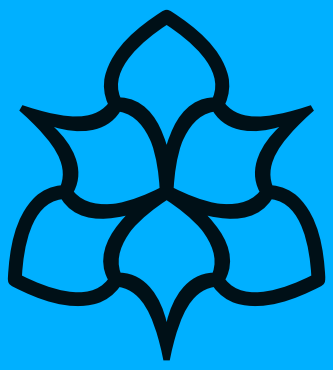
Manchester Metropolitan University

Work incentives in the tax and benefit system



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1 Executive summary

1.1 Key messages

- Despite the simplification of work incentives intended from Universal Credit, work incentives in the tax and benefit system will remain immensely complex.
- The vast majority of Universal Credit recipients will also be paying Income Tax and National Insurance or be in receipt of Council Tax Reduction, creating overlaps between taper rates from different parts of the tax and benefit system.
- As a result, fewer than a quarter of Universal Credit recipients will face a marginal deduction rate equal to the Universal Credit taper rate of 55%.
- Many low-paid workers on Universal Credit who increase their hours of work are likely to see little additional income from any such change.
- The effects of any changes to the Universal Credit taper rate are dampened by interactions with other parts of the tax and benefit system.
- Despite reductions in the real level of benefits over several years, marginal deduction rates remain very high for large numbers of people: one in eight working age adults face a marginal deduction rate of 64% or higher.
- Some people – e.g. higher-earners in receipt of Child Benefit and people making student loan repayments – face very high marginal deduction rates.
- There remain some circumstances that give rise to cliff-edges – points where an increase in earnings will result in a drop in income.
- Given the complexity of incentives in the tax and benefit system, it is inconceivable that most people will understand the actual incentives that they face but it is highly likely that these will be different from the headline of 55% used frequently in public discussion.
- The extent to which people actually respond to the complex incentives they face with changes to their hours of work remains a topic that requires substantial research.

Budget 2024 changes

The analysis in this report was carried out using the tax and benefit system in place at the start of the 2024/25 tax year, if Universal Credit were fully rolled out. Therefore, it takes into account changes to National Insurance and the Higher Income Child Benefit Charge announced by the Chancellor in the budget on 6 March 2024.

1.2 Introduction

The tax and benefit system is in a period of considerable flux. Universal Credit (UC) was announced as a simplification to ensure that claimants would always be better off from entering work or earning more. However, it has brought new complexities: a long transition, complex self-employment rules, and new interactions with other parts of the tax and benefit system.

As millions of low-paid workers are brought within the scope of UC, subject to conditionality rules that can require them to search for more hours of work, the question of financial incentives to do so becomes particularly important.

Prior to the 1997 and 2010 elections, opposition parties criticised poor work incentives and used this as a rationale for major reform in office. Yet under UC, 3.6 million people still face losing at least two-thirds of any additional earnings in reduced benefit or increased tax.

This is particularly important given the emphasis on in-work UC claimants increasing their hours of work. Requiring low-paid workers to work more hours looks very different depending on whether the majority of the gain from doing so goes to the individual or the state.

As an adult's gross earnings increase, Income Tax and National Insurance contributions are usually paid on the additional earnings and, if in receipt, the family's means-tested benefits may be reduced. The proportion of an increase in gross earnings of £1.00 that is 'lost' through Income Tax, National Insurance contributions and reduced benefits is known as the person's Marginal Deduction Rate (MDR)[1]. A low MDR means that more of any increase in gross earnings is kept and so there is a stronger financial incentive to increase earnings.

1 It is also known as the Effective Marginal Deduction Rate (EMDR).

This study assesses where, under a tax and benefit system in which UC has been fully rolled out, high MDRs exist.

Note that having a high or low MDR does not imply a specific behavioural response. For example, costs associated with commuting, clothing and childcare may feature in families' decision-making. Constraints on people's time due to caring responsibilities may mean they have little ability to respond to better financial incentives by changing their hours of work. The organisational complexity of organising childcare, including co-ordinating shifts between partners, with grandparents, and breakfast and after-school clubs can make it difficult to renegotiate such arrangements and the risks in doing so may discourage families from changing hours of work despite an apparent financial benefit from doing so.

The question of how people will respond to financial incentives is not the subject of this study. However, this study's outputs would be an input into any such research.

1.3 Typical withdrawal rates

As an adult's earnings increase, they pass through several key thresholds in the tax and benefit system which define the rate at which additional earnings are 'lost' through Income Tax and National Insurance contributions and reduced benefits.

The point at which UC starts to be tapered away as earnings rise varies depending on whether a family has children or contains a disabled person. UC is tapered away at a rate of 55p for each £1.00 of net earnings above this point.

The design of Council Tax Reduction (CTR) varies around the country.[2] However, in the default scheme, used if local authorities have not designed their own scheme, CTR is withdrawn at a rate of 20p for each £1.00 of net earnings.

Basic rate Income Tax and National Insurance contributions are payable once earnings exceed the Personal Allowance of £12,570. The total rate between the two is 28% of gross earnings.

Once the higher rate Income Tax threshold of £50,270 is reached, the combined rate of Income Tax and National Insurance contributions is 42%.

At £60,000, Child Benefit is tapered away. The rate of withdrawal depends on the number of children in the family. The rate is 6.7% of taxable earnings for the first child and 4.4% of taxable earnings for each additional child. These rates are designed so that all of a family's Child Benefit has been withdrawn by the time earnings reach £80,000.

Between £100,000 and £125,140, the Income Tax Personal Allowance is withdrawn, creating an effective Income Tax and National Insurance rate of 62%. Above £125,140, the rate drops down to 47%.

These rates of income withdrawal interact with one another. Crucially, the extent to which the UC taper overlaps with paying Income Tax and National Insurance depends on the UC Maximum Amount and whether a family is entitled to a UC Work Allowance. If a family contains more than one adult, children, a person with a disability, a carer, or has housing or childcare costs, the Maximum Amount is higher and there is a higher likelihood of an overlap between UC and paying Income Tax/National Insurance.

For people earning below £100,000 and not subject to the Higher Income Benefit Charge, there are four main rates of withdrawal and 12 potential combinations of these. 78% of working age adults (31.3 million people) will experience one of these 12 typical withdrawal rates whilst 22% (8.9 million) will experience an atypical rate outside of one of these combinations.

With UC fully rolled out, 19% of working age adults (7.6 million) will experience an MDR of least 55%. Only 5.5% (2.2 million) will experience an MDR of exactly 55% - the headline taper rate: 13% (5.4 million) will face MDRs of higher than 55%. 9% (3.6 million) will face an MDR of at least 67%.

Of particular note is that many UC claimants are also paying Income Tax or receiving Council Tax Reduction and so face MDRs higher than the headline UC taper rate of 55%. Amongst UC claimants, 22% (2.2 million) face an MDR of exactly 55% but more – 40% (3.9 million) – face an MDR that is even higher.

2 Whilst most local authorities had, by 2021/22, changed their Council Tax Reduction scheme in some way, only 23% had introduced banded schemes (Ayrton et al., 2021) and so the structure of incentives in most areas remains similar to the default scheme.

High MDRs are most likely to occur when UC overlaps with Income Tax and/or Council Tax Reduction. The factors that give rise to this being more likely include having two adults in the family, having more children, particularly if the younger children are born before 2017, having a disabled person or carer in the family, and having childcare or housing costs.

There is an overlap between groups more likely to have high MDRs and to be in poverty as higher need leads to higher UC entitlement. In turn, as earnings increase, it takes longer for UC to be tapered away. So, it is more likely that the family will still be in receipt of UC when Income Tax and National Insurance are being paid. It is these overlaps that lead to high MDRs.

1.4 Explaining high MDRs

An MDR of 55% (2.2 million, 5.5% of working age population) will most likely to be experienced by childless adults with no work allowance, low UC entitlement and zero CTR entitlement with earnings less than 20 hours a week on the minimum wage. These families have their UC tapered away as soon as they start earning and will often have their UC tapered away before they start paying Income Tax/National Insurance. People in this group with CTR entitlement will have an MDR of 64% (1.0 million, 2.5%).

An MDR of 67.6% (2.1 million, 5.3%) arises from receiving UC whilst also paying Income Tax/National Insurance contributions. This is mostly experienced by families with children or a disabled person, (and hence a UC work allowance), or who have relatively high housing costs. These factors mean that their UC has not been tapered away by the time their earnings reach the Income Tax Personal Allowance.

Families with some combination of high housing costs, children and/or disabilities are likely to experience a high MDR over a wide range of earnings. **For a minimum wage earner, it is possible that they will still be on the UC taper at full-time hours.**

1.5 Atypical MDR trajectories

Nine million people, or 22% of working age adults, experience MDRs that do not fit neatly into one of the patterns defined by 'standard' interactions of tax and benefit thresholds. 2.2 million (5.4% of working age adults face atypical MDRs higher than 55%. One example of this is undergraduate Student Loan repayments[3], where the effect of making payments is to add nine percentage points to MDRs. A graduate on the UC taper and paying Income Tax/National Insurance would therefore face an MDR of 76.6%.

Eighty-five per cent of childcare costs are covered in UC. This means that a person who has to find additional hours of childcare to facilitate an increase in hours of work will have to meet 15% of the costs. If this cost were 82p an hour[4], it would represent an additional 7.2 percentage points on the effective MDR of a minimum wage worker.

The withdrawal of Child Benefit for people earning between £60,000 and £80,000 per annum adds 6.7p per pound earned to the MDR for families with one child and a further 4.4p for each additional child. So, a two-child family faces an increase of 11.1 percentage points in their MDR due to the withdrawal of Child Benefit.

It is unlikely that higher rate taxpayers will still be in receipt of UC. However, high housing costs, and having children in the family make it possible. If this happens, the combination of higher-rate Income Tax/ National Insurance, the UC taper and Child Benefit withdrawal, can create MDRs of 70 to 80%.

1.6 Cliff edges

There are a few places in the benefit system where an increase in earnings results in a drop in net income. At these points, MDRs are greater than 100%.

Owner-occupiers with service charges can receive support for paying their service charges through UC. However, this support is withdrawn as soon as they have any earnings at all. So, they would need their earnings to increase by 2.2 times the service charge before being better off in work.

3 See Section **6.1** for more detail on Postgraduate Loans.

4 Assuming an hourly cost of £5.49 per hour. See Section **6.2** for an explanation of this assumption.

Owner-occupiers can receive a loan (worth 3.16% of the outstanding mortgage amount) from the DWP to help them with mortgage interest costs. However, this support is withdrawn as soon the family's income is high enough that they are no longer entitled to UC. The result is that 'floating off' UC due to working extra hours can leave families having to fund mortgage interest payments, making them feel worse off.

Families with children older than the maximum age for universal Free School Meals (7 in England, 9 in Scotland, 11 in Wales from 2024/25) have a maximum net income threshold of £9,552 in Scotland, £7,400 in England and Wales and £14,000 in Northern Ireland. Income rising above this point results in a loss of £13 per child per week during term-time, or around £500 per annum.

1.7 Conclusions and recommendations

1.7.1 Most claimants on the UC taper face an MDR of more than 55%

Few people actually face an MDR of 55%. Most claimants on the UC taper are also in receipt of Council Tax Reduction or pay Income Tax or National Insurance contributions and so face significantly higher MDRs than 55%.

The single withdrawal rate of 55% only applies to the UC part of the tax and benefit system and most claimants face interactions with other parts of the system, which reintroduces complexity. A 'universal' policy such as a single taper rate actually has unequal impacts when these interactions are considered.

Policy implication: Policy design relating to the UC taper should consider explicitly the implications for people who face interactions between the UC taper, Council Tax Reduction, National Insurance Contributions and Income Tax.

1.7.2 Those who face the highest MDRs are those most at risk of poverty

Poverty rates are much higher amongst the demographic groups most likely to face high MDRs. This is because these groups are, in general, likely to have higher levels of UC Maximum Amount or a Work Allowance and therefore likely to have overlaps between the UC taper and paying Income Tax and National Insurance contributions. The last decade has seen significant reductions in the level of support provided by the benefit system to groups at the highest risk of poverty. Yet these reductions have not eliminated very high MDRs.

Policy implication: Reducing support for people in need cannot eliminate high MDRs.

1.7.3 Escaping high MDRs and in-work progression

Many people with plausible hourly rates of pay will never escape high MDRs, even if they work full-time. For many people in this position, with MDRs of 67% of more, the majority of any earnings from additional hours goes to the state and not to them. Active Labour Market Policies which put more emphasis on enabling low-paid workers to increase their hourly rate of pay (rather than just their hours of work) are therefore more consistent with the incentives provided by the tax and benefit system.

Policy implication: Active Labour Market Policies to support in-work progression should prioritise enabling low earners to increase their hourly rate of pay, not simply the number of hours of work.

1.7.4 Reducing the taper

Reducing the taper does provide additional income for people in low-paid work and it does reduce the intensity of very high MDRs, but not by as much as the headline reduction in the taper rate. For example, a five-point reduction in the taper reduces an MDR of 67.6% to 64% because of the interaction with Income Tax and National Insurance contributions.

1.7.5 Student loan repayments

Given the size of the student population, and student loan repayment thresholds prior to 2012, it is highly likely that many people on UC will also face Income Tax, National Insurance contributions and student loan repayments. MDRs for people in this group are extremely high and this is particularly the case because deductions from pay for student loan repayments are ignored in the UC income calculation.

Policy implication: Compulsory student loan repayments should be deducted from the income figure used to assess entitlement to UC.

1.7.6 Owner-occupiers

The system of support for the housing costs of owner-occupiers who are on UC contains two cliff edges: the withdrawal of support to cover service charges as soon as a person earns anything at all and the removal of loan payments to support mortgage interest payments once UC has been tapered away.

Policy implication: The DWP should estimate and publish the cost of removing the rule that any earnings render a family ineligible for support for service charges.

Support for Mortgage Interest for people on legacy benefits (Income Support, Jobseekers Allowance, Employment and Support Allowance) have a provision that allows people whose income takes them narrowly above entitlement to these benefits to continue to receive these loans. So, there is precedent for measures to address the cliff-edge when people's income rises just above this level.

Policy implication: The DWP should explore tapering away the size of loan payments when income rises just above the level at which entitlement to UC ceases to avoid the current cliff-edge.

1.7.7 Childcare support

Assessing the full range of interactions between parts of the tax-and-benefit system responsible for childcare is extremely difficult given the complexity of the childcare support system. More analysis of these issues is essential. However, the failure over the past 15 years to increase maximum childcare costs that can be supported by Universal Credit at the same rate as actual costs has created a situation where effective MDRs for claimants with children under 2 whose costs exceed these limits are likely to be extremely high and a strong disincentive to work.

Policy implication: Increase the maximum amount of childcare that can be supported in UC to where it would have been had it tracked increases in childcare costs over the last 15 years and continue to increase this cap in line with the annual Childcare Survey.

1.7.8 Removing cliff edges

Despite the introduction of Universal Credit, there remain some areas of the tax and benefit system that produce cliff-edges: situations where an increase in earnings can lead to a reduction in family income, such as the rules for owner-occupiers highlighted above. Often, these do not affect a huge number of people but are problematic for those affected. There are a number of points of detail that could address these cliff edges which, if they do not affect large numbers of people, are unlikely to come with significant cost.

1.7.8.1 ESA Permitted work rules

Policy implication: Change the ESA Permitted Work rules from an earnings threshold to an hours threshold.

1.7.8.2 Scottish Child Payment

There is a cliff-edge because the Scottish Child Payment is withdrawn when a family's income reaches the point when they are no longer entitled to UC. As the level of the payment rises, the size of the cliff edge increases and it becomes more important to tackle this issue.

Policy implication: Calculate the Scottish Child Payment as if it were an increase in the Universal Credit Maximum Amount. This could be achieved by the Scottish Government receiving an appropriate data feed from the Department for Work and Pensions of UC Maximum Amounts and receipt and then calculating and paying the relevant amount. (Local authorities already receive a similar data feed to enable administration of Council Tax Reduction.)

1.8 Higher rate taxpayers

There are a number of examples of very high MDRs for higher rate taxpayers – particularly those with children who face the Higher Income Child Benefit Charge – such that they face higher MDRs than people who are even better off.

Policy implication: Redesign the tax system for higher rate taxpayers so that families with children do not pay higher MDRs than others and so that the highest paid face the highest MDRs.

2 Introduction

The tax and benefit system is in a period of considerable flux. Universal Credit (UC) was announced as a simplification to ensure that claimants would always be better off from entering work or earning more. However, it has brought new complexities: a long transition, complex self-employment rules, and new interactions with other parts of the system.

Furthermore, the transition of in-work benefits from tax credits to UC brings millions of low-paid workers within the scope of a new conditionality regime that can require them to increase their earnings through additional hours of work.

Prior to both the 1997 and 2010 elections, opposition parties of the day criticised poor work incentives and used this as a rationale for major reform once in office. Yet under UC, 3.6 million people will still face losing at least two-thirds of any additional earnings in reduced benefit or increased tax.

This is particularly important given the emphasis that the government has placed on in-work progression for people on Universal Credit. Working families on a low income receiving Universal Credit can be required to search for more work. Requiring low-paid workers to increase their hours of work looks very different depending on whether the majority of the benefit from doing so goes to the individual or to the state.

In this project, we carry out a study of work incentives throughout the tax and benefit system in order to identify where, and why, work incentives remain poor for so many people. The findings presented below will be of direct interest to politicians, policymakers, think-tanks, and campaigners. They will add to the evidence base on labour market behaviour and how to design support for sub-groups of the population.

2.1 About us

The project has been carried out by Dr Becky Milne and Professor Ashwin Kumar in the Policy Evaluation Research Unit (PERU) at Manchester Metropolitan University. PERU is a multi-disciplinary team of evaluators, economists, sociologists and criminologists. We specialise in evaluating policies, programmes and projects and advising national and local policy-makers on the development of evidence-informed policy.

2.2 Funding

This project has been funded by the abrdn Financial Fairness Trust (**financialfairness.org.uk**). abrdn Financial Fairness Trust funds research, policy work and campaigning activities to tackle financial problems and improve living standards for people on low-to-middle incomes in the UK. It is an independent charitable trust registered in Scotland (SC040877).

3 Methods

3.1 Marginal Deduction Rate

The measure of work incentives used in this project is the Marginal Deduction Rate (MDR). A person's **Marginal Deduction Rate** is the proportion of an additional pound of gross earnings that is lost through increased taxation or reduced benefits for the family.

Note that MDRs are personal – they are calculated separately for each adult in a family – as each adult may sit at a different point in the tax schedule and therefore may not face the same deductions from their earnings. However, part of the deduction arises from reductions in family benefits as earnings rise. The implicit assumption is that each adult values equally reductions in their personal earnings through income taxes as they value reductions in family income through benefit withdrawal.

3.2 Caveats

Having a lower MDR is a stronger financial incentive to increase earnings as more of each pound of additional earnings feeds through into an increase in net income. However, it is important to recognise that the MDR represents only the financial incentives provided by the tax and benefit system and these are not the only factors that can influence a person's decision to work.

There are costs associated with working such as childcare, commuting, and clothing, each of which may feature in families' decision-making. There are constraints on people's time due to caring responsibilities. A person with such constraints may have little ability to respond to better financial work incentives by changing their hours of work.

Where childcare arrangements are complex, involving a mixture of parents co-ordinating their shifts, grandparents helping out for part of the week, and use of breakfast and after-school clubs, it can be difficult to renegotiate such arrangements. The risks involved in doing so may discourage families from changing hours of work despite the apparent financial incentive to do so.

The key point is that that a change in financial incentives does not necessarily imply a change in behaviour. The question of how people will respond to changes in their incentives is not the subject of this study. However, the outputs of this study would be important inputs into any such research.

2.3.1 Marginal Deduction Rate example

Consider a single person working with earnings of £100 a week.

They are likely to be earning too little to pay Income Tax and National Insurance contributions and, if they are not disabled, might also be in receipt of £36 of UC.

If that person increased their earnings by £1.00, their earnings are still too low for there to be any Income Tax or National Insurance contributions to pay. So their post-tax earnings would increase to £101. Because of the Universal Credit taper, their benefits would fall by 55p. So they would see an increase in their net income of 45p as a result of their £1.00 increase in earnings.

In this case, the percentage of the increase in gross earnings that they lose to increased tax or benefit reduction – i.e. their MDR – is 55%.

On the other hand, if the same person were disabled and earning £100 a week, they might similarly not be paying Income Tax or National Insurance contributions but might be in receipt of £91 per week in Universal Credit. They would also have a UC Work Allowance. So, if their earnings increased by the same £1.00, they would not lose any UC. In this case, their net income would increase by £1.00 to £192 and so they would not lose any of their increase in earnings to benefit withdrawal. In this case, their MDR is zero.

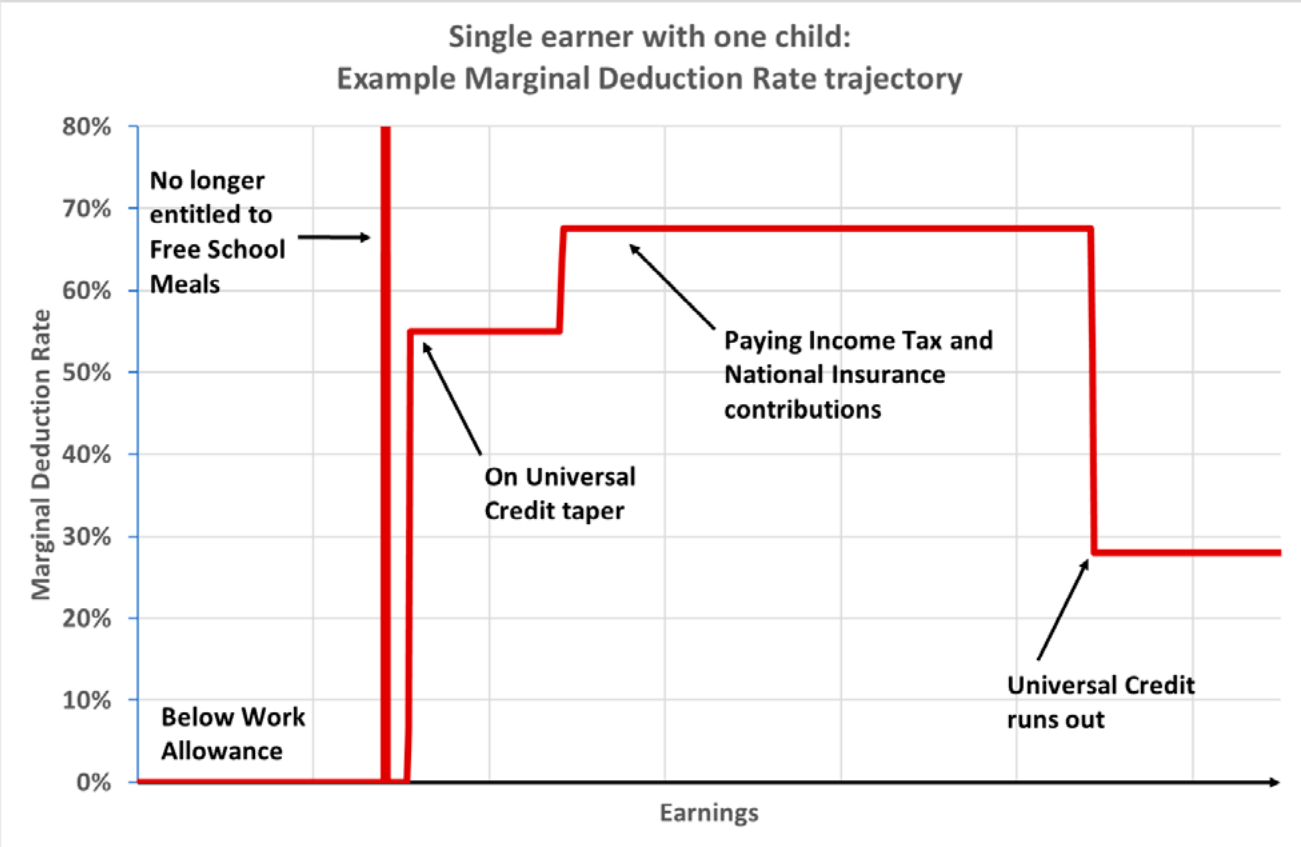
3.2.2 MDR Trajectory

For each adult, we can trace their trajectory through different MDRs as their earnings increase. For example, if they are entitled to a UC Work Allowance, as their earnings increase from zero, their Marginal Deduction Rate would be zero because they keep the whole of any additional pound in earnings. However, once their earnings take family earnings above their Work Allowance, each additional pound of earnings would result in a reduction in UC of 55p, and so their MDR would be 55%.

As their earnings increase further, they would start to pay National Insurance and Income Tax, which would reduce further the increase in net income. At some point their UC would be tapered away and their only deductions would be for Income Tax and National Insurance.

An example of such a trajectory is illustrated in **Figure 1**.

Figure 1 Example MDR trajectory



3.3 Tax-benefit microsimulation

Traditionally, analysis of the tax and benefit system is carried out using tax-benefit microsimulation in which a model simulates the effects of the tax and benefit system on a representative sample of the population. All of the major tax-benefit microsimulation models in the UK – in government and outside – use the Family Resources Survey (FRS), produced by the Department for Work and Pensions as their input sample.

The representative nature of the FRS sample enables estimates of the national effects of policy to be estimated relatively accurately. However, its sample of 22,500 families[5] cannot capture the full variety of complex circumstances found in the population. This raises the question of how rigorous analysis can take place of the effects of the tax and benefit system on families with less widespread circumstances.

For example, before Covid, 74,000 families were subject to the Benefit Cap. As a 1 in 1,500 sample, that means only around 50 families in the FRS sample are subject to the Benefit Cap. This relatively small sample means that traditional tax-benefit microsimulation models cannot provide sufficient detail to analyse the Benefit Cap without wide confidence intervals. Furthermore, analysis of the effect of the Benefit Cap on demographic sub-groups using one year of data is almost impossible.

3.4 Synthetic microsimulation

Work incentives depend on a range of personal circumstances, including earnings, other income, family size, child ages, disability status, rent, housing status and costs. In this project we built datasets consisting of millions of synthetic families that encompass as wide a range as possible of combinations of circumstances. For example, we were able to create families with one non-working disabled adult, one non-disabled earner, two children, average non-London housing costs, and earnings ranging from £0 to £1000 a week in £1 intervals.

The approach of the study was to run these synthetic families through the tax-benefit calculation engine of a traditional tax-benefit microsimulation model to generate net income for each family, and net income if each adult's earnings were one pound higher.

This allowed us to calculate MDRs for each adult in our synthetic families and allowed for insights into combinations of characteristics not usually found in sample surveys. In particular, for any given set of family circumstances, we have generated synthetic families at every level of earnings from £0 to £1,000 per week. This allows us to estimate how net income changes as earnings increase and to produce a comprehensive view of the work incentives faced by each of our synthetic families.

3.5 Modelling assumptions

3.5.1 2024/25 tax and benefit system

For the analysis in this study, we have used the tax and benefit system as at April 2024 – i.e. at the start of the 2024/25 financial year. The analysis therefore takes into account the changes to the National Insurance system and to the Higher Income Child Benefit Charge announced in the budget on 6 March 2024.

3.5.2 Universal Credit

All families are assumed to be of working age and subject to Universal Credit (UC) rather than legacy benefits: i.e. UC is the only means-tested benefit available to them and tax credits and other means-tested benefits are not available. This reflects the situation that will be in place once the transition to Universal Credit is complete.

3.5.3 Council Tax Reduction

Our synthetic families are assumed to live in an area where Council Tax Reduction (CTR) is provided according to the Default Scheme – i.e. using the rules that are in place for Council Tax Reduction where a local authority has not chosen to design their own local scheme. However, it is assumed that Council Tax Reduction will cover only up to 76% of Council Tax bills to reflect the fact that most local authorities do not provide full coverage.

So, in our modelling, families with no income receive CTR equal to 76% of their Council Tax liability.

5 There are 22,733 benefit units in the 2019/20 Family Resources Survey, which is the last wave unaffected by Covid (author's calculation). The 2020/21 and 2021/22 samples are smaller whilst the 2022/23 sample is expected to increase to 25,000 (DWP, 2023b).

However, if their income goes above a threshold based on their family size and circumstances, their CTR is tapered away at a rate of 20p for each £1.00 of income above the threshold. Income used in the Universal Credit calculation is used to calculate entitlement to Council Tax Reduction.

Note that CTR schemes vary significantly around the country. In some local authority areas, there are higher tapers or banded schemes where income is grouped into bands to determine the level of support. These changes to the default scheme will have a material impact on MDRs.

3.5.4 Other assumptions

Our synthetic families are assumed to have less than £6,000 in savings, i.e. below the level at which savings would cause a reduction in benefits, and to receive interest from savings below the level of the tax-free savings allowance.

3.5.5 Design of Universal Credit

UC is claimed at the level of the nuclear family: a single adult or adult couple with their children under 16 (or under 19 if in full-time education). Claimants are assigned a Maximum Amount based on their family size, disability status, and caring responsibilities, according to standard tariffs. Amounts for housing and childcare costs are added based on actual costs, up to a set maximum. A family with no income of their own and no savings would receive their Maximum Amount as their benefit.

Families with children or containing a disabled person receive a Work Allowance and can earn up to this Work Allowance and continue to receive their Maximum Amount without deduction. For each pound of earnings above the Work Allowance the family's benefit is reduced by 55p. Their Universal Credit is 'tapered' away in this manner until their earnings are high enough that they receive no benefit.

Non-disabled families without children have a zero Work Allowance and so the taper kicks in from the first pound of earnings: each pound of earnings reduces their benefit by 55p.

Earnings calculations in UC are made on post-tax earnings – i.e. after any Income Tax or National Insurance contributions have been deducted.

When first introduced, the UC taper was set at 65p. In 2017, it was reduced to 63p and in 2022 to 55p. Each such reduction was designed to improve work incentives as less of each pound earned above the Work Allowance is tapered away.

3.5.6 Employee earnings

This study focuses on the impact of an increase in *employee* earnings, not self-employed earnings, which can be much more complex. National Insurance rates for self-employed workers are different to those faced by employees. Low-income families are subject to a 'Minimum Income Floor' – an assumption that their earnings are at least equivalent to 35 hours of work at the minimum wage. Self-employed workers who work through a limited company may choose to pay themselves in dividends from the company rather than through earnings and, if so, will face a different tax regime. Given this complexity, this study calculates MDRs based on an increase in employee earnings. However, this complexity itself suggests that a detailed examination of work incentives for self-employed workers would be valuable.

3.6 Analytical approach

This section of the report sets out our findings under four main areas.

First, we discuss the typical work incentives experienced by adults as their earnings increase from £0 to £1000 a week. We describe the tax and benefit thresholds they pass, the order in which they pass them, and the consequent implications of these tax rates and benefit taper rates on overall income and incentives to increase earnings.

We then go on to describe who experiences these work incentives, through analysis of population survey data on personal incomes from the FRS. We describe the prevalence of each of these typical MDRs, the types of people and families who experience them, and the circumstances required to experience them.

Next, we look at atypical work incentives, experienced by people with specific sets of circumstances. In doing this we look at both the impact on individuals and the parts of the tax-benefit system that cause these atypical MDRs to occur.

Finally, we draw out conclusions and make recommendations for the tax and benefit system.

3.7 Example families

Throughout this section, we illustrate the impact of the work incentives we describe through the experiences of 5 (fictional) example families:

Family A: Abigail and Alex

- Two pre-school age children
- Abigail works whilst Alex stays at home to care for their children.

Family B: Beth

- No children
- Owns her flat with a mortgage.

Family C: Cath and Colin

- No children
- Cath earns at the minimum wage.
- Colin is currently out of work and looking for a job.

Family D: David and Donna, with their 1 child, renting a house. David has a disability and receives Personal Independence Payment (PIP)

- One child (aged 10)
- Donna earns £15 per hour.
- David works for 10 hours a week at the minimum wage and receives Personal Independence payment (PIP)

Family E: Ernest, with his 1 child, renting a house

- One child (aged 10)
- Ernest earns £12 per hour.
- If he works more than 20 hours a week, he has to pay for childcare.

4 Typical Marginal Deduction Rates

As an adult's earnings increase, they pass through several key thresholds in the tax and benefit system. After passing each threshold they experience a change in the rate at which any additional earnings are 'lost' – i.e. their MDR. These are:

Table 1 Main tax and benefit thresholds

Event	Threshold	Impact	Duration
Universal Credit taper begins	£0.00/£4,848/£8,076 Parents and people with disabilities are entitled to earn either £4,848 or £8,076 a year before any of their UC entitlement is tapered away.[6] Non-parents who don't have any disabilities have their UC tapered as soon as they earn anything.	For each additional £1.00 earned (after tax), Universal Credit is reduced by 55p	Until the family's Maximum UC entitlement has been tapered away
Council Tax Reduction taper	£0 In the presence of Universal Credit, in the default CTR scheme, CTR is tapered away as soon anyone in the family has any earnings.	For each additional £1.00 earned (after tax), the CTR payment is reduced by 20p.	Until the family's CTR entitlement has been tapered away
Income Tax Personal Allowance	£12,570	For each additional £1.00 earned (gross), 20p in Income Tax and 8p in employee National contributions are payable	Until £50,270.
Income Tax higher rate threshold	£50,270	For each additional £1.00 earned (gross), 40p is payable in Income Tax and 2p in National Insurance contributions	Income Tax at 40p lasts until £125,140. National Insurance Contributions at 2p applies to all earnings above £50,270.

6 The Work Allowance for families who are in receipt of support for their housing costs is £4,848; for others, it is £8,076 (DWP, 2024).

Event	Threshold	Impact	Duration
Higher Income Child Benefit Charge	£60,000	0.005% of the family's Child Benefit must be paid for each £1.00 earned over £60,000. For families with one child, this is 6.7p per £1.00 earned. It is a further 4.4p per £1.00 earned for each additional child: Two children: 11.1p per £1.00 earned. Three children: 15.5p per £1.00 earned. Four children: 19.9p per £1.00 earned.	Until £80,000. By this point, the entirety of Child Benefit has been tapered away so there is no further reduction taking place.
Point at which the Income Tax Personal Allowance starts being reduced	£100,000	Each £1.00 of earnings increases Income Tax by 20p to an effective rate of 60p. £1.00 of earnings reduces the Personal Allowance by 50p, so 50p more of income is taxed at 40%, leading to an increase in tax of 20p	Until £125,140
Income Tax additional rate threshold	£125,140	Income Tax payable at 45p for each £1.00 earned	Applies to all income above £125,140

These rates of income withdrawal interact with one another, so the order in which a person passes these thresholds has an impact on the pattern of work incentives that they face. Importantly, the extent to which the UC taper overlaps with paying Income Tax and National Insurance contributions depends on the Maximum Amount of Universal Credit that a family may be entitled to, and whether or not they are entitled to a UC Work Allowance. The higher the Maximum Amount, the longer it takes for all of their benefit to be tapered away and the higher the likelihood of an overlap with National Insurance and Income Tax.

The Maximum Amount is increased if a family contains more than one adult, has children, contains a person with a disability or who is a carer, and has housing or childcare costs. Having a Work Allowance depends on whether a family has children or contains a disabled person. Each of these factors makes it more likely that Universal Credit entitlement will overlap with paying National Insurance and Income Tax.

4.1 Examples

To demonstrate, we compare Alex and April (Family A) with Beth (Family B). Each family has one worker.

4.1.1 Abigail and Alex (Family A)

2 adults, 2 kids, £800pm rent, £150pm Council Tax, Alex does not work.

If Abigail was out of work, family A would be entitled to claim £444 per week in Universal Credit and £26 in Council Tax Reduction. Because they have children, their UC work allowance is £93.

If she earns £1.00 a week, the family remains under the UC work allowance. Because of the interaction between the Benefit Cap, UC and CTR, initially, CTR is also not tapered away so Abigail's MDR is zero. However, once her earnings go above £14 a week, 20p of the family's CTR is tapered away for each £1.00 earned. So, the family is 80p better off from the £1.00 of earnings and Abigail's MDR is 20%.

This remains the case until her earnings reach the UC work allowance. At this point, the family's UC starts to be tapered away at a rate of 55p for each £1.00 of earnings. 20% of the remaining 45p – 9p – is lost in CTR. So, the family is 36p better off from the additional £1.00 of earnings and Abigail's MDR is 64%.

At weekly earnings of £173, her CTR has been tapered away and so her MDR goes to 55%, reflecting the UC taper. This lasts until her earnings reach the Income Tax Personal Allowance at £241 and she starts paying basic rate Income Tax at 20% and National Insurance (NI) contributions at 8%. The combined effect of the two means that her post-tax earnings are 72p higher for each £1.00 of gross earnings. The 55% UC taper is then applied to this 72p, resulting in a reduction in these benefits of 39.6p. Added to the 28p paid in Income Tax and NI contributions, this means she has an MDR of 67.6%.

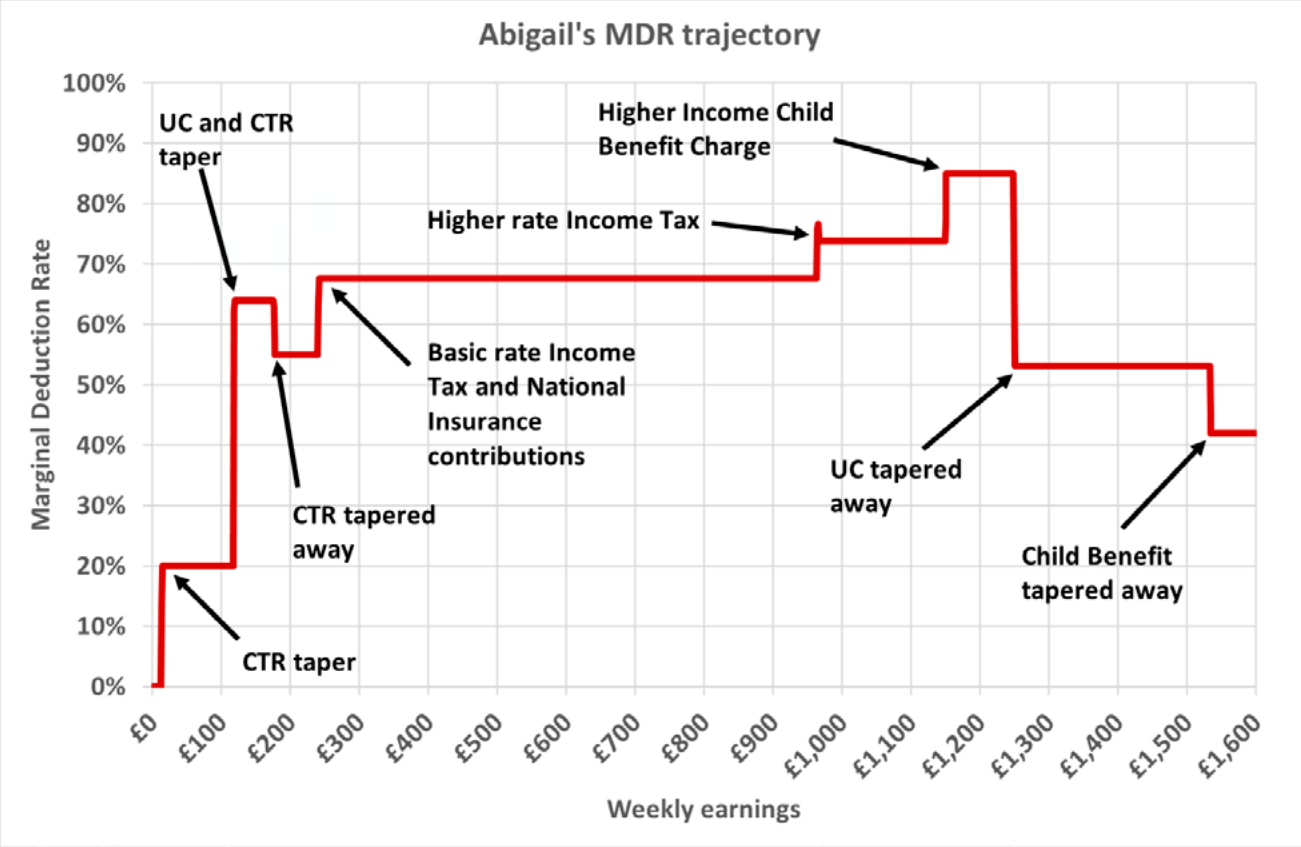
If her earnings continue to rise, at £964 per week, she starts paying Higher Rate Income Tax. Now her combined tax and National Insurance rate is 42%. The UC taper means that each pound of earnings also loses the family 55% of the remaining 58p of post-tax income or 31.9p. The combined effect of 42p in tax and 31.9p in UC means a Marginal Deduction Rate of 73.9%. At £1,151 (£60,000 per annum), she has to start paying the Higher Income Child Benefit Charge and her MDR rises to 78.9%.

At £1,273, the family's UC has been tapered away and her MDR drops to 53.1%, reflecting higher rate tax and National Insurance and the Higher Income Child Benefit Charge. At £1,535, Child Benefit has been fully tapered away and her MDR drops to 42%, reflecting higher rate tax and National Insurance.

It is worth nothing that, once higher rate Income Tax and the Higher Income Child Benefit Charge are being paid, each £1.00 of earnings produces a smaller increase in post-tax earnings. As a result, UC is withdrawn at a slower rate and the family remains on UC until a surprisingly high level of income. Essentially, if a family does remain on UC when reaching the higher rate tax threshold, the combined effects of the various tapers will keep them on UC until quite a high level of income.

Figure 2 shows how Abigail's MDR changes as her weekly earnings progress from £0 a week to £1,600 a week.

Figure 2 Abigail's Marginal Deduction Rate



4.1.2 Beth (Family B)

1 adult, owner of leasehold flat, outstanding mortgage of £200,000, £100pm service charges, £100pm council tax

Out of work, Beth is entitled to claim £114 per week in UC and £13 in Council Tax Reduction. Her UC includes £23 per week to cover her service charges. Because she doesn't have any children, she is not entitled to a UC work allowance.

If she has been out of work for at least three months, she can also receive a loan of £121 per week to contribute towards her mortgage interest payments. Each such payment adds to a debt to the Department for Work and Pensions that attracts interest (at 3.16%) and must be repaid when the property is sold.

If Beth earns £1.00 a week, she becomes ineligible for the support for her service charges so she loses £23 in UC immediately, plus the normal UC taper of 55p and 9p from the CTR taper. So, she faces a cliff-edge if she enters work: £1.00 of work leaves her £24 worse off. Once she is past this cliff-edge, her MDR is 64%, reflecting the 55% UC taper and the 20% CTR taper on the remaining 45p.

Because of this cliff-edge, as her earnings increase, it is only by the time she is earning £64 per week (or roughly six hours of work at the minimum wage) that she is better off than when out of work.

Her MDR of 64% continues until her CTR is tapered away at weekly earnings of £146, when it reduces to 55%. At £164, her UC has been fully tapered away.

Once this happens, she is no longer entitled to Support for Mortgage Interest so she will no longer receive the £121 loan payments to help her pay her mortgage interest. Strictly, speaking, because the £121 per week is not income but receipt of a loan, it does not count in most definitions of disposable income, and so would not figure in an MDR. However, the practical reality for Beth is that, once her weekly earnings reach £164, she has to pay £121 more than previously.

At this point, her MDR drops to zero as she has not yet reached the Income Tax Personal Allowance. Once she does so, her MDR goes up to 28% to reflect the Income Tax basic rate of 20% and the National Insurance contribution rate of 8%.

Figure 3 shows how Beth's MDR changes as her weekly earnings progress from £0 a week to a hypothetical weekly wage of £500 a week. **Figure 4** shows how Beth's disposable income changes as her earnings increase from £0.00 to £500 per week, assuming that we treat the mortgage loan as income.

Figure 3 Beth's Marginal Deduction Rate

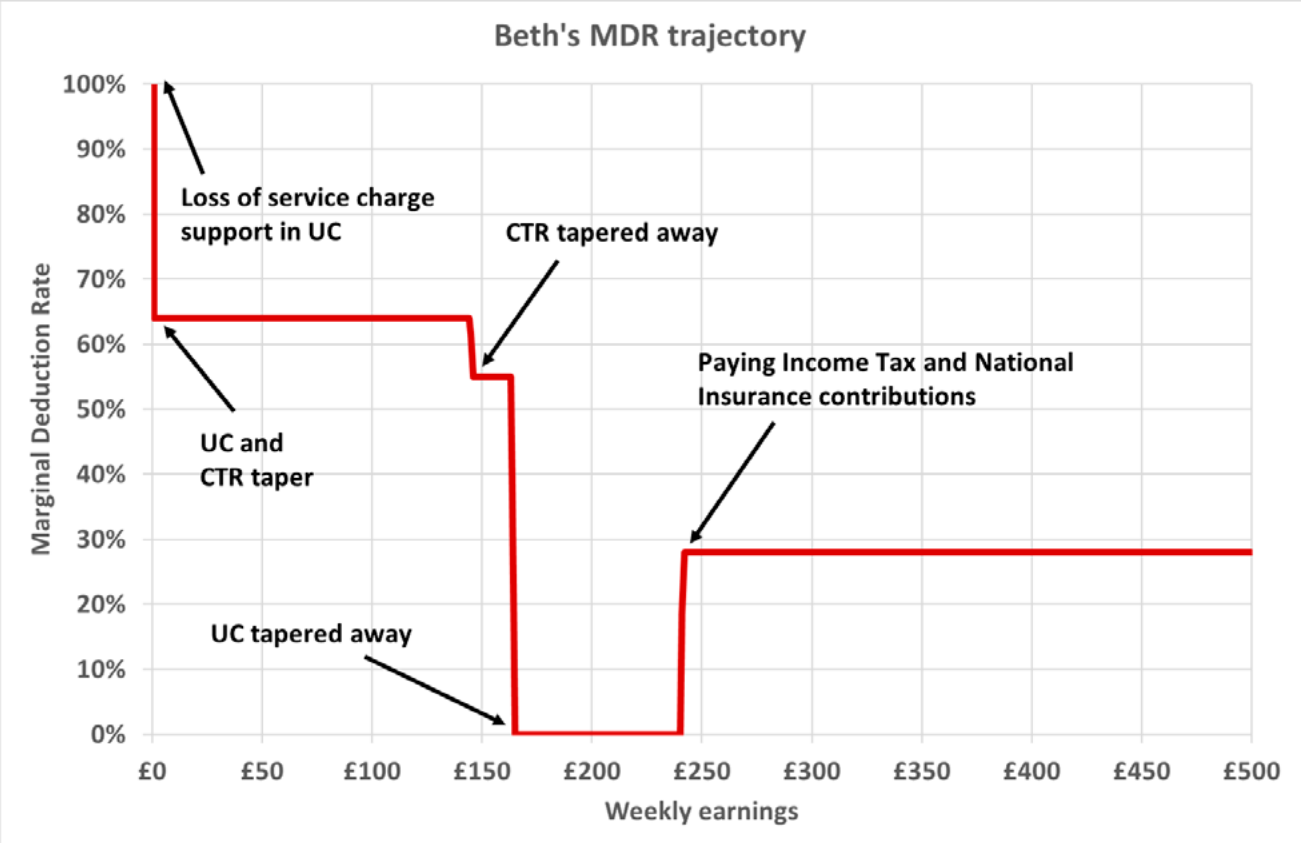
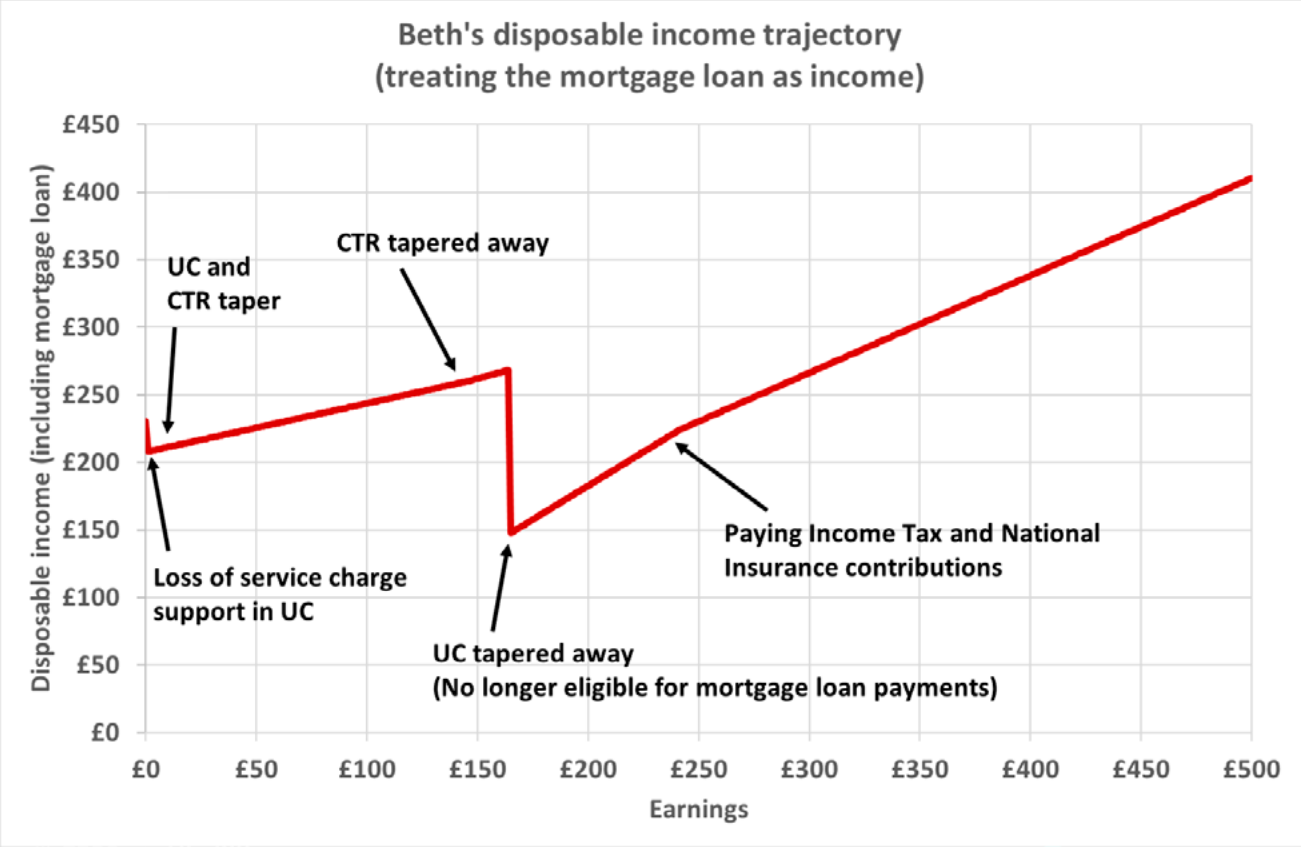


Figure 4 Beth's disposable income



4.2 Note on income Tax rates in Scotland

In Scotland, in 2024/25, there are six income tax bands with bands 1 to 3 having income tax rates of 19, 20 and 21 per cent respectively, and bands 4, 5 and 6 having rates of 42, 45 and 48 per cent. The 42 per cent band starts at £43,663 per annum, which is lower than the starting point of £50,270 for the higher rate (40 per cent) band in the rest of the UK. The consequence of these differences is that typical marginal deduction rates in Scotland will vary compared to the rest of the UK and issues relating to the higher rate tax band will start at a lower level of income.

4.3 The 4 thresholds, and 12 combinations

As described above, the four main rates of withdrawal are:

Table 2 Main rates of withdrawal and combinations

For people not subject to the Higher Income Child Benefit Charge and earnings below £100,000 per annum, there are four main rates of withdrawal and 12 potential combinations of these.

Tax/benefit	Taper rate
Universal Credit taper (UC)	55%
Council Tax Reduction taper (CTR) – default scheme	20%
Income Tax basic rate and National Insurance Contributions (NICs)	20% + 8% = 28%
Income Tax higher rate and National Insurance contributions	40% + 2% = 42%

Table 3 Combinations of tapers/taxes

Combination of tapers/taxes	MDR calculation	MDR
Under work allowance	0	0%
CTR taper	0.2	20%
IT basic rate and NICs	0.2 + 0.08	28%
IT higher rate and NICs	0.4 + 0.02	42%
CTR taper and IT basic rate	1 – (1 – 0.28) * (1 - 0.2)	42.4%
CTR taper and IT higher rate	1 – (1 – 0.42) * (1 – 0.2)	53.6%
UC taper	0.55	55%
UC taper and CTR taper	1 – (1 – 0.55) * (1 – 0.2)	64%
UC taper and IT basic rate	1 – (1 – 0.28) * (1 – 0.55)	67.6%
UC taper and IT higher rate	1 – (1 – 0.42) * (1 – 0.55)	73.9%
UC taper, CTR taper, IT basic rate	1 – (1 – 0.28) * (1 – 0.55) * (1 – 0.2)	74.08%
UC taper, CTR taper, IT higher rate	1 – (1 – 0.42) * (1 – 0.55) * (1 – 0.2)	79.12%

4.4 Prevalence of the 12 standard MDRs

Table 4 and Table 5 shows the prevalence of the 12 typical MDRs within the working age population (adults aged 18 – 65 in April 2024). 78% of working age adults face an MDR in one of these 12 standard groups, whilst 22% face non-standard MDRs, which are discussed in section 6.

Under UC, 19% of working age adults experience an MDR that is at least 55%. It is notable that only 5% will experience an MDR of exactly 55%. 9% will face an MDR of at least 67%.

Table 4: Prevalence of low MDRs in the working age population

MDR	Taxes/benefit tapers	Number of adults	Proportion of working age population
0%		4.9 million	12%
20%	CTR	4.0 million	10%
28%	IT basic rate, NICs	13.7 million	34%
42%	IT higher rate, NICs	3.4 million	8%
42.4%	IT basic rate, NICs, CTR	0	0%
53.6%	IT higher rate, NICs, CTR	0	0%
Atypical < 55%		6.7 million	17%
Total lower than 55%		32.7 million	**81%**

Table 5: Prevalence of high MDRs in the working age population

MDR	Taxes/benefit tapers	Number of adults	Proportion of working age population
55%	UC	2.2 million	5%
64%	UC, CTR	1.0 million	3%
67.6%	UC, IT basic rate, NICs	2.1 million	5%
73.9%	UC, IT higher rate, NICs	< 0.1 million	< 1%
74.08%	UC, IT basic rate, NICs, CTR	< 0.1 million	< 1%
79.12%	UC, IT higher rate, NICs, CTR	0	0%
Atypical > 55%		2.2 million	5%
Total at least 55%		7.5 million	**19%**

4.5 Prevalence of MDRs for people on Universal Credit[7]

Focusing specifically on those on Universal Credit, what is clear is that many people on Universal Credit are also paying Income Tax or are receiving Council Tax Reduction and therefore face MDRs higher than the headline UC taper rate. Whilst 22% of UC recipients will see an MDR of exactly 55%, because of these interactions, more – 40% of UC recipients – face an MDR of higher than 55%.

Table 6: Prevalence of MDRs for people on Universal Credit

MDR	Taxes/benefit tapers	Number of adults	Proportion of UC recipients
0%		1.2 million	12%
20%	CTR taper	2.5 million	25%
28%	IT basic rate, NICs	< 0.1 million	< 1%
Atypical < 55%		0.1 million	1%
55%	UC taper	2.2 million	22%
64%	UC taper, CTR taper	1.0 million	10%
67.6%	IT basic rate, UC taper	2.1 million	22%
74.08%	IT basic rate, UC taper, CTR	< 0.1 million	< 1%
73.9%/79.12%	IT higher rate, UC taper (with and without CTR)	< 0.1 million	< 1%
Atypical > 55%		0.7 million	7%
All UC recipients		9.9 million	**100%**

7 An adult is considered to be on UC if the benefit unit of which they are a member is in receipt.

5 High MDRs

5.1 Who experiences high typical MDRs?

The higher MDRs, shown in the lower half of **Table 3** or in **Table 5** are those where an adult is entitled to Universal Credit and where there is no Work Allowance or family earnings are above the Work Allowance. MDRs are particularly high where there is an overlap with other tapers/taxes. In general, a person is likely to have a higher MDRs when:

- the family's UC Maximum Amount (the amount they would be entitled to if they had no other income) is higher, which in turn is more likely if:
  - the family has two adults rather than one
  - there are more children in the family, and particularly if the younger children were born before 2017[8]
  - there is a disabled adult or child or a carer in the family
  - the family has childcare or housing costs
- the family has a UC Work Allowance, which depends on having children or a disabled member of the family
- the adult's earnings are such that they are paying Income Tax and National Insurance contributions
- the family is paying Council Tax

5.2 High MDRs and poverty rates

There is an overlap between groups more likely to have high MDRs and more likely to be in poverty. Higher needs leads to higher entitlement to UC – for example having more children or caring responsibilities, or higher housing costs. In turn, this means that, as earnings increase, it takes longer for the UC taper to reduce UC to zero. So it is more likely that the family will still be in receipt of UC when Income Tax and National Insurance start to be paid and it is likely that the overlap will continue for longer. It is these overlaps that lead to high MDRs.

Table 7: High MDRs and poverty rates[9]

Subgroup	% with high MDR	% in poverty
All working age adults	19%	18%
Without children	14%	17%
Lone Parents	46%	38%
In a couple, with children	26%	18%
With 3 or more children	44%	37%
Aged 18-25	30%	23%
Aged 26-65	17%	17%
Housing costs a third of household income[10]	33%	62%
Housing costs < third of household income	17%	13%
With a disability[11]	13%	20%

8 The two-child limit means that support for third and subsequent children is not available if those children were born after April 2017.

9 High MDRs are MDRs of at least 55%

10 Housing costs include mortgage capital repayments. Household income is net income before housing costs.

11 For this analysis, no adjustment is made for the costs of disability and so poverty rates are lower than otherwise

5.3 High MDRs: examples

5.3.1 Cath and Colin (Family C)

2 adults, no children, rent £700pm, council tax £120pm, Cath earns at the minimum wage, Colin is unemployed

If Cath was out of work, Cath and Colin would be entitled to £303 a week of UC (£142 for the two adults and £161 to cover their rent) and £21 per week in Council Tax Reduction. Because they do not have children, they are not entitled to a Work Allowance. So, as soon as Cath starts earnings, their UC is tapered away at a rate of 55% and 20% of the remainder is tapered away in the form of reduced Council Tax Reduction. The combined effect gives Cath an initial MDR of 64%.

By the time, she has reached £233 per week, their Council Tax Reduction has been fully tapered away and her MDR drops to 55%, reflecting just the UC taper. However, at £241 per week, she starts to pay Income Tax and the combined effect of Income Tax, National Insurance contributions and the UC taper gives her an MDR of 67.6%. Even at full-time earnings of 40 hours per week, the family would still be in receipt of UC and so Cath's MDR would still be at 67.6%. She would only escape this high MDR if her earnings exceeded £673 per week and the family's UC was fully tapered away. This would require 59 hours of work per week at the minimum wage and so, in reality, she will not escape an MDR of 67.6%.

Table 8: Cath's Marginal Deduction Rate trajectory

Cath's weekly hours of work	Cath's earnings	Tapers	MDR
0 to 20 hours	£0 to £12,170 per year	UC and CTR tapers	64%
20 to 21 hours	£12,170 to £12,570	UC taper	55%
More than 21 hours	£12,570 and above	Income Tax basic rate, NI contributions, UC taper	67.6%

5.3.2 David and Donna (Family D)

1 child (age 10), rent £800 pm, council tax £120 pm, Donna earns £15 an hour, David receives PIP and works 10 hours a week at minimum wage.

If Donna did not work, they would be entitled to £391 a week of UC (£142 for the two adults, £77 for their child, £184 to cover their rent, less £12 due to the UC taper), less than £1.00 of CTR and an estimated £13 a week in Free School Meals in term time, which is worth £10 a week averaged out over the year.

Because of David's earnings of £114.40 a week, they are already earning more than their family work allowance and so Donna's earnings start to be tapered away at 55% immediately. Alongside that, their CTR is withdrawn at 9p for every £1.00 of earnings, resulting in an MDR of 64%. With a single hour of work, their CTR has been tapered away and Donna's MDR drops to 55%, reflecting only the UC taper. However, once she works 2 hours each week, the family's annual earnings go above £7,400 a year and they lose entitlement to Free School Meals so there is an immediate drop in income of £10 per week.

By the time she is working 16 hours a week, she reaches the Income Tax Personal Allowance and her MDR climbs from 55% to 67.6% due to the combined effect of basic rate Income Tax, National Insurance contributions and the UC taper. It would take until least 60 hours of work each week before she is earning enough that the family's UC is tapered away so the reality is that, at her current wage rate, she will not return to a standard MDR of 28%.

Table 9 Donna's Marginal Deduction Rate trajectory

Donna's weekly hours of work	Donna's earnings	Tapers	MDR
2 hours	£1,400	Loss of Free School Meals	Drop in weekly income of £10
16 hours or less	Below £12,570 per year	UC taper	55%
More than 16 hours	£12,570 and above	Income Tax basic rate, NI contributions, UC taper	67.6%

5.3.3 Ernest (Family E)

1 child, earns £12 per hour, rent £700pm council tax £90pm

If he did not work, Ernest would be entitled to £328 per week of UC – £167 for him and his daughter, and £161 per week to cover his rent – and £16 of CTR. As he starts earning, his work allowance of £93 per week would mean, initially, no withdrawal of UC and so he would face an MDR of 20% as his CTR is gradually reduced. By weekly earnings of £79 (or 7 hours of work), his CTR would have been tapered away and his MDR would drop to zero. By £94 a week (8 hours of work), the UC taper would kick in and his MDR would rise to 55%.

At weekly earnings of £241, or 20 hours of work, he would reach the Income Tax Personal Allowance and the combined effect of the UC taper, basic rate Income Tax and National Insurance contributions would increase his MDR to 67.6%.

In theory, once his UC is tapered away, his MDR would return to the standard rate of 28% (Income Tax + National Insurance contributions). However, this would only take place once his weekly earnings reach £865, or 72 hours of work. So the reality is that, at his wage rate of £12 per hour, he would be on an MDR of 67.6% once he works 20 hours or more.

Table 10 Ernest's Marginal Deduction Rate trajectory

Ernest's weekly hours of work	Ernest's earnings	Tapers	MDR
6.5 hours or less	Up to £4,120 per year	CTR taper	20%
6.6 to 7.7 hours	Between £4,120 and £4,880 per year	None: CTR tapered away and below UC Work Allowance	0%
7.8 to 20 hours	Between £4,880 and £12,570 per year	UC taper	55%
More than 20 hours	£12,570 per year or more	Income Tax basic rate, NI contributions, UC taper	67.6%

5.4 MDRs of 55% and 64%

Adults at the lower end of the high MDRs group (55%) are adults who have no work allowance, a low UC entitlement, and either a zero or low CTR entitlement. Families who fall into this category are generally single and couple adults with no children, zero (or low) housing costs, and low wages (fewer than 20 hours a week on minimum wage).

These families have their UC tapered as soon as they start earning, so move from a 0% MDR to a 55% MDR more quickly than other family types. However, because they receive relatively low levels of UC and it is tapered away relatively quickly, as earnings rise, they remain on this MDR for a relatively short period. Once their UC has been tapered away, they move onto the 'normal' MDR of 28% experienced by those paying the basic rate of Income Tax and not on benefits (see **4.4**).

5.5 MDR of 67.6%

An MDR rate of 67.6% is mostly experienced by working adults with children or disabilities (and hence a work allowance), or who have relatively high housing costs which drive up their UC entitlement. In both cases, the work allowance and/or the high housing costs mean that their UC has not been tapered away by the time they earnings reach the level where they have to start paying Income Tax and National Insurance contributions.

Single people and to some extent couples without children who are not eligible for a work allowance would need relatively high housing costs to reach the Income Tax Personal Allowance whilst still receiving some UC. Once their earnings rise to the point that their UC has been fully tapered away, their MDR will drop back to the 'normal' level of 28%.

Families with children have a work allowance so only need average rates of UC entitlement to remain on the UC taper beyond reaching the point at which they start to pay Income Tax and National Insurance contributions.

Those with some combination of high housing costs, children, and/or disabilities are likely to experience an MDR of 67.6% over a wide range of earnings. For a worker on the minimum wage, it is possible that even at full-time hours, they will still be on the UC taper whilst also paying Income Tax/National Insurance contributions. In this circumstance, their MDR will never drop to 28%.

5.6 Work status and hours

The mechanics of Universal Credit, with a work allowance and taper rate, are designed to incentivise entry into work, and many adults who are currently out of work have an initial MDR of 0% which would continue for a short period after they start working. Out-of-work adults who are not entitled to a work allowance (those who are not disabled and without children) have an initial MDR of 55%, which is equal to the UC taper rate. If they were to enter work on the minimum wage of £11.44 an hour, they would see a reduction to their UC of £6.29 and would therefore only be £5.15 better off for each hour worked.

The political (and policy) narrative around the reduction in the taper rate from 63% to 55% as an incentive for entering work was based on improving this incentive. Instead of only keeping £4.23 of a £11.44 hourly wage, new workers can now keep £5.15. Adults who are already in low-paid work (either due to low wages or low hours) are likely to have much higher MDRs than the 55% UC taper rate, so while the taper reduction is beneficial to them, it is less effective at providing an incentive to take on additional earnings.

5.7 Children, and adults with disabilities

As explained above, adults with children or a disability are entitled to earn a given amount before their Universal Credit starts to be tapered away. This provides a greater incentive for these adults to enter employment. However, the delay before the UC taper rate is applied means that as they approach full time work, if on a low hourly rate of pay (e.g. the minimum wage), they are much more likely to face higher MDRs due to the cross-over with Income Tax and National Insurance payments. Of the 13% of adults shown above who face an MDR of over 55%, 63% are parents or adults with disabilities.

5.8 Housing

Renting a home in a high-cost area of the country can lead to much higher levels of UC Maximum Amount. As earnings rise, it takes longer for all of this UC to be tapered away and therefore there is a stronger likelihood of still being in receipt of UC when earnings rise to the level at which Income Tax and National Insurance contributions start to be paid.

6 Atypical MDR trajectories

The above analysis looks at which types of people and families experience the high typical MDRs. However, as noted in section **4.4**, 22% of working age adults or 8.9 million people experience atypical MDRs. These are MDRs that are not one of the 12 caused by an interaction between the tax-benefit thresholds set out in section **4**. The following section sets out some of the personal circumstances that give rise to atypical MDRs, concentrating in most detail on high MDRs – i.e. those above 55%.

6.1 Student Loan repayments

6.1.1 How Student Loan repayments work

Students attending university in England and Wales are able to take out a loan to cover the cost of their fees and living expenses. These are then paid back directly through wages after the person has left university and started earning a salary above a given threshold.

- For students who took out a loan before 1 September 2012, this salary threshold is £24,990.
- For students who took out a loan after 1 September 2012, this salary threshold is £27,295.[12]
- In both cases, loans are repaid at 9% of any taxable income that falls above the threshold.
- For students who took out a postgraduate loan, the salary threshold is £21,000 and loans are repaid at 6% of any taxable income above that threshold.
- Where a student has taken out both an undergraduate and postgraduate loan, repayments are set at 6% of taxable income above £21,000 and 9% above their undergraduate salary threshold.

The threshold and repayment amount are both calculated based on gross earnings (pre-tax) rather than on post-tax take-home pay. Repayments are not excluded from earned income for the purposes of the Universal Credit means test.

6.1.2 Impact on MDRs

Because of where the thresholds are set, anyone making student loan repayments must also be paying NICs and IT. Because there is no interaction between loan repayments and tax or benefits, the repayment adds an additional 9 percentage points for undergraduate loans to any of the typical MDRs a person might experience. 6 percentage points is added for postgraduate loans, and 15 percentage points is added where a person has both types of loan.

Table 11 Impact of undergraduate student loan repayments on MDRs

Tax/benefit circumstances	Previous MDR	MDR with student loan repayment
Not claiming UC	28%	37%
Paying higher rate Income Tax/NI contributions	42%	51%
On the UC taper and paying basic rate Income Tax/NI contributions	67.6%	76.6%

12 For students who took out a loan after August 2023, the repayment threshold reduces to £25,000, but none of these loans are yet due for repayment (gov.uk, n.d.).

6.2 Childcare costs

6.2.1 Universal Credit

UC covers 85% of childcare costs up to a cap set at £1,014.63 per month for one child and £1,739.37 for two or more children. In order to factor childcare costs into work incentives, we assume that full-time workers require 50 hours of childcare each week and that the UC cap for childcare support would cover 50 hours of childcare. From this, we derive an hourly cost of childcare of £5.49 for one child and £9.42 for two children, of which 85% can be included in a claimant's Maximum Amount. This leaves 15% to be covered by wages and amounts to 82p per hour for families with one child and £1.41 per hour for families with two or more children.

For a minimum wage worker with one child, having to pay 82p an hour for each hour worked represents an additional 7.2 percentage points on their MDR. Having to pay £1.41 an hour for two children represents an additional 12.3 percentage points on the MDR.

Assuming they get UC and pay NICs and IT, their effective MDR would change from 67.6% to **74.8%** (one child) or **79.9%** (two children).

6.2.1.1 Caveats

There are a number of caveats to our assumptions on childcare costs. The first question is whether childcare can be purchased by the hour. In many contexts, childcare can only be purchased by half-day session, and so the hourly costs identified above would in reality be faced in blocks of four or five hours. Also, according to the Coram Family and Childcare Survey 2023 (Jarvie et al., 2023), the cost of 25 hours is slightly more than half of the cost of 50 hours because providers pass on some economies of scale for full-time provision.

Secondly, the UC cap on support for childcare costs implies that the monthly cost of childcare for one child is £1,194 and for two or more children is £2,046 in 2024/25. In 2023, for children aged under two, the average monthly cost of 50 hours childcare was £1,240 in a nursery and £1,074 with a childminder, so the average nursery cost in 2023 was more than the DWP 2024/25 cap. There is substantial variation between regions, with childminder costs in 2023 varying from £907 in the East Midlands to £1,543 in Inner London. So, in many parts of the UK, actual costs exceed the DWP cap.[13]

Whilst the proportion of costs that the DWP meets was increased in 2016 from 70% to 85%, the maximum value of childcare on which that percentage is calculated was fixed between 2005 and 2023 at £760 for one child and £1,304 for two-plus children (The Tax Credits Up-rating Regulations 2005) before being increased by 47% in April 2023 and 6.7% in April 2024, representing a total rise of 57% between 2005 and 2024.

However, whilst the recent increases are welcome, it is important to note that actual costs have risen by more over this period. Comparing the 2008 Childcare Costs Survey (Daycare Trust, 2008) with the 2023 survey shows that nursery costs in England over those 15 years have risen by 82% (under two) and 90% (two and over) whilst childminder costs have risen by 72% (under two) and 75% (two and over).

For the purpose of our modelling, we have assumed that the maximum value of childcare covered by the DWP meets actual costs. If we had assumed higher costs, the effects on MDRs would be greater. Similarly, if the actual costs faced by a family were lower, the effect would be smaller.

6.2.1.2 Three- and four-year olds

The picture is much more complicated for three- and four-year-olds because of provision of a certain number of hours of free childcare, which varies between England, Scotland, Wales and Northern Ireland. In Scotland, there is universal entitlement to 1,140 hours per year, which could be 30 hours over 38 weeks of term time or spread throughout the year. In England, this entitlement is contingent upon working and earning at least the equivalent of 16 hours at the minimum wage but may also be accessed if in receipt of certain benefits. Given the range of policies, we have not attempted to simulate all possible variations of circumstance for childcare of 3 and 4-year-olds.

13 Jarvie et al. (2023)

Because of the provision of free hours of childcare, the total number of hours that parents need to fund is significantly lower than for under-three-year-olds. The average cost of funding 20 hours of childcare (assuming that 30 hours is provided free) is £117.60 in England, £102.37 in Scotland, and £98.79 in Wales.[14] Using a population-weighted average of £115.42 gives an hourly cost of £5.77. 15% of this would not be covered by UC, leading to an hourly cost of 87p per hour. However, this cost would only be faced where more than 30 hours of childcare was needed. In the case of a minimum wage worker on UC and paying Income Tax and National Insurance contributions requiring more than 30 hours of childcare, the effective MDR would rise from 67.6% to **75.2%**.

6.2.2 Tax-Free Childcare

Families not receiving childcare support through UC are entitled to Tax-Free Childcare, which provides a 20% subsidy for childcare costs, up to a limit of £2,000 in subsidy per child per year. Entitlement requires parents to be working and earning at least the equivalent of 16 hours at the minimum wage. Entitlement stops if either parent's income reaches £100,000. (See section 7 for more on this.)

Up to £833 per month, the government covers 20% of the cost through Tax-Free Childcare. Making the same assumptions as above – that the cost of childcare is £5.49 per hour – means that, up to this point, the cost paid per hour is £4.39. After this, the hourly cost goes back up to £5.49. For a worker on the minimum wage (£11.44 per hour), assuming that childcare costs can be paid on hourly basis, this would add 38 or 48 percentage points to the effective marginal deduction rate. Because Tax-Free Childcare, is not available for those receiving childcare support through UC, the base MDR before considering childcare costs is likely to be 28%. Adding childcare costs on an hourly basis creates an effective deduction rate of either **66%** or **76%**.

6.3 Child Benefit and higher earners

Once an adult earns over £50,270, they are subject to a 40% rate of Income Tax and a 2% rate of NI contributions on any additional earnings. The combined effect is to move their MDR from the standard rate of 28% to a new standard higher rate of 42%.

However, higher earners with children will also see their Child Benefit reduced as their earnings rise from £60,000 to £80,000. Based on the income of the highest earner within a family, Child Benefit is reduced by 0.5% for each £100 earned between £60,000 and £80,000. This means that 0.005% of the family's Child Benefit is lost for each £1.00 earned between £60,000 and £80,000 by the highest earner in the family.

Child Benefit is set at £25.60 per week for the first child (£1,331 per year[15]), and £16.95 per week for subsequent children (£881 per year). Thus, the withdrawal for a highest earner with one child is 6.7p per £1.00 earned and an additional 4.4p for each additional child.

This results in additions to MDRs of between 6.7 percentage points for one child and 19.9 percentage points for four children.

Most families in this position are not receiving either UC or CTR and so the base MDR for a person in this earnings range is 42% arising from a 40% Income Tax Rate and a 2% NI contribution rate. Thus, MDRs for people in this position range from **49%** with one child to **62%** with four children.

14 Ibid Jarvie et al (2023)

15 For most calculations in this report, conversions from monthly to weekly are carried out using a factor of 84/365. However, the weekly value of the HMRC's Higher Income Child Benefit Charge is calculated from annual thresholds using a factor of 52 and so this is used in this section.

Table 12 Impact of Child Benefit reduction on higher-rate taxpayers

Number of children	Weekly Child Benefit	Annual Child Benefit	Loss of Child Benefit for each £1.00 earned between £60k and £80k	Addition to MDR	MDR (assuming no UC)
0	£0	£0	0p	0pp	42.0%
1	£25.60	£1,331	6.7p	6.7pp	48.7%
2	£42.55	£2,213	11.1p	11.1pp	53.1%
3	£59.50	£3,094	15.5p	15.5pp	57.5%
4	£76.45	£3,975	19.9p	19.9pp	61.9%

6.4 Higher-rate taxpayers and UC

As mentioned above, it is unlikely that a higher-rate tax payer would also be in receipt of Universal Credit. However, given the freeze in the higher-rate tax threshold, it is possible. A family entitled to a lower work allowance (has children or an adult with a disability and rents their home) with a UC Maximum Amount of UC of at least **£24,983** would not have had their UC fully tapered away by the time family earnings reached the higher-rate tax threshold of £50,270.

Here is one example of how a sufficiently high UC Maximum Amount could be achieved:

- £7,411: Standard Allowance – i.e. for a couple
- £10,910: Child Elements for three children born before April 2017 (so the 2-child limit does not apply)
- £8,400: Rent of £700 per month

A person in this position earning £51,000 would face a combined Income Tax and National Insurance withdrawal rate of 42%. Applying the UC taper to their remaining income would create an MDR of 73.9%.

6.5 Personal allowance withdrawal at £100,000

Most taxpayers only pay Income Tax on income above the Income Tax Personal Allowance, which is £12,570. However, people whose income is above £100,000 see the Personal Allowance withdrawn at a rate of 50p for each £1.00 of income above £100,000. This means each £1.00 of income results in 50p more being taxed at the higher rate of 40%. This adds 20 percentage points to MDRs for people in this position. So, instead of the normal MDR for higher-rate taxpayers of 42%, people with income between £100,000 and £125,140 face an MDR of 62%.

7 Cliff Edges: trajectories that include MDRs > 100%

There are a few places in the benefit system that give rise to cliff edges: points where an increase in earnings will result in a drop in net income. At those points, MDRs are greater than 100%.

7.1 Owner-occupiers on UC with service charges

Owner-occupiers in receipt of UC can claim support for paying service charges through the Housing Element of UC. However, they are not entitled to this support if they have any earnings at all. This means that a single pound of earnings, or a single hour of work, would result in a loss equal to the amount of their service charge.

For a claimant entitled to a Work Allowance (parents and disabled people), they would need to earn as much as their service charge before being better off in work. A claimant not entitled to a Work Allowance would face an MDR of 55% from the first pound of earnings. So, they would need to earn at least 2.2 times the value of the service charge before being better off in work.

7.2 Owner-occupiers whose UC is tapered away

Owner-occupiers who have been on UC for at least three months can receive a loan from the DWP to support their interest payments on a mortgage up to £200,000. Paid directly to the lender, in 2024/25, the payments are worth 3.16% of the outstanding mortgage amount.

However, this support is withdrawn as soon the family's income is high enough that they are no longer entitled to UC. The result is that 'floating off' UC due to working extra hours can leave families having to fund mortgage interest payments, making them feel worse off.

7.3 Scottish Child Payment

Parents who claim UC and live in Scotland are entitled to a Scottish Child Payment of £26.70 per week for each child under 16 years of age. This payment ends if earnings increase to the point that their UC is tapered away.

A claimant who is near the end of the UC taper (i.e. receives a very small amount of UC) and has even a small increase in earnings that reduces their UC award to zero will suddenly find themselves losing all of their Scottish Child Payment. A family with three children stands to lose £80 per week and would need to work more than 7 additional hours of work at the minimum wage to replace the lost income.

7.4 Carer's Allowance

Carer's Allowance is withdrawn from anyone whose net earnings exceed £151 per week, or £7,875 per annum, creating a cliff-edge if earnings rise above this point, resulting in a loss of income of £81.90 per week.

7.5 Free school meals and other 'passported' benefits

Across the nations and regions of the UK, there are different ages up to which all children receive free school meals. For example, in Scotland, these are received up to the age of 9. In Wales, the age limit went up to 11 from 2024/25. In London, it is 11 in 2023/24 and 2024/25. In England, the age limit is 7. In Northern Ireland, there is no universal provision.

Once a child is over the age limit for universal free school meals, provision is means-tested. Under UC, in Scotland, free school meals are withdrawn at £9,552 per annum in net earnings, in England and Wales, the threshold is £7.400 and in Northern Ireland it is £14,000.

Clearly, there is a cliff-edge at this income level for families with children above the age for free universal provision. An increase of a single £1.00 in earnings that takes the family above this income limit results in a loss of the estimated weekly value during term-time of Free School Meals of £13 per child.

In England, free NHS prescriptions are available to families on Universal Credit earning less than £5,220 or £11,220 for families with children or with a disabled adult. Once again, this creates a cliff-edge which is more significant for those with greater health needs. If a person is able to cap their prescription costs with an annual NHS Prepayment Certificate, the increase in costs from going above the relevant salary threshold is £114.50 per year, which is an average of £2.20 per week.[16]

7.6 Adults in the ESA Work Related Activity Group since before April 2017

Until 2017, disabled claimants in receipt of contributory Employment and Support Allowance (ESA) were entitled to extra support through the ESA Work Related Activity Group. From April 2017, new claims were no long allowed.[17] However, those in receipt of this support (or an associated component in legacy benefits before transferring to UC) continue to receive it if they have an unbroken claim since then.

In ESA, work is permitted if average wages are below £183.50 per week *and* weekly hours are no more than 16. So there will be a cliff edge at 16 hours of work for a minimum wage earner. A single additional pound of earnings will result in a loss of £35.95 per week in the Work Related Activity Group element. This requires more than 3 additional hours of work to replace the lost income. For claimants in this position on a higher hourly rate of pay, the cliff edge will happen at fewer hours of work.

7.7 Tax-free childcare for very high earners

As discussed in section **6.2.2**, families not on Universal Credit are entitled to Tax-Free Childcare if neither partner has income of £100,000. What this means is that the childcare subsidy in Tax-Free Childcare, which is worth up to £2,000 per year, is removed as soon as income reaches £100,000.

16 If an annual NHS Prepayment Certificate is paid for by Direct Debit, ten monthly payments of £11.45 are made. So the weekly cost is £2.64 in the ten months in which payment is being made.

17 Severely disabled claimants continued to be able to claim support through the UC Limited Capability for Work-Related Activity Element and the ESA Support Group.

8 Conclusions

8.1 Most claimants on the UC taper face an MDR of more than 55%

The UC taper rate of 55% features prominently in political discussion about how to change the benefit system. However, it is important to recognise that few people actually face an MDR of 55%. Most claimants on the UC taper are also in receipt of Council Tax Reduction or pay Income Tax or National Insurance contributions and so face significantly higher MDRs than 55% (see **Table 6**).

Part of the point of UC was to reduce complexity in withdrawal rates and introduce a simple, single withdrawal rate. The reality is that the single withdrawal rate only applies to the UC part of the tax and benefit system and most claimants face interactions with other parts of the system, which reintroduces complexity. A 'universal' policy such as a single taper rate actually has unequal impacts when these interactions are considered.

Policy implication: Policy design relating to the UC taper should consider explicitly the implications for people who face interactions between the UC taper, Council Tax Reduction, National Insurance Contributions and Income Tax.

8.2 Those who face the highest MDRs are those most at risk of poverty

Poverty rates are much higher amongst the demographic groups most likely to face high MDRs (see **Table 7**). This arises from the fact that these groups are, in general, likely to have higher levels of UC Maximum Amount or Work Allowance and therefore likely to have overlaps between the UC taper and paying Income Tax and National Insurance contributions.

It is notable that the last decade has seen significant reductions in the level of support provided by the benefit system to groups at the highest risk of poverty. These reductions have been delivered through the 2016 to 2020 benefit freeze, reductions in Work Allowances, the freeze in the Local Housing Allowance, and the 2-child limit for support for children. Yet these reductions have not eliminated very high MDRs.

Policy implication: Reducing support for people in need cannot eliminate high MDRs.

8.3 Escaping high MDRs and in-work progression

In theory, once earnings are high enough, a family will have their UC tapered away and will return to a 'normal' MDR of 28% based on paying the basic rate of Income Tax and National Insurance contributions. However, many people with plausible hourly rates of pay will never escape high MDRs even if they work full-time hours (e.g. see section 5.3, **Table 9**, and **Table 10**).

This has an important implication for policies that intend that low earners should increase their hours of work. For many people in this position, with MDRs of 67% or more, the majority of any earnings from additional hours goes to the state and not to them.

Active Labour Market Policies to support people to enter work are designed around the notion of 'Any Job, Better Job, Career' where the first step is to support people into any work at all, even if low-paid, with the expectation that this will lead to a better job and then a career. However, policies for low-paid workers that emphasise increasing hours of work ignore the fact that, for many people, there is little financial return on doing so. Active Labour Market Policies which put more emphasis on enabling low-paid workers to increase their hourly rate of pay are therefore more consistent with the incentives provided by the tax and benefit system.

Policy implication: Active Labour Market Policies to support in-work progression should prioritise enabling low earners to increase their hourly rate of pay, not simply the number of hours of work.

8.4 Reducing the taper

Reducing the taper does provide additional income for people in low-paid work and it does reduce the intensity of very high MDRs, but not by as much as the headline reduction in the taper rate. For example, a five-point reduction in the taper reduces an MDR of 67.6% to 64% because of the interaction with Income Tax and National Insurance contributions.

However, reducing the taper also increases the number of hours of work required to escape high MDRs and increases the number of people who cannot escape high MDRs despite working full-time hours.

8.5 Student loan repayments

Given the size of the student population, and student loan repayment thresholds prior to 2012, it is highly likely that many people on UC will also face Income Tax, National Insurance contributions and student loan repayments. MDRs for people in this group are extremely high and this is particularly the case because deductions from pay for student loan repayments are ignored in the UC income calculation.

Policy implication: Compulsory student loan repayments should be deducted from the income figure used to assess entitlement to UC.

8.6 Owner-occupiers

The system of support for the housing costs of owner-occupiers who are on UC contains two cliff edges: the withdrawal of support to cover service charges as soon as a person earns anything at all and the removal of loan payments to support mortgage interest payments once UC has been tapered away.

Whilst the DWP's private administrative data will be more comprehensive, indications from the Family Resources Survey suggest (albeit with a very small sample size) that the cost of abolishing the rule that any earnings leads to a loss of support for service charges would be very small.

Policy implication: The DWP should estimate and publish the cost of removing the rule that any earnings render a family ineligible for support for service charges.

Support for Mortgage Interest for people on legacy benefits (Income Support, Jobseekers Allowance, Employment and Support Allowance) has a provision that allows people whose income takes them narrowly above entitlement to these benefits to continue to receive these loans. So there is precedent for measures to address the cliff-edge when people's income rises just above this level.

Policy implication: The DWP should explore tapering away the size of loan payments when income rises just above the level at which entitlement to UC ceases to avoid the current cliff-edge.

8.7 Childcare support

Assessing the full range of interactions between parts of the tax-and-benefit system responsible for childcare is extremely difficult given the complexity of the childcare support system. More analysis of these issues is essential. However, it is clear that the failure over the past 15 years to increase maximum childcare costs that can be supported by Universal Credit at the same rate as actual costs have risen has created a situation where effective MDRs for claimants with children under 2 whose costs exceed these limits are likely to be extremely high and a strong disincentive to work.

Policy implication: Increase the maximum amount of childcare that can be supported in UC to where it would have been had it tracked increases in childcare costs over the last 15 years and continue to increase this cap in line with the annual Childcare Survey.

8.8 Removing cliff edges

Despite the introduction of Universal Credit, there remain some areas of the tax and benefit system that produce cliff-edges: situations where an increase in earnings can lead to a reduction in family income. Often, these do not affect a huge number of people but are problematic for those affected. There are a number of points of detail that could address these cliff edges which, if they do not affect large numbers of people, are unlikely to come with significant cost.

8.8.1 ESA Permitted work rules and UC Limited Capability for Work rules

Policy implication: Change the ESA Permitted Work rules from an earnings threshold to an hours threshold.

8.8.2 Scottish Child Payment

When the Scottish Child Payment was set at £10 per child, the size of the cliff edge was small when claimants' UC was tapered away and they were no longer entitled to this payment, although it was larger for families with more children. However, in order to tackle child poverty, the Scottish Government has increased this payment significantly. As the level rises, the size of the cliff edge increases and it becomes more important to tackle this issue.

The obvious solution is to calculate the payment as if it were an increase to Universal Credit so that the payment is subject to a UC-style taper. This will extend the hours of work for which claimants will remain on the UC taper but will avoid a point where an additional hour of earnings results in a loss of income. It will also mean that take-up rates for the Scottish Child Payment are no lower than those of Universal Credit, increasing its effectiveness in reducing child poverty.

Policy implication: Calculate the Scottish Child Payment as if it were an increase in the Universal Credit Maximum Amount. This could be achieved by the Scottish Government receiving an appropriate data feed from the Department for Work and Pensions of UC Maximum Amounts and receipt and then calculating and paying the relevant amount. (Local authorities already receive a similar data feed to enable administration of Council Tax Reduction.)

8.9 Higher rate taxpayers

The analysis shows examples of very high MDRs for higher rate taxpayers – particularly those with children. Whilst there is an argument to say that one should be less concerned about high MDRs for people who are already on high incomes, there are a few points worthy of noting.

Firstly, the higher rate tax threshold has been frozen for a number of years. At a time of high inflation, this necessarily pulls in an increasing proportion of the population into higher MDRs. For example, the Institute for Fiscal Studies has estimated that the proportion of taxpayers paying higher rate tax will have nearly quadrupled between the early 1990s and 2027/28 (Delestre and Water, 2023).

Secondly, it is notable that these high MDRs are much higher than for people on even higher incomes. The general principle of our Income Tax system is progressivity – people on higher incomes pay higher rates of tax – which is why the basic rate is 20%, the higher rate 40%, and the top rate 45%. However, the Higher Income Child Benefit Charge and the withdrawal of the Personal Allowance breach this principle. A fairer way of organising the tax system would be to put the burden of the highest MDRs on the highest paid. It is possible on a revenue-neutral basis to replace these charges with higher rates of tax on the very highest earners or by lower thresholds above which people start to pay the highest rates of tax.

Thirdly, the current system levies the highest burden of MDRs only on people with children. Re-organising the tax system (on a revenue-neutral basis) as suggested in the previous paragraph would remove this unfairness.

Lastly, if people respond to high MDRs by altering their levels of work, it is inefficient to allow such high MDRs to exist as they are likely to distort labour market activity more than is necessary.

Policy implication: Redesign the tax system for higher rate taxpayers so that families with children do not pay higher MDRs than others and so that the highest paid face the highest MDRs.

9 Acknowledgements

9.1 abrdn Financial Fairness Trust:

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abrdn Financial Fairness Trust funds research, policy work and campaigning activities to tackle financial problems and improve living standards for people on low-to-middle incomes in the UK. It is an independent charitable trust registered in Scotland (SC040877).

The Trust was established in 2009 and became Standard Life Foundation in 2017 upon receiving a substantial donation from the unclaimed assets following Standard Life's demutualisation. At this time, its constitution, governance structure and name were all revised to align with this change.

Standard Life plc merged in 2017 to become Standard Life Aberdeen, and in 2021 became abrdn plc. From December 2021 the trust became abrdn Financial Fairness Trust.

9.2 IPPR tax-ben model

The analysis for this report was carried out by using a synthetic family generator written in Python developed by the Policy Evaluation Research Unit at Manchester Metropolitan University and by running datasets created using this generator through the Institute of Public Policy Research (IPPR) Tax-Benefit Model.

The IPPR Tax-Benefit Model is a tax-benefit microsimulation model maintained and developed by the Policy Evaluation Research Unit at Manchester Metropolitan University. It is used by a number of think-tanks to provide analysis of the tax and benefit system, including the Resolution Foundation, Joseph Rowntree Foundation, Legatum Institute, New Economics Foundation, Fraser of Allander Institute, Centre for Social Justice, and the IPPR.

9.3 Manchester Metropolitan University

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10.1 Data sources

10.1.1 Family Resources Survey

Department for Work and Pensions, Office for National Statistics, NatCen Social Research. (2021). Family Resources Survey, 2019-2020. [data collection]. UK Data Service. SN: 8802, **http://doi.org/10.5255/UKDA-SN-8802-1**

10.1.2 Inflation and earnings growth data

Office for National Statistics (ONS) time series D7BT, D7G7, CZBH, K54U, KAC3, CZMP, CZMK, CZML, CZMS, KEF4, CZMR, DOBQ, D7F2, D7DR, KYHM, SGON

10.1.3 Bank of England base rate and average mortgage rates

Bank of England Database (**https://www.bankofengland.co.uk/boeapps/database/**) time series IUDBEDR and CFMHSDE

https://www.bankofengland.co.uk/boeapps/database/fromshowcolumns.asp?Travel=NIxAZxSUx&FromSeries=1&ToSeries=50&DAT=RNG&FD=1&FM=Jan&FY=2007&TD=31&TM=Dec&TY=2022&FNY=Y&CSVF=TT&html.x=66&html.y=26&SeriesCodes=CFMHSDE&UsingCodes=Y&Filter=N&title=CFMHSDE&VPD=Y

https://www.bankofengland.co.uk/boeapps/database/fromshowcolumns.asp?Travel=NIxSUx&FromSeries=1&ToSeries=50&DAT=ALL&FNY=&CSVF=TT&html.x=94&html.y=40&C=13T&Filter=N

10.1.4 Minimum wage

https://www.gov.uk/national-minimum-wage-rates

https://www.gov.uk/government/publications/20-years-of-the-national-minimum-wage

10.1.5 Office for Budget Responsibility (OBR) forecasts

Economic and Fiscal Outlook publication and the publication's Supplementary Economic Tables, all available at: **https://obr.uk/economic-and-fiscal-outlooks/**

10.1.6 Regional rent data

ONS Index of Private Housing Rental Prices

10.1.7 Minimum wage and Eligible Rent forecasts

OBR Economic and Fiscal Outlook Supplementary Economic Tables.
(**https://obr.uk/economic-and-fiscal-outlooks/**)

10.1.8 State Pension Age

https://assets.publishing.service.gov.uk/media/5a7f02e640f0b62305b84929/spa-timetable.pdf

10.1.9 Benefit take-up rates

https://www.gov.uk/government/collections/income-related-benefits-estimates-of-take-up--2

10.1.10 Benefit rates and thresholds

https://www.gov.uk/government/publications/benefit-and-pension-rates-2024-to-2025/benefit-and-pension-rates-2024-to-2025

10.1.11 UK furlough scheme

https://www.gov.uk/government/collections/coronavirus-job-retention-scheme

10.1.12 Tax rates and thresholds

https://www.gov.uk/guidance/rates-and-thresholds-for-employers-2023-to-2024

10.1.13 Scottish tax rates and thresholds

https://www.mygov.scot/income-tax-rates-and-personal-allowances

10.1.14 Council Tax data

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