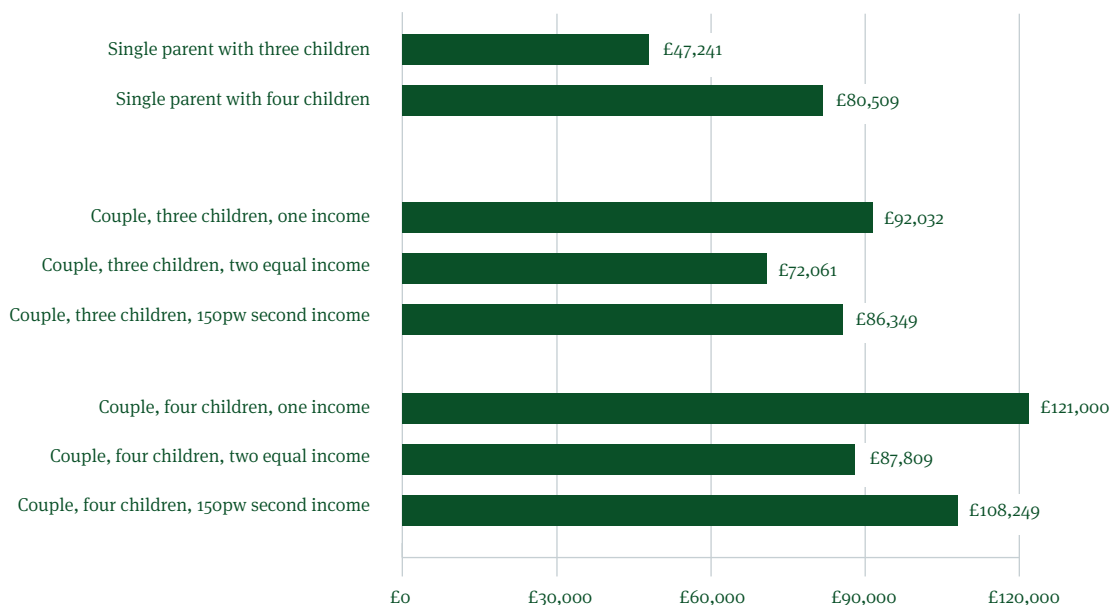
Chart 6: Income tax at a median level of gross income, for renting households in LEEDS, with 3rd and 4th children born after 2017



Households with a median standard of living – LONDON.

- 14 The picture in London is much the same as Leeds, however, as the rents are higher, gross incomes are also higher.

Chart 7: Gross income required for a median standard of living, for renting households in LONDON, with 3rd and 4th children born after 2017

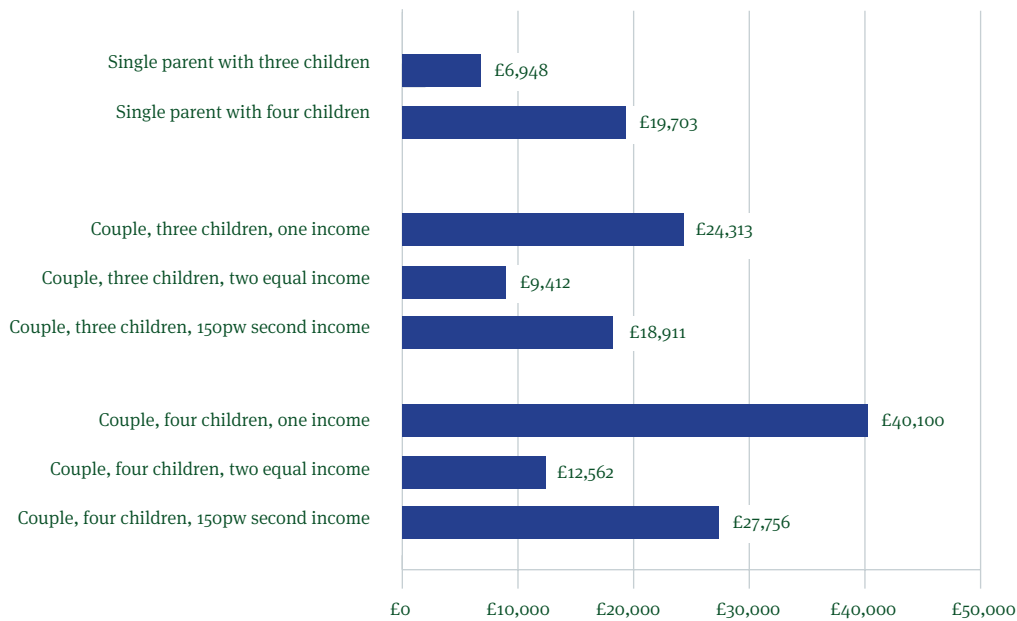


¹⁰ Median weekly pay for full time employees was £586 in April 2020 (£30,472 annual income).



15 The modelling suggests that a single parent with four children requires a gross income of £80,000 to have a median income. A couple with one income and four children and one-earner requires £121,000. If both parents were in full-time employment and earned the same gross income, the household would only require £88,000 to live at the same standard of living. This would equal £44,000 each, from the chart above, we can also see the huge difference in required gross income for households with three compared to four children. A single parent would have to earn an extra £33,000 to support an additional child while maintaining the same standard of living.

Chart 8: Income tax at a median level of gross income, for renting households in LONDON, with 3rd and 4th children born after 2017



16 As discovered earlier, larger households will have sizable income tax liabilities. The household earning £121,000, will be required to pay over £40,000 in tax.

OWNER OCCUPIER

17 The DWP AHC figures¹¹ take account of mortgage interest but not capital repayments. Some households will have repayment mortgages others will have interest-only mortgages, still others will have fixed interest rates. It is difficult to know what assumptions to make in modelling owner occupier households. We have modelled households with weekly mortgage interest payments of £50 and £100¹².

Households with 60% of median standard of living.

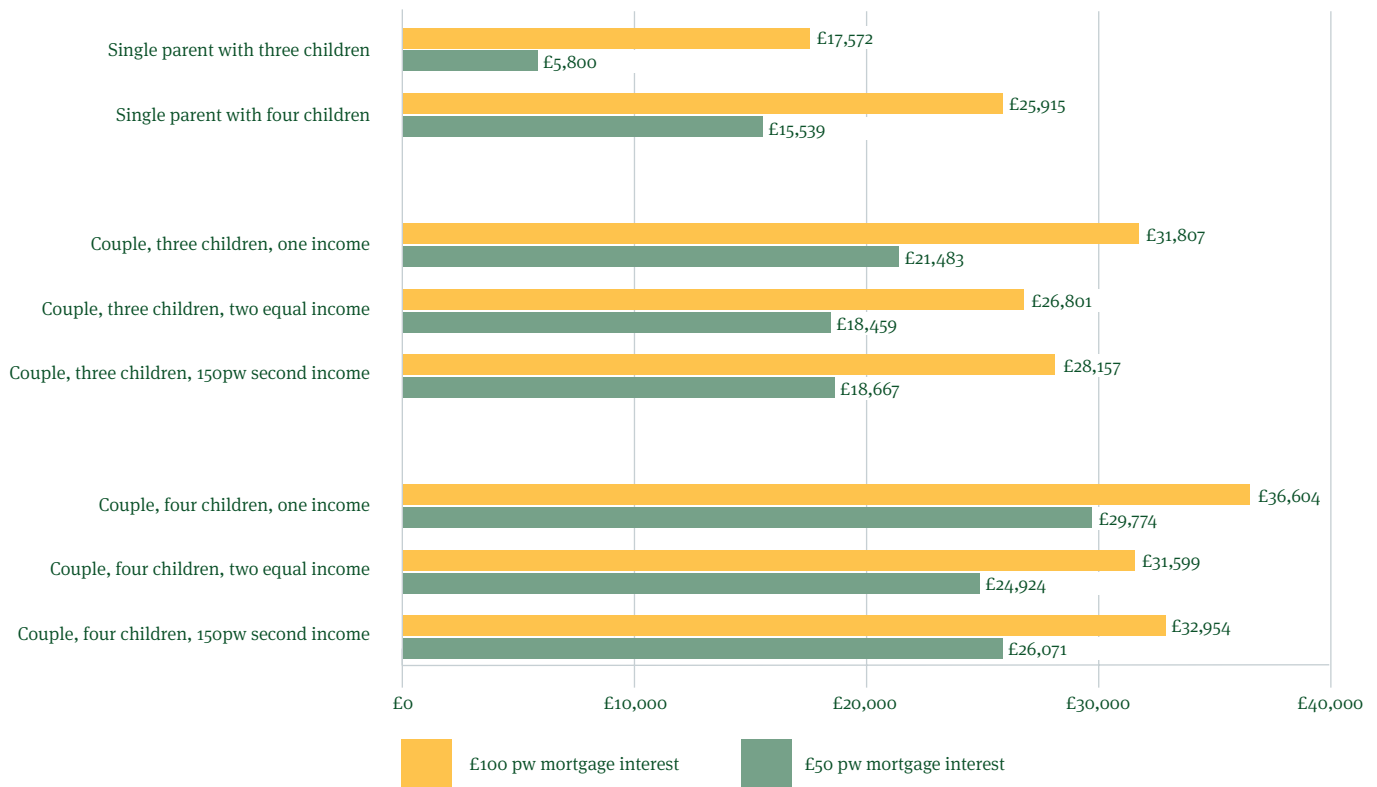
18 From the chart below it can be seen that the gross income required for households with fixed mortgage interest payments to remain above the unofficial poverty line is greater than renting households. A household with £100 per week mortgage payments and four children would be considered to be living in poverty if they earn below £36,000. Similarly, a single parent with four children would have to earn more than £25,000 to escape poverty.

¹¹ See footnote 2.

¹² Average price for property in Leeds in January 2021 was £237,301 (Zoopla). £100 per week mortgage implies an interest rate of 2.19% on a 100% mortgage.



Chart 9: Gross income required for 60% median standard of living, for owner-occupier households, with either £50 or £100 pw mortgage interest, in LEEDS, with 3rd and 4th children born after 2017



19 Many of these households have substantial income tax liabilities. As a result of the high gross incomes required to stay above the poverty line, households have been pushed to the top end of the first income tax bracket. A household with a £100 per week mortgage repayment, four children, and only one income will be liable to more than £4,500 in income tax, even though they have a supposedly impoverished standard of living.

Chart 10: Income tax at 60% median level of gross income, for owner-occupier households, with either £50 or £100 pw mortgage interest, in LEEDS, with 3rd and 4th children born after 2017

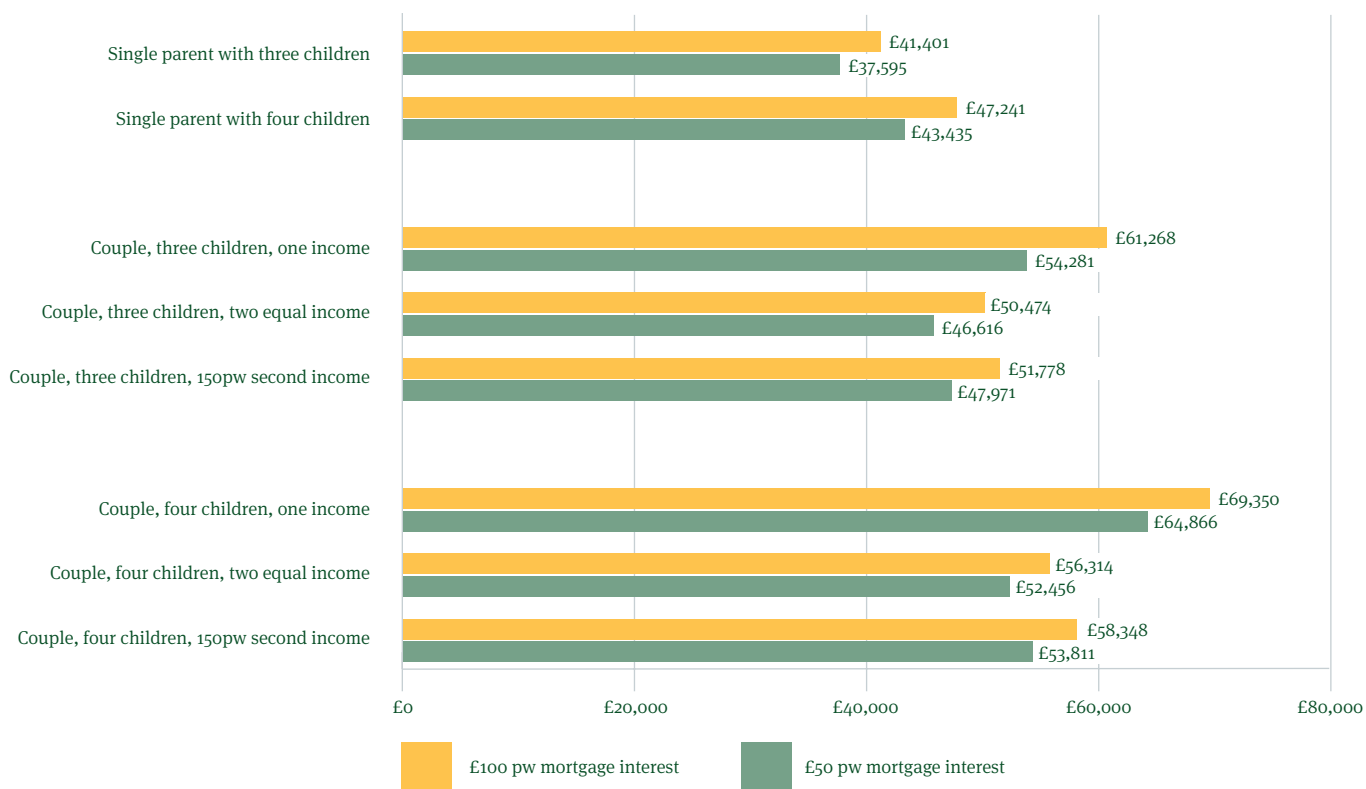




Households with a median standard of living

20 The chart below shows the gross income required for households to maintain a median standard of living while paying mortgage interest payments. Although the incomes aren't quite as high as the renting households, they are all considerably greater than median full time earnings¹³. Even a single parent with three children and only £50 per week mortgage interest payments needs to earn more than £37,000 to have an average living standard. At the top end of the spectrum, a couple with four children and a £100 per week mortgage interest payment will need nearly £70,000 to live at the same standard.

Chart 11: Gross income required for a median standard of living, for owner-occupier households, with either £50 or £100 pw mortgage interest, in LEEDS, with 3rd and 4th children born after 2017

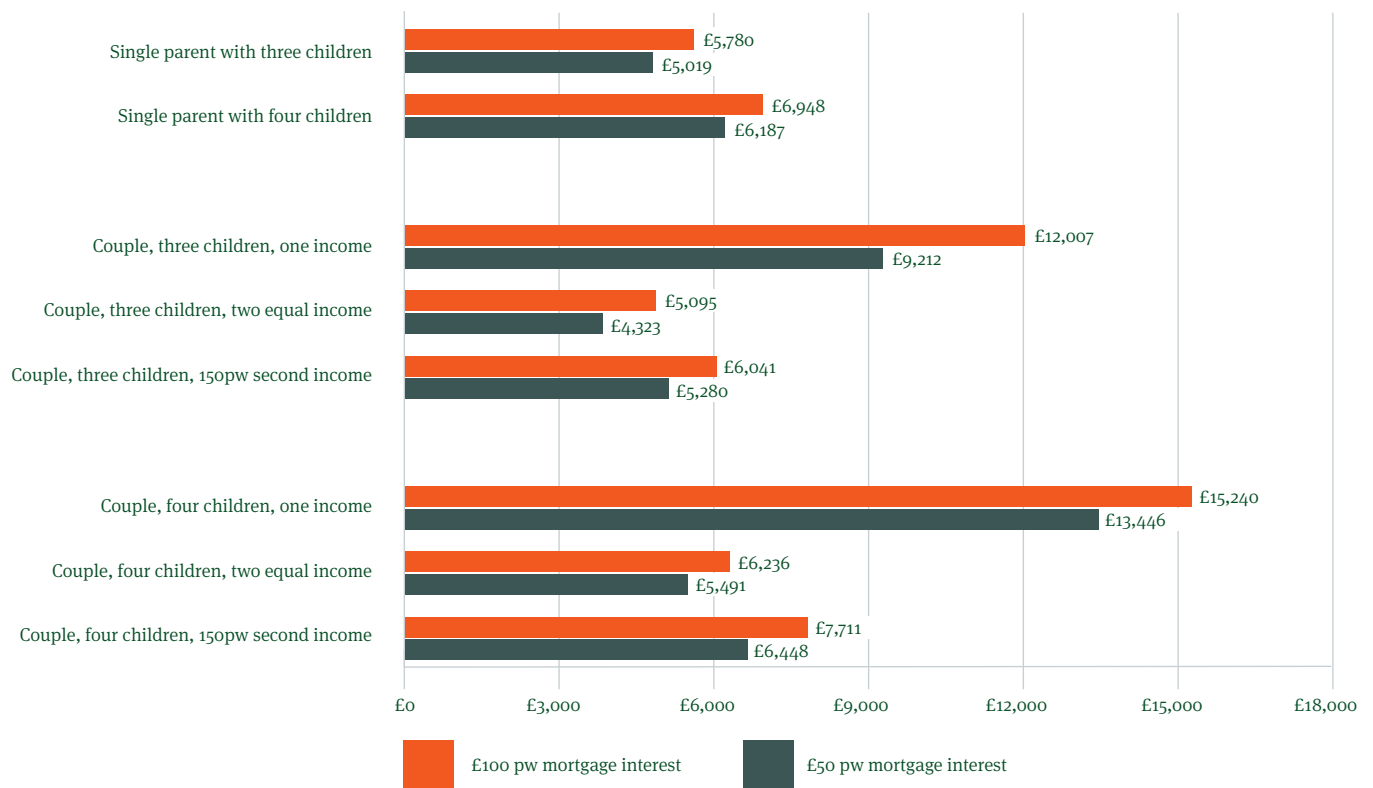


21 Once again the households are required to pay substantial amounts of income tax. Income tax payments of over £5,000 will be required from all couples with four children and one income. Single parents with three and four children will be liable for £3,500 and £4,200 worth of income tax respectively when they have mortgage interest of £100 per week. The liabilities of all owner-occupier households living at the median standard can be found in the chart on the following page.

¹³ Median weekly pay for full time employees was £586 in April 2020 (£30,472 annual income).



Chart 11: Income tax at a median level of gross income, for owner-occupier households, with either £50 or £100 pw mortgage interest, in LEEDS, with 3rd and 4th children born after 2017



CONCLUSION

- 22 Our earlier paper showed that households with two children, particularly single-earner couples and single parents had higher income tax liabilities than other households with the same equivalised income. Households with three or four children pay even more tax than other comparable households. Three things stand out:
1. Families with incomes below 60% median may have significant income tax liabilities.
 2. Owner-occupiers are more at risk.
 3. Households with children born after 6th April 2017 bear particularly heavy tax burdens.
- 23 Larger households need a higher pre-tax income than smaller households to have the same standard of living (same equivalised household income). Their equivalised household income has been reduced by the changes to universal credit made in 2017.
- 24 Our modelling suggests a family with four children, all born after 6th April 2017, and a mortgage might need to earn almost £70,000 and pay £15,000 income tax, to have a median standard of living. Whereas a single person paying the same mortgage interest would need to earn less than £25,000 on which the tax liability would be £2,400¹⁴.

¹⁴ See Chart 6 of the earlier paper and Chart 10 above.



- 25 A single adult on median income and paying rent in Leeds pays only £300 income tax. Households with two children and paying rent are unlikely to be paying income tax if their household equivalised income is below all 60% median¹⁵.
- 26 Where there are three or four children the tax burden is not insignificant even on 60% median. A family with four children, all born after 6th April 2017, paying rent in Leeds, might need to earn £28,000 and pay income tax of nearly £3000 to have 60% median household income. For a couple with four children in Leeds paying £100 a week mortgage interest, it will be more than £4,500.
- 27 Tax and the Family's analysis of larger families have revealed that families with children born after 2017 are greatly disadvantaged and are required to earn far larger incomes (x10)¹⁶, to remain above the standard of living that is considered to be poverty in the UK.
- 28 The gross incomes required for larger families to have a median income are beyond the realistic income that these households can earn. In London, a renting family with four children might need to earn more than £120,000¹⁷. Moreover, these families will typically be facing a 75% effective marginal rate.
- 29 The additional income a family would require to raise a fourth child, while maintaining its current standard of living is significant, especially in London where there is a considerable jump in the cost of housing between three- and four-bedroom properties. To maintain a median standard of living in Leeds, a single parent would have to earn £16,000 extra to raise a fourth child, £33,000 in London.
- 30 Households with two incomes fare better but for families on universal credit the increase in take-home pay results in a cut in universal credit (see Appendix). For these households, the marginal rate on the second income will be 63%, even if the second income does not attract income tax or national insurance contributions.

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Tax and the Family
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¹⁵ Chart 4 of the earlier paper.

¹⁶ Chart 1 shows a household with four children, born before 6th April 2017, and one earner require £2,850 to stay above the poverty line. If these children were born after 6th April 2017 (Chart 3), the household would need £28,209, this is almost 10 times more.

¹⁷ See Chart 6 above.



Appendix

Increase in disposable income resulting from a second income.

Tax Year 2020/21

One earner married couple with two children both born before 6th April 2017

Assumptions

- ▶ rent £161 per week

- ▶ local housing allowance £161 per week

- ▶ council tax £32 per week

- ▶ earnings £30,000

- ▶ no childcare costs

Gross weekly earnings	£ 576
Income tax	£ 62
National insurance	£ 47
Take home pay	£ 467
Universal credit	£ 155
After housing cost income	£ 464

Married couple with two children born before 6th April 2017 one income of £576 per week and a second income of £150 per week

Gross weekly earnings	£ 726
Income tax	£ 62
National insurance	£ 47
Joint take-home pay	£ 617
Universal credit	£ 61
After housing cost income	£ 519
Gain from having a second income	£ 55
Effective "tax rate" on second income	63%

One earner married couple with four children all born before 6th April 2017

Assumptions

- ▶ rent £207 per week

- ▶ local housing allowance £207 per week

- ▶ council tax £32 per week

- ▶ earnings £30,000

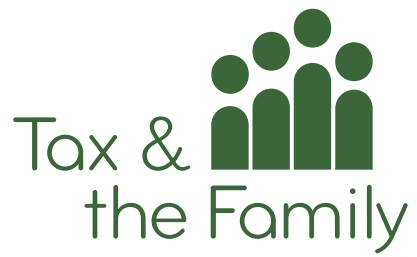
- ▶ no childcare costs



Gross weekly earnings	£ 576
Income tax	£ 62
National insurance	£ 47
Take home pay	£ 467
Universal credit	£ 320
After housing cost income	£ 611

Married couple with four children all born before 6th April 2017 one income of £576 per week and a second income of £150 per week

Gross weekly earnings	£ 726
Income tax	£ 62
National insurance	£ 47
Joint take-home pay	£ 617
Universal credit	£ 226
After housing cost income	£ 667
Gain from having a second income	£ 55
Effective “tax rate” on second income	63%



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