CAMBRIDGE ECONOMETRICS

Estimating the economic costs of unpaid caring in the UK

The hidden cost of unpaid care: The economic price of locking carers out of work

Final Report

October 2025

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Report summary

This study, commissioned by Carers Trust and funded by the Standard Life Centre for the Future of Retirement, provides an analysis of unpaid carers partial or total disengagement from paid employment. It estimates the resulting impact on the economy, the government's tax revenues and welfare expenditures, and unpaid carers' incomes. Based on these opportunity costs and other existing evidence, a tool has been developed to estimate the return on investment (ROI) of programmes that support unpaid carers into employment.

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CARERS TRUST

Standard Life Centre for the Future of Retirement

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Key findings

Unpaid carers in 2023

There were an estimated 5,954,000 unpaid carers in the UK in 2023, of which:

- 2,673,000 were not working
- 524,000 were not working and of working age who could have been working

Direct opportunity costs of unpaid caring

The opportunity cost of carers being out of the workforce is between £5.4 billion - £16.9 billion, depending on whether it is assumed non-working unpaid carers could earn as much as working unpaid carers or working non-carers. The opportunity cost includes:

- £0.6 billion - £2.8 billion of reduced welfare payments
- £4.6 billion - £10.1 billion of increased household income
- £0.3 billion - £4.0 billion of increased Income Tax and National Insurance contributions

Wider economic costs from reduced income and consumption

There are further indirect costs of unpaid carers being out of work. Increased household income from unpaid carers being supported to work could support household consumption and economic growth in the wider economy, including:

- £2.5 billion - £7.2 billion increase in GVA in the economy
- £170 million - £494 million increased VAT revenue for the Exchequer

Opportunity costs by carer demographics

- Women, particularly those aged 25–64, are more likely than men not to be working due to caregiving responsibilities.
- Men aged 25–64 have the highest opportunity cost of unpaid care (over £40,000 per unpaid carer) when compared to working non-carers. Women of the same age have slightly lower, but still substantial costs (£30,000 per unpaid carer when compared to working non-carers), reflecting both the higher earnings potential of prime working-age individuals and the persistent gender wage disparities.
- Female unpaid carers aged 50–64 could generate £4.8 billion in benefits if working at the levels of non-carers (over four times the gain compared to if they were working at the levels of carers), demonstrating the scale of earnings potential loss due to caregiving responsibilities.

Unpaid carers in work still left behind

Even when working, unpaid carers are more likely to be in lower-paid or less secure jobs, highlighting the structural disadvantages they face in the labour market, which could impact lifelong career progression and earnings. This in turn can impact individuals' pensions later in life.

Young carers

- There were an estimated 70,000 non-working unpaid carers aged 16-24 in 2023 who could have been working.
- The opportunity cost of these young unpaid carers being out of the workforce is between £0.7 billion – £1.1 billion, depending on whether it is assumed they could earn as much as working unpaid carers or working non-carers.
- Evidence from literature suggests that intensive or prolonged care giving responsibilities disrupt education opportunities and negatively impact future employment prospects, with young, female unpaid carers especially vulnerable to working reduced hours or leaving the workforce all together.

Opportunity cost for all non-working unpaid carers aged 16-64

- There were an estimated 1,465,000 non-working unpaid carers aged 16-64 in the UK in 2023.
- If all of these carers were otherwise in employment, the opportunity cost of these non-working unpaid carers being out of the workforce is between £15.3 billion - £47.7 billion, depending on whether it is assumed non-working unpaid carers could earn as much as working unpaid carers or working non-carers.

1 Introduction

An unpaid carer is someone who cares for a family member or friend unable to look after themselves because of a long-term illness, disability, addiction or poor mental health. The time commitments of unpaid carers can vary significantly, and many carers are compelled to take time off from employment to fulfil their caregiving responsibilities. Analysis from the Department of Work & Pensions estimates that there were approximately 540,000 unpaid working age carers in the UK in 2022 who would work if they were not carers (DWP, 2025).

This report, commissioned by Carers Trust and funded by the Standard Life Centre for the Future of Retirement, examines the economic costs of labour market inactivity among unpaid carers in the United Kingdom (UK), and how these costs differ across various demographic groups (by age and sex). These costs include, but are not limited to: foregone earnings, foregone Income Tax and National Insurance contributions, unrealised savings in social security payments, and reduced household consumption and its associated impacts on the wider economy.

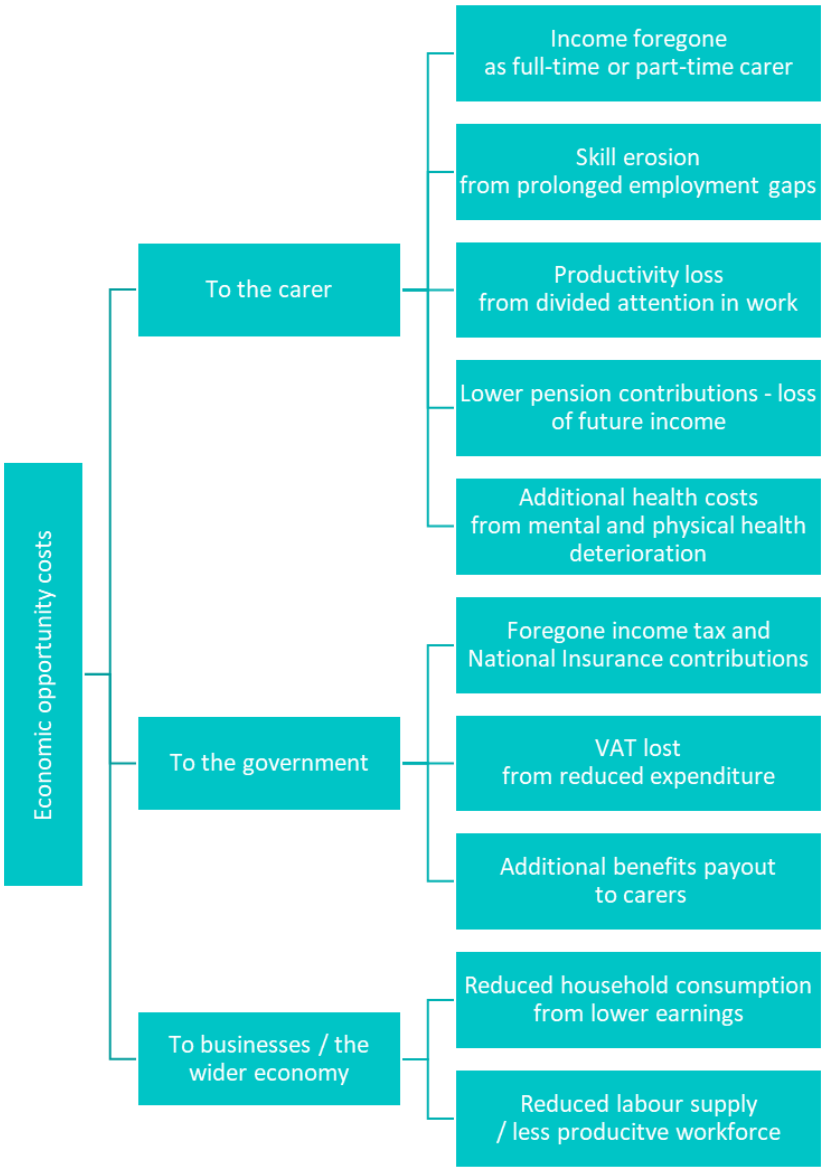
There is a growing demand for social care, stemming from multiple factors, such as increasing poverty, which contributes to poorer health outcomes and greater reliance on support services. Alongside this, more working-age individuals are living with long-term disabilities that require ongoing care, and a rapidly ageing population increases the prevalence of complex health needs and dependence on social care provision. Understanding the costs of unpaid caregiving is crucial, as they are expected to grow over time. This analysis aims to provide insights into the benefits of investing in employability support for targeted groups of unpaid carers. It seeks to present an evidence base to inform and guide the development of effective interventions and policies, by assessing the socioeconomic costs of unpaid carers and the potential return on investment (ROI) of support programmes designed for their benefit.

2 Background

This section outlines approaches used to estimate the economic value and costs of unpaid caregiving in the existing published literature, along with a review of support programmes for carers.

Figure 2.1 outlines potential opportunity costs from unpaid carers being out of work due to their caring responsibilities. In this context, 'opportunity costs' refer to the benefits that are lost when unpaid carers are unable to take up or remain in paid work because of their caring responsibilities. This includes lost income for carers themselves, reduced tax contributions to the economy, increased welfare payments by the government, and the loss of valuable skills that unpaid carers could otherwise bring to the workforce. Figure 2.1 outlines potential opportunity costs from carers being out of employment due to their caring responsibilities, though not all of these costs have been quantified by previous studies or are quantifiable using publicly available data.

Figure 2.1: Potential opportunity costs of unpaid carers



A review of existing literature on the cost of unpaid caregiving has helped to identify:

- three methods of estimating the cost of unpaid caregiving: proxy methods, opportunity cost methods, and qualitative approaches
- the types of costs incurred, including: foregone earnings for unpaid carers; lost tax revenue and increased welfare payments for the Exchequer; and negative impacts on unpaid carers' mental and physical health
- estimated costs incurred by different unpaid carer groups and in different years
- the key demographic characteristics of unpaid carers, including their sex, age, ethnicity, socioeconomic status – example demographic groups include young carers, women, and cohabiting carers
- existing data sources that could support the analysis

We have also identified a range of policies designed to support unpaid carers, including: subsidised care services; financial benefits; workplace flexibility; and mental health resources. Survey studies indicated that these support services helped carers remain in employment and improved their quality of life. However, there are limited quantitative assessments on the impact on employment. Meta-analyses reinforced the benefits of such programmes, but highlighted notable variations in effectiveness depending on location, demographic factors, and the type of support provided.

2.1. Cost estimation

There are many methodological approaches to calculate the value of the time spent by unpaid carers providing care services.

Proxy methods

The proxy method estimates the value of unpaid carers by assigning the cost of a close market substitute to the time spent on informal caregiving, such as the wages paid to professional nurses. The various care duties performed by the unpaid carer are mapped to their corresponding market prices and multiplied by the relevant time units. This method assumes that formal and informal care are perfect substitutes and does not account for the additional satisfaction or utility derived from providing care to a friend or family member.

In the UK, this method has been widely applied in research. For example, Buckner & Yeandle (2015), published by Carers UK, used a cost of £17.20 per hour for home care, based on data from the Personal Social Services database, estimating the economic value of carers' contributions to be £132 billion per year. Using a similar methodology with updated figures for 2021/22, Petrillo et al. (2024) calculated the value of unpaid care to be £184 billion per year.

Opportunity cost methods

The opportunity cost method quantifies the value of income forgone by unpaid carers, by multiplying the market wage rate they would have earned in formal employment by the time spent providing care. This approach requires estimating the market wage rate under a counterfactual scenario, which is typically done by either using the unpaid caregiver's reservation wage or imputing a value based on the known wages of individuals with similar age, education, sex, and other wage determining attributes (Pickard et al., 2017; Brimblecombe et al., 2020; Cartagena-Farias & Brimblecombe, 2023).[1]

Cartagena-Farias & Brimblecombe (2022) estimated an average reduction in earnings of £10,000 per year for female unpaid carers, rising to £12,000 for those with lower qualifications and a higher intensity of caring. While unpaid carers of Asian ethnicity were found to earn £7,500 less per year than their counterparts, the study did not find any significant effect on foregone earnings for black unpaid carers.[2] The study also estimated that unpaid carers were six times less likely than non-carers to be in employment.

The income forgone is then used to quantify the associated costs of unpaid care to the Exchequer. For example, Pickard et al. (2017) estimated the total annual loss to public finances was £2.9 billion, comprising: £1.7 billion in social security benefits paid to individuals who have left their jobs due to unpaid caring and £1.2 billion in taxes forgone on lost earnings. Their analysis also estimated lost earnings by sex and employment status.[3]

Brimblecombe et al. (2020) estimated that the impact of young unpaid carers (aged 16–25) on public expenditure was £1 billion in 2017. This includes: £497 million in foregone tax revenue; £357 million in welfare benefits; and £194 million in additional health service costs. Using regression methods, the authors identified variations in the impact on employment and health outcomes based on sex, ethnicity, educational qualifications, age, marital status, and housing tenure.[4]

Cartagena-Farias & Brimblecombe (2023) estimated the total impact on public expenditure over 2017-20 ranged from £6.1 billion (using a matched sample of unpaid carers and non-carers) to £21 billion (based on an unmatched sample). Hu et al. (2024) estimated that the total cost (the monetary value of the hours spent on unpaid care) of providing informal care to older people (aged 50 and over) in England was £54.2 billion in 2019, using data from the English Longitudinal Study of Ageing and the Health Survey for England.

Qualitative approaches

Other approaches seek to estimate the impact of informal caregiving on wellbeing, factoring in any positive utility derived from providing care. These methods range from self-reported wellbeing assessments to qualitative data collected through interviews and surveys. Researchers have also

[1] Reservation wage in this context refers to the wage that a carer would be willing to accept to provide care services. Contingent valuation methods or conjoint measurement are approaches used to elicit the minimum amount of compensation required to induce the carer to provide an additional hour of service, or alternatively the maximum amount of compensation that a carer will be willing to pay to reduce caregiving services by an hour. These methods can be used to obtain a proxy for the reservation wage, and in practise often involve an experimental setup.

[2] The authors attribute this to potential methodological issues (see discussion on page e6573 in Cartagena-Farias & Brimblecombe [2022]).

[3] Pickard et al. (2017) also estimates the propensity to leave work due to caring using regression methods, considering the carer's gender, ethnicity and age.

[4] A two-part generalised least squares estimation method was used to account for the skewed distribution of the dependent variable.

developed specialised instruments and indices to measure both the subjective and objective costs of informal care, providing a more nuanced understanding of the costs associated with unpaid caregiving.

For example, Lacey et al. (2024) used the General Health Questionnaire (GHQ-12) and the 12-item Short Form Survey (SF-12) from the UK Household Longitudinal Study to examine the mental and physical health impacts of unpaid caregiving in the UK. They reported that psychological distress increased during the transition into caregiving, particularly for: unpaid carers under 64 years of age; those providing care for 20 hours or more per week; and those cohabiting with the care recipient. They found no evidence of differences in impacts between sexes. Similarly, Cartagena-Farias & Brimblecombe (2022) found that caregiving responsibilities were linked to worse mental health outcomes for unpaid carers aged 16-44, and poorer physical health outcomes for those aged 44 and over.

Long-term impact of caring on young carers

A rapidly aging population and increasing incidence and awareness of chronic illnesses and disabilities have led to a rising dependence on informal care, with young unpaid carers facing potentially lifelong challenges. While studies such as Brimblecombe et al. (2020) have tried to quantify the annual opportunity costs for young unpaid carers, there is a lack of research investigating the long-term impact (for example, on lifelong earnings) of caring on young carers in the context of the UK.

Xue et al. (2023) analysed data from the UK Household Longitudinal Study (2009–2020) and found that young adult unpaid carers were significantly less likely to obtain a university degree and enter the labour market compared to non-carers.[5] Heavier care loads (such as more weekly hours or longer durations) were linked to worse outcomes, and caregiving after leaving full-time education further reduced employment chances. Higher education attainment was associated with a smaller employment disadvantage, and female unpaid carers appeared more vulnerable to reducing their work hours or leaving the labour force than young male unpaid carers.

These findings suggest that early caregiving can disrupt critical educational and career transitions, with potential long-term socio-economic consequences.

2.2. Carer support programmes

In response to the scale and impact of unpaid caregiving, governments worldwide have implemented various support programmes: replacement care – such as subsidised formal care services for care recipients; cash benefits; technological tools for monitoring care recipients; workplace initiatives like flexible working and paid care leave; provision of therapy and training programmes; and the creation of support groups. However, quantitative research on the impact of support policies on employment outcomes for unpaid carers remains limited in the UK.

Pickard et al. (2015) examined the provision of support services in the UK and found that they generally improve employment outcomes for unpaid carers. Their study highlighted that home care and personal assistants supported employment for both male and female unpaid carers, while day care and

[5] Unpaid carers cannot claim Carers Allowance if pursuing a full-time degree, with possible implications for their pension, as no contributions are paid during this time. Carer's allowance provides eligible carers in the UK with up to £83.30 a week, if they care for someone for at least 35 hours a week and the cared-for person gets certain benefits. For more details, see https://www.gov.uk/carers-allowance

meals-on-wheels[6] services specifically aided women's employment. Additionally, the study suggested short-term breaks[7] enhanced employment prospects when combined with other services.

More specifically, Pickard et al. (2017) investigated the impact of replacement care using mixed methods. Relying on qualitative interviews and questionnaires, they surveyed unpaid carers in the public sector to explore the causal relationship between caregiving and leaving the workforce. Their findings reinforced the view that support services helped unpaid carers remain in employment by alleviating barriers that would otherwise make balancing work and care responsibilities difficult.

Rand et al. (2020) examined the impact of support services on unpaid carers' quality of life in England through a survey of 31 participants. They identified a significant positive relationship between the cost-weighted utilisation of social care services by care recipients and unpaid carers' quality-of-life scores. However, this effect was dampened by financial difficulties within households, suggesting that those with fewer resources may struggle to afford additional services to address quality-of-life deficits beyond those covered by publicly funded support.

Extensive reviews of evidence on the impact of support services on various aspects of carers' lives are provided by Glendinning (2016), Spann et al. (2020), Spiers et al. (2021), Dixley et al. (2019), and Brimblecombe et al. (2018). These meta-studies consolidated findings from across the world, generally highlighting positive effects of support services on unpaid carers' health, employment, and wellbeing. However, the magnitude of impact varies substantially depending on factors such as region, population, service type, and research methodology.

[6] Eligible households may be provided meal delivery service by the council or other local organisations (https://www.gov.uk/meals-home)
[7] Short-term breaks or respite care refer to services that enable carers to take a break from caring by having someone else look after the cared-for person for a specific amount of time (https://www.nhs.uk/social-care-and-support/support-and-benefits-for-carers/carer-breaks-and-respite-care/)

3 Approach

This section outlines the approach used to estimate the cost of unpaid carers not participating in the labour force, using a tool that has been developed to estimate the return on investment (ROI) of programmes that support unpaid carers into employment. In particular, the tool focuses on estimating the opportunity costs: the unpaid carers' forgone income; the government's foregone tax revenue from unpaid carers not working; and the government's welfare payments to unpaid carers not working. In addition, the tool also estimates the wider economic impact associated with foregone household income (reflecting the foregone household consumption that would have otherwise supported economic growth in the wider economy).

We carry out the analysis by sex and age groups. The necessary data are not available by other breakdowns of demographic characteristics (e.g. ethnicity of the carer) to carry out the analysis by these characteristics. Further analysis that focuses on these characteristics could highlight how costs could further vary by other demographic characteristics other than sex and age.

Appendix A provides an overview of the key data sources used for the opportunity cost estimations in the tool. Throughout this section, the following definitions are used:

- a non-working unpaid carer refers to a caregiver who is not paid for providing care and is currently not working
- a working unpaid carer refers to a caregiver providing unpaid care, while also working
- a working non-carer refers to someone who is working, but not providing unpaid care

3.1. Forgone income from employment

To estimate how much non-working unpaid carers could earn by transitioning into employment, their average earnings are compared to a reference group with similar demographic characteristics. Interventions designed to induce non-working unpaid carers into work may lead to an increase in their earnings corresponding to a working unpaid carer's income. In an optimistic scenario, some interventions may also result in non-working unpaid carers being able to earn as much as working non-carers. To account for these scenarios, both groups (i.e. working non-carers and working unpaid carers) are used to benchmark forgone earnings using data from the Labour Force Survey (LFS).[8]

The weekly earnings gap between non-working unpaid carers and the relevant comparison group is first estimated and then scaled up to estimate annual figures. This assumes that full-time equivalent workers spend 48 weeks working in a year.[9]

3.2. Forgone tax revenue

The tax revenue that could be generated from an unpaid carers' earnings increasing if they join the labour force is estimated by applying average effective Income Tax and National Insurance contributions (NICs) rates to the increased earnings. NICs also impact an individual's entitlement to certain state benefits, most

[8] When analysing LFS data, an unpaid carer is assumed to be one who receives Carer's Allowance, claims Universal Credit due to caring responsibilities or self-reports being out of work and receiving benefits as a carer.
[9] An alternative annual earnings approach directly estimates the differences in average annual earnings. While annual data can also be used to calculate earnings, the weekly data are generally preferred due to more consistent data coverage and better numerical accuracy in the Labour Force Survey.

notably the State Pension.[10] Individuals who have lower NICs and do not receive National Insurance credits for being a carer will have fewer qualifying years for the State Pension, potentially resulting in reduced overall pension income later in life.

The average effective Income Tax and NIC rates are calculated based on marginal tax levels in Scotland and the rest of the UK. The foregone tax revenue is estimated by multiplying the average effective tax rate to unpaid carers' foregone annual earnings and comparing this to the comparison group (i.e. working unpaid carers and working non-carers). The difference between the tax paid by both groups is the government's foregone tax revenue. The potential tax paid by unpaid carers if they were to join the labour force is also subtracted from their gross earnings to estimate their foregone net income.

Note that since benefit payments are not taxed, only income from employment is considered when calculating forgone tax revenues.

3.3. Welfare payment savings

Savings to the Exchequer from reduced welfare payments are estimated based on the annual income from benefits received by non-working unpaid carers. These data are obtained from the Department for Work and Pensions (DWP) Stats-Xplore and provide total income from benefits as a cumulative annual amount, which may include (but is not limited to) amounts receivable from Universal Credit (UC), UC carers' premium and Carer's Allowance.

Table 3.1 presents the assumed average annual income from benefits for individuals classified as 'unemployed' and a 'carer' by age and sex.[11] As per the UC guidelines on standard allowance,[12] households comprising a single individual aged 25 and under may receive lower monthly benefits payments compared to households with individuals over the age of 25. To account for this difference, income from benefits for unemployed carers aged 16-24 years is discounted by 79.2%.[13]

Table 3.1: Annual income from benefits assumption

Age	Sex	Annual income from benefits
16-24	Males	£3,417
16-24	Females	£4,938
25-65+	Males	£4,314
25-65+	Females	£6,235

Source: Stats-Xplore, Cambridge Econometrics calculations

As non-working unpaid carers transition into employment, benefit payments would reduce, which is treated as a saving to the Exchequer. From the unpaid carer's perspective, while earnings increase from working more, this comes at the expense of lower welfare payments. Since UC payments are determined

[10] For more details, see: https://www.gov.uk/national-insurance
[11] Stat-Xplore does not provide an official explanation for this, but this disparity may arise as men tend to spend less time on average caring and therefore are eligible for fewer benefits.
[12] For more details see: https://www.gov.uk/universal-credit/what-youll-get
[13] The discount rate is calculated based on data from Stat-Xplore.

by household earnings, we assume that benefit payments reduce gradually once an individual earns above a certain income threshold. While in reality, this income threshold is case-dependent, we use a monthly value of £684 which is what a beneficiary can expect to earn before payments start to reduce.[14] This can be scaled to an annual income threshold of £8,208. After that point, the benefits reduce by 55p per each additional £1 earned over the threshold until the UC payments reach £0.

3.4. Employment impact

The 2021 England and Wales Census, the 2022 Scotland Census, and the 2021 Northern Ireland Census is used to calculate the number of unpaid carers returning to work.[15] The Census data provide proportion of unpaid carers by age, sex, hours of care provided, and hours worked. These proportions are then applied to the 2023 mid-year population estimates from the Office for National Statistics (ONS) to calculate the total number of unpaid carers and their demographic split in 2023. We restrict our analysis to working age carers, assuming that non-working unpaid carers aged 65 or older (into retirement age) are unlikely to be induced into employment.

Assumptions for the share of non-working unpaid carers that transition to work are applied to the 2023 estimate of total unpaid carers to estimate how many non-working unpaid carers would otherwise work if they did not have caring responsibilities (see Table 3.2).

Table 3.2: Assumptions for employment propensity by caring intensity

	Non-working unpaid carers (16-64) providing between 1-34 hours of care a week	Non-working unpaid carers (16-64) providing greater than 35 hours of care a week
Share of non-working unpaid carers that become employed	50%	25%

Source: Cambridge Econometrics, Carers Trust

We assume that at least half of unpaid carers providing low-intensity care could reasonably be supported to return to work. In contrast, unpaid carers providing higher-intensity care have a lower likelihood of returning to work due to the higher time constraints they face. The opportunity cost of caring for all non-working unpaid carers is presented in Appendix B.

[14] For more details on how wages affect payments, see: https://www.gov.uk/universal-credit/how-your-wages-affect-your-payments

[15] Census data define an unpaid carer as someone who provides help or support to individuals with long-term physical or mental health conditions, illnesses, or issues related to old age. This care is unpaid, not part of paid employment, and may take place either within or outside the carer's household.

For unpaid carers rejoining the workforce, the total impacts on income, tax, and welfare payments are calculated as described below:

- the total additional income gained if the unpaid carer were to work is estimated by multiplying the number of unpaid carers returning to work by the income gained per unpaid carer
- the subsequent total additional tax revenue generated is calculated as the number of unpaid carers returning to work multiplied by the tax and NIC contributions per carer
- the total welfare savings are estimated by multiplying the number of non-working unpaid carers returning to work by the average benefits saved per non-working unpaid carer

3.5. Wider economic impacts

The foregone income that unpaid carers would have otherwise earned working also generates wider economic impacts. These foregone earnings can increase household disposable income and stimulate consumption in the economy. This additional consumption has further knock-on effects in the economy, as increased household spending increases economic activity to respond to higher demand. A so-called Type II multiplier is applied to estimate the broader economic total gross value added (GVA) impact of the forgone earnings. This multiplier is estimated to be 0.513, based on the 2022 UK input-output tables (i.e. for every £1 spent in the economy, an additional £0.51 is generated in the wider economy, for example, through supply chains).

Foregone VAT revenue from the wider economic impacts is estimated by applying an average VAT rate of 6.9%[16] to the wider GVA impacts calculated in the previous step, to estimate additional VAT revenue for the Exchequer.

[16] The average VAT rate is calculated based on the total VAT revenue divided by total GVA in 2023.

4 Results

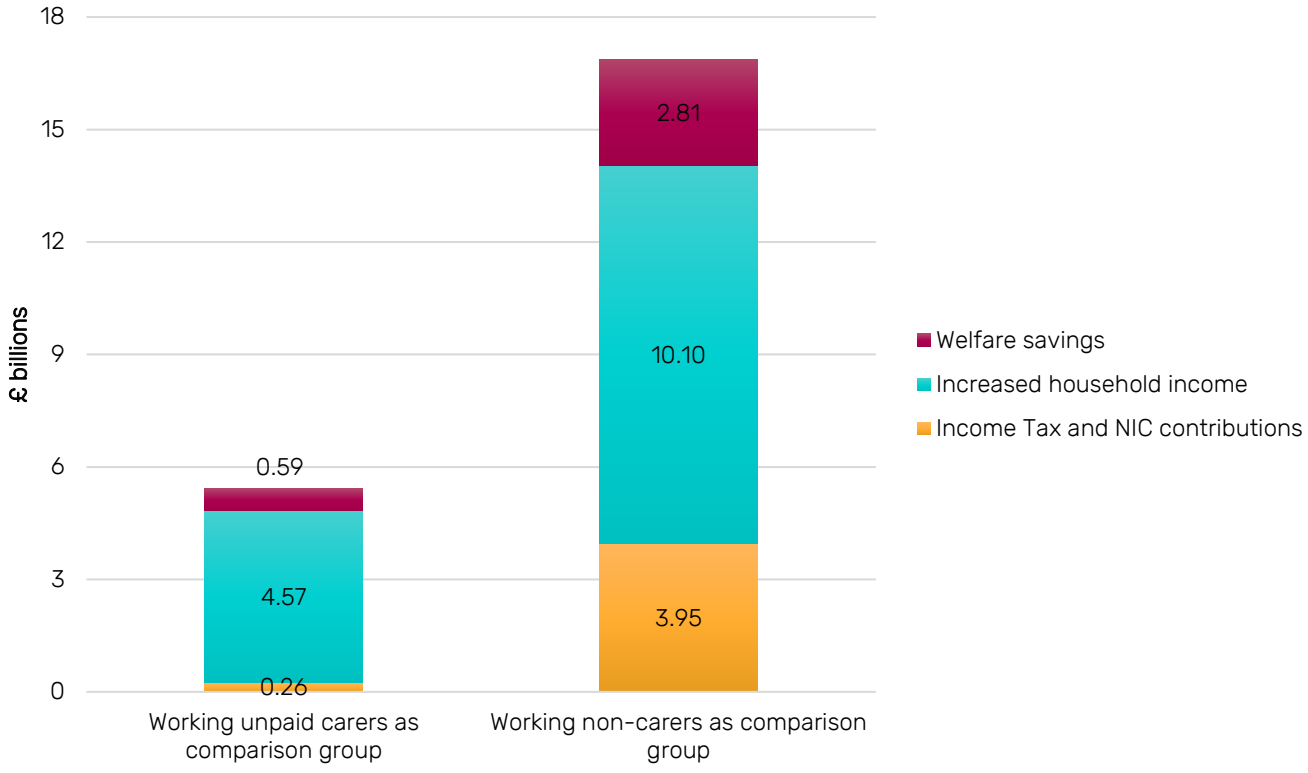
This section presents and discusses the key findings of the analysis, highlighting how the costs of unpaid caring varies across different demographic groups of unpaid carers.

4.1. Summary

The opportunity costs associated with unpaid carers being out of the workforce ranges from £5.4 billion - £16.9 billion, depending on whether it is assumed non-working unpaid carers could earn as much as working unpaid carers or working non-carers. If non-working unpaid carers were employed at the same levels as working non-carers or working unpaid carers, the economy would benefit from a substantial increase in economic activity, household disposable income, and tax revenue, as well as savings from reduced welfare expenditure (see Figure 4.1). The opportunity costs include:

- reduced welfare payments (£0.6 billion - £2.8 billion), easing fiscal pressures
- increased household income (£4.6 billion - £10.1 billion), stimulating consumption and economic growth in the wider economy, as well as increasing individuals' private pension later in life
- increased Income Tax and National Insurance contributions (£0.3 billion - £4.0 billion), strengthening public finances and potentially increasing individuals' State Pension income later in life
- higher labour market participation (520,000 people), boosting economic output

Figure 4.1: Total opportunity costs of non-working unpaid carers



Source(s): Cambridge Econometrics calculations

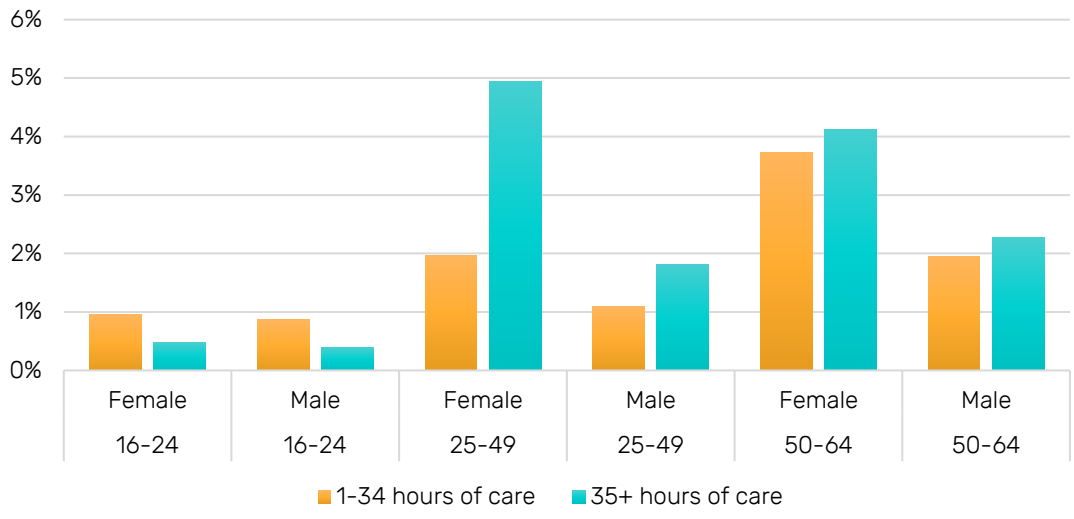
Increased household income from unpaid carers being supported to work could result in additional indirect benefits from an increase in household consumption, supporting economic growth in the wider economy. We estimate these additional indirect benefits to include £2.5 billion - £7.2 billion increased GVA in the wider economy, and £170 million - £494 million increased VAT revenue for the Exchequer, depending on whether it is assumed non-working carers could earn as much as working carers or working non-carers.

The main analysis in this report focuses on the opportunity costs of non-working unpaid carers of working age (16-64) who would otherwise work if they did not have caring responsibilities. If all of the non-working unpaid carers aged 16-64 (an estimated 1,470,000 carers) were otherwise in employment, the opportunity cost of these non-working unpaid carers being out of the workforce is between £15.3 billion - £47.7 billion, depending on whether it is assumed non-working unpaid carers could earn as much as working unpaid carers or working non-carers (see Appendix B for detailed analysis).

4.2. Opportunity costs by sex and age

Figure 4.2 illustrates the share of unpaid carers who are not working in each demographic group (age, sex, and the intensity of caregiving). Individuals providing more intensive care (35+ hours per week) are more likely to be out of work across most age and sex groups. This reflects a fundamental economic trade-off that time spent on unpaid care reduces the ability to engage in paid employment, highlighting the opportunity cost of caregiving. Young unpaid carers (aged 16-24) are likely not to follow this trend, given they are more likely to be providing care alongside being in education and training (and so they are likely not working for that reason).

Figure 4.2: Proportion of unpaid carers not working in each demographic group



Note(s): Proportions are calculated as the share of all unpaid carers in a specified age, sex and intensity of care group not working.
Source(s): Cambridge Econometrics calculations

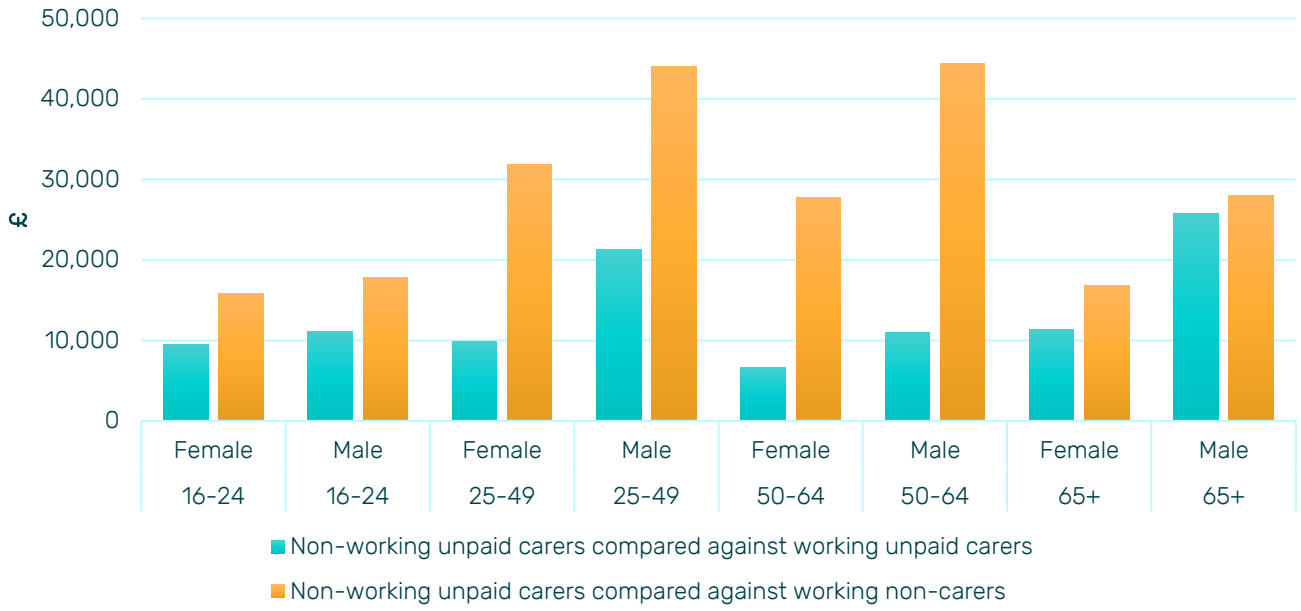
Disparities between sexes are especially pronounced. Women, particularly those aged 25–49 and 50–64, are more likely than men to be out of the labour force due to caregiving responsibilities. For example, nearly 5% of women aged 25–49 who provide 35+ hours of care per week are not working (compared to less than 2% of men in the same group), making them the most affected demographic group. These

patterns contribute to and in turn may be impacted by broader sex inequalities in labour force participation rates.

Age also plays a critical role. While younger unpaid carers (16–24) are the least likely to not be working (perhaps because many are in education or provide lower-intensity care), employment opportunities for older unpaid carers are more likely to be impacted by caregiving responsibilities. This group may be part of the so-called "sandwich generation," balancing care for both aging parents and dependent children, often at the expense of their own careers.

Figure 4.3 illustrates the total opportunity cost per non-working unpaid carer, disaggregated by age and sex. These costs represent the foregone economic value that would have been generated if the unpaid carer was working. The estimates vary depending on the benchmark group used to calculate forgone income (either working unpaid carers or working non-carers). The opportunity costs include lost revenue to the government from Income Tax and National Insurance contributions (NICs) (which in turn could potentially impact individuals' State Pension income later in life, depending on whether they receive National Insurance credits for being a carer), forgone net income for the unpaid carer (which impacts individuals' private pension later in life), and additional welfare payments that the state continues to incur.

Figure 4.3: Opportunity cost per non-working unpaid carer by demographic group under different scenarios



Note(s): The opportunity cost is calculated against two scenarios: 1. Non-working unpaid carers are compared with working unpaid carers; 2. Non-working unpaid carers are compared with working non-carers (an optimistic scenario to reflect non-working unpaid carers being able to earn as much as working non-carers if they were not providing care).
Source(s): Cambridge Econometric calculations

Overall, the data show that the economic return of non-working unpaid carers entering employment is substantial, particularly for those in the 25–49 and 50–64 age groups. Males aged 25-64 have the highest opportunity cost (over £40,000 per unpaid carer) when compared to working non-carers. Females in the same age group see slightly lower, but still substantial costs (approximately £30,000 per unpaid carer when compared to employed non-carers). This reflects the higher earnings potential and productivity of

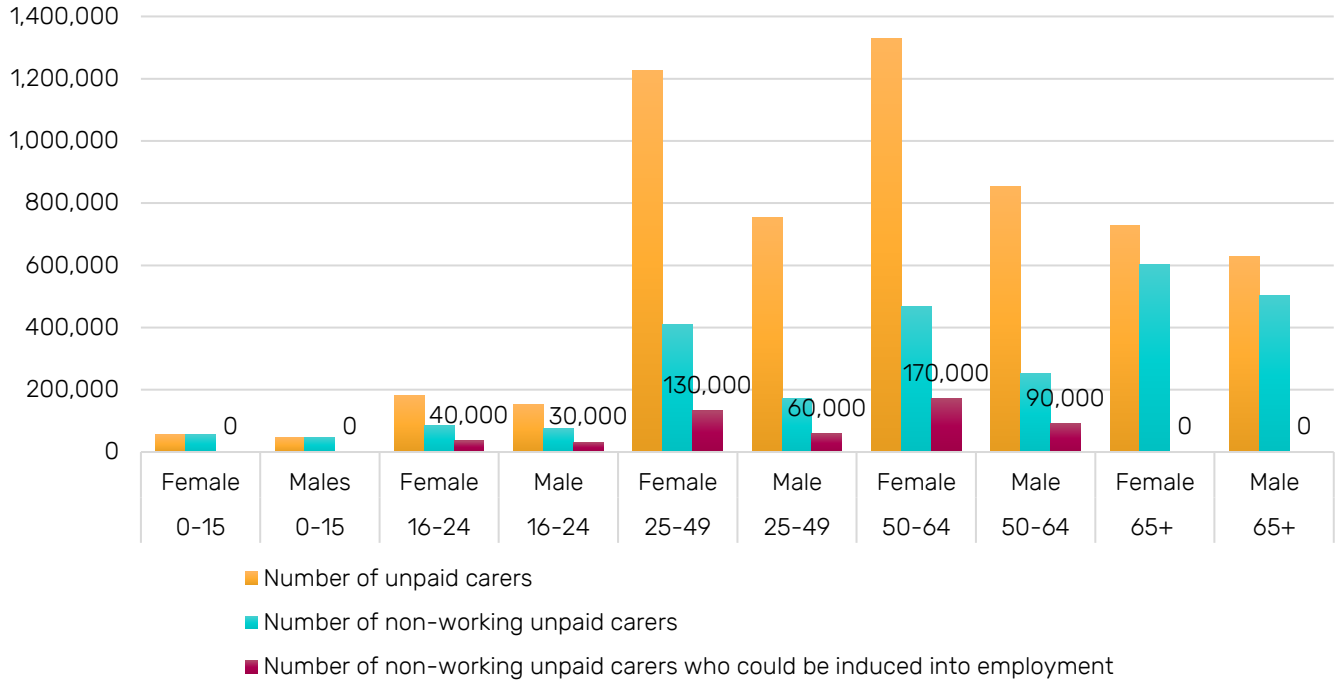
individuals in their prime working years, as well as existing gender pay gaps with women often having a lower economic return from employment than men.[17]

Across all groups, the opportunity costs are consistently higher when non-working unpaid carers are compared to working non-carers rather than working unpaid carers. This suggests that working unpaid carers often have lower-paid or less secure jobs when working, highlighting structural disadvantages they face in the labour market. These opportunity costs can compound over a carer's lifetime, if they continue to provide care over many years. Figure 4.3 shows the impact of unpaid care on the economy at different stages of a carer's life, giving an indication of the scale of the opportunity cost, if they remained a carer for a prolonged period. The opportunity costs for older unpaid carers (65+) remain meaningful, indicating that even part-time employment of older unpaid carers can yield fiscal gains through reduced welfare spending and moderate tax contributions (see Appendix B for the opportunity cost of caring for all unpaid carers, including those aged 65+).

4.3. Estimates of the number of unpaid carers

Figure 4.4 presents the distribution of unpaid carers in the UK by sex and age group, distinguishing between the total number of unpaid carers, the subset of which are not working, and from those who are non-working unpaid carers, those who we assume could be induced into employment. We estimate that there were 5,950,000 unpaid carers in the UK in 2023. Females consistently represented a higher number of unpaid carers compared to males across all age groups, particularly in the 25–49 and 50–64 age groups, where female unpaid carers exceeded one million in each age group.

Figure 4.4: Estimate of the number of unpaid carers



Note(s): The data labels correspond to the breakdown of non-working unpaid carers who could be induced into employment
Source(s): Cambridge Econometric calculations

[17] While there are a number of factors contributing to the gender pay gap, the disproportionate caring expectation of women compared to men is likely to be one of the contributors.

From the total number of unpaid carers, we estimate that there were 2,670,000 unpaid carers who were not working. Among these, the number of non-working carers is also substantially higher for women of working age than men, with more than 400,000 women in the 25–49 group and nearly 500,000 in the 50–64 group.

Based on assumptions in Section 3.4, it is assumed that there are 520,000 unpaid carers of working age who do not work and could potentially work if they did not have caring responsibilities. This estimate aligns closely with the Department for Work and Pensions' (DWP) estimate of 540,000 working-age unpaid carers who are not in employment, and whose caring responsibilities prevent them from working (DWP, 2025). It also provides a more recent assessment than the Pickard et. al (2017) estimate of 345,000 unpaid carers aged 16-64 who have left work due to their caring responsibilities, which is based on 2011 Census data and the 2009/2010 Survey of Carers in Households. Importantly, Figure 4.4 highlights the employment potential of female unpaid carers of working age: 130,000 non-working female unpaid carers aged 25–49 and 170,000 aged 50–64 could be induced into work, figures far higher than their male counterparts (60,000 and 90,000 respectively).

4.4. Total opportunity cost

The total opportunity cost of non-working unpaid carers who would otherwise work if they did not have caring responsibilities is £5.4 billion - £16.9 billion, depending on whether it is assumed non-working carers could earn as much as working carers or working non-carers (see Table 4.1).[18]

Table 4.1: Total opportunity costs by demographic group

Age	Sex	Number of unpaid carers	Total opportunity cost (higher income, higher tax revenues, and welfare savings) (£ millions)	
			Working unpaid carer comparison group	Working non-carer comparison group
16-24	Female	35,000	336.3	561.5
16-24	Male	32,000	353.0	563.2
25-49	Female	132,000	1,303.6	4,217.3
25-49	Male	60,000	1,275.0	2,632.9
50-64	Female	173,000	1,152.7	4,799.8
50-64	Male	92,000	1,008.7	4,090.8
Total	**Total**	**524,000**	**5,429.2**	**16,865.5**

Source(s): Cambridge Econometrics calculations

This opportunity cost is particularly large for women and individuals in their prime working years (25-64). For instance, female unpaid carers aged 50–64 would yield £4.8 billion in total benefits if they were to be employed at levels similar to working non-carers. This is more than four times the gain estimated when comparing them to working unpaid carers (£1.2 billion), demonstrating the large employment gap and earnings potential lost due to caregiving responsibilities. Similarly, females aged 25–49 would contribute

[18] See Chapter 3 for details on approach.

£4.2 billion to the UK economy when benchmarked against working non-carers, highlighting both the large number of unpaid carers in this group (approximately 132,000 carers) and their high productivity potential.

Male unpaid carers, though fewer in number, also represent substantial economic costs. For example, males aged 50–64 would generate £4.1 billion in benefits if they were to be employed at levels similar to working non-carers, compared to £1.0 billion if they were to be employed at levels similar to working unpaid carers.

Notably, even young unpaid carers aged 16–24, though fewer in number (70,000) represent a meaningful cost of over £1.1 billion when benchmarked against working non-carers. Young unpaid carers are likely to face more constrained work opportunities in their career compared to non-carers. As outlined in Chapter 2, young unpaid carers often face barriers accessing higher education and skills development opportunities, which further restricts their earnings potential. The absence of early work experience and lower initial earnings generates a cumulative disadvantage over time (both for the individual and the wider economy) in the absence of any kind of external intervention. These costs may include reduced lifelong earnings, lost productivity, reduced tax revenues, and increased welfare dependencies.

4.5. Additional indirect costs

Increased household income from unpaid carers being supported to work could also support economic growth in the wider economy. Higher incomes will drive higher household consumption, which in turn will increase economic activity in the economy through increased demand for goods and services, resulting in additional indirect impacts. We estimate these additional indirect costs of foregone incomes of unpaid carers who would otherwise work if they did not have caring responsibilities to include £2.5 billion - £7.2 billion in foregone GVA in the wider economy, and £170 million - £494 million foregone VAT revenue for the Exchequer, depending on whether it is assumed non-working carers could earn as much as working carers or working non-carers (see Table 4.2).[19]

Table 4.2: Indirect costs

	Indirect costs (£ millions)	
	Working unpaid carer comparison group	Working non-carer comparison group
Additional GVA foregone in the wider economy from increased incomes	2,478.9	7,203.4
Additional VAT revenue forgone for the Exchequer from wider economic impacts	170.0	494.0

Source(s): Cambridge Econometrics calculations

[19] We do not combine the consumption impacts on the wider economy and VAT revenue with the total opportunity cost (on carers' incomes, tax revenues, and welfare savings), to maintain a clear distinction between the direct impacts (on carers' incomes, tax revenues, and welfare payments) and those arising from secondary (indirect) impacts (GVA and VAT revenues associated with household consumption).

In addition to these wider economic impacts, foregone incomes of unpaid carers who would otherwise work if they did not have caring responsibilities affects individuals' pension later in life. This in turn will have additional indirect costs, including: costs to the government to provide welfare support to these individuals in retirement; and foregone investment in the wider economy that would have been financed by the foregone pension contributions.

5 Conclusion

There are 520,000 unpaid carers currently not working who could be supported back to work if they did not have caring responsibilities.

The opportunity costs of non-working unpaid carers is £5.4 billion - £16.9 billion, depending on whether it is assumed non-working carers could earn as much as working unpaid carers or working non-carers.

The opportunity costs include: reduced welfare payments (£0.6 billion - £2.8 billion); increased household income (£4.6 billion - £10.1 billion); and increased Income Tax and NIC contributions (£0.3 billion - £4.0 billion).

The additional indirect costs of foregone incomes of unpaid carers who would otherwise work if they did not have caring responsibilities includes £2.5 billion - £7.2 billion in forgone GVA and £170 million - £494 million forgone VAT revenue for the Exchequer, depending on whether it is assumed non-working carers could earn as much as working carers or working non-carers.

The findings of this study demonstrate that unpaid caregiving (particularly by women and those aged 25-64) imposes substantial economic costs, both at the individual level and across the wider economy. This not only limits carers' personal income and career progression (and so lifelong earnings potential, including pension income later in life), but it also results in a loss of tax revenue and increased welfare expenditure for the government. Getting non-working carers into employment would yield considerable economic benefits, including higher household incomes, increased Income Tax and National Insurance contributions, and reduced reliance on welfare. These returns are especially pronounced among midlife carers, whose earnings potentials and productivity are at their peak. Even younger (aged 16–24) and older (aged 65+) carers, while representing smaller cohorts, would contribute meaningfully if supported into the labour market through targeted interventions.

These findings highlight an economic rationale for investing in social care and in policies that better support carers' access to employment. Addressing the barriers that keep carers (especially women and midlife individuals) out of the workforce could deliver large returns to both the Exchequer and the economy more broadly. Support and programmes that support 50% of part-time unpaid carers and 25% of full-time unpaid carers who are currently out of paid work into employment could provide a economic boost of up to £16.9 billon. Strategic interventions, such as flexible working arrangements, unpaid carers' leave, affordable care services, and targeted employment support, are essential not only for improving carers' individual wellbeing, but also for unlocking their full economic lifelong potential. In addition, investing in social care could improve the quality of care available and increase the number of available carers, which ultimately can support unpaid carers into employment. Without such measures, economies risk individuals with valuable skills and experience not being able to participate in the workforce, and so they are unable to productively contribute to the economy, because of their unpaid caring responsibilities.

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Appendices

Appendix A. Key data sources

Appendix Table A.1: Key data sources

Variable	Source	Comments
Provision (hours) of unpaid care by: sex; age; economic activity	England and Wales 2021 Census Northern Ireland 2021 Census Scotland's 2022 Census	Data used to estimate hours of work forgone for different demographic groups of unpaid carer[20].
Income earned	Labour Force Survey (Annual Population Survey)	Used to calculate employment income forgone
Effective Income Tax rate for different demographic groups of employees	IFS - TaxLAB: Combined marginal rates of Income Tax and National Insurance contributions, 2024–25	Used to calculate the forgone: government revenue from Income Tax and NICs; and carers' disposable income.
Average Value-Added Tax (VAT) rate	HMRC Annual UK VAT Statistics Office for National Statistics (ONS), specifically: ONS: Gross Value Added at basic prices ONS: Gross National Income	Used to estimate the forgone VAT revenue from carers' forgone disposable income.
Benefit payments to carers	Department for Work and Pensions (DWP) Stat-Xplore[21]: Gross annual income from benefits (Individual Dataset)	Data used to estimate savings in government welfare payments, based on benefits paid to carers. Income from benefits includes, but is not limited to, Carers' Allowance and Universal Credit (previously Income Support).
Type II gross value added multiplier for forgone income (compensation of employees)	Office for National Statistics (ONS) 2022 UK input-output analytical tables	Used to estimate the wider economic impacts of forgone economic output from carers' forgone income.

[20] Note that 2021 is within the COVID-19 period where the amount of unpaid care is likely higher than other periods.
[21] Stat-Xplore provides data relating to a range of different benefits/programmes.

Appendix B. Opportunity cost for all non-working unpaid carers aged 16-64

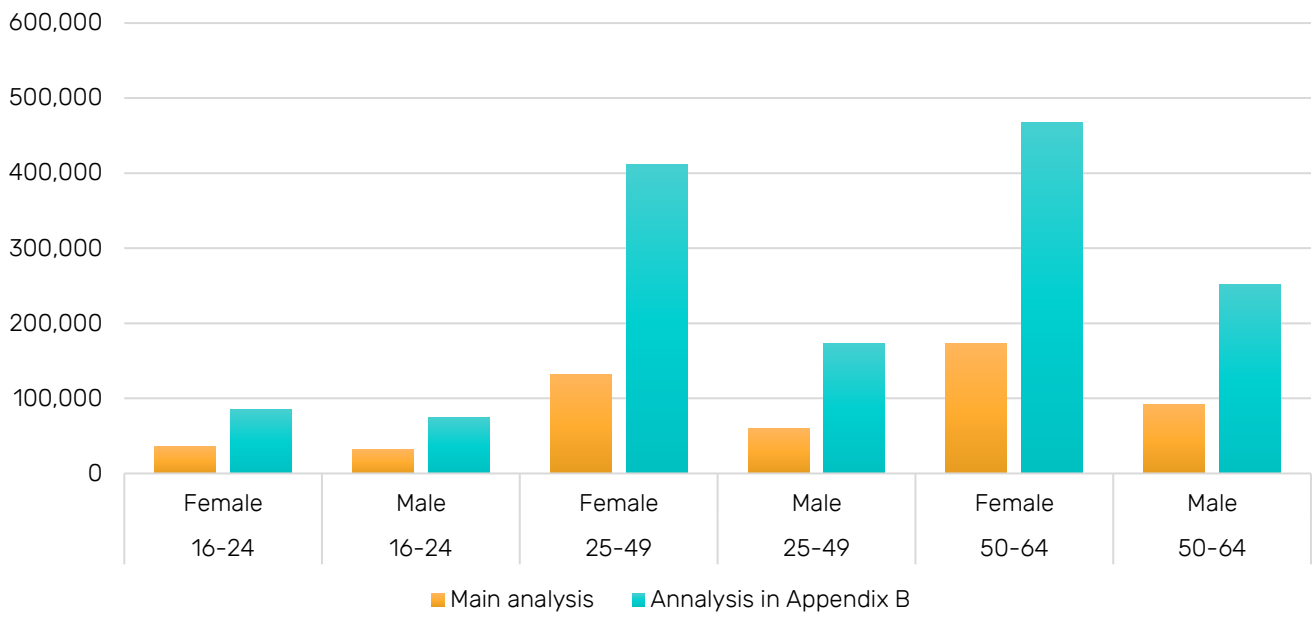
The main analysis in this report focuses on the opportunity costs of non-working unpaid carers of working age who would otherwise work if they did not have caring responsibilities. In order to understand the opportunity cost of all unpaid carers aged 16-64, the analysis in this appendix considers relaxing the assumptions for the share of non-working unpaid carers that become employed to 100% (i.e. we assume all non-working unpaid carers can be gainfully employed, see Table B.1).

Table B.1: Assumptions for employment propensity by caring intensity

Share of non-working unpaid carers that become employed	Non-working unpaid carers providing between 1-34 hours of care a week	Non-working unpaid carers providing greater than 35 hours of care a week
Main analysis	50%	25%
Analysis in Appendix B	100%	100%

Figure B.1 shows the increase in the number of non-working unpaid carers under the new assumptions compared to the main analysis. In total, we estimate 1,470,000 non-working unpaid carers who could be induced to employment under the new assumptions (compared to 520,000 in the main analysis). The opportunity costs under the new set of assumptions are provided in Table B.2.

Figure B.1: Comparison of non-working unpaid carers who could be induced to employment



Source(s): Cambridge Econometric calculations

Table B.2: Total costs of all unpaid carers aged 16-64

	Total opportunity cost and additional indirect costs (£ billions)	
	Working unpaid carers as comparison group	Working non-carers as comparison group
Reduced welfare payments	1.7	7.9
Increased household income	12.8	28.5
Income Tax and National Insurance contributions	0.8	11.2
Total opportunity costs	**15.3**	**47.7**
Additional GVA foregone in wider economy from increased incomes	7.0	20.4
Additional foregone VAT revenue for the Exchequer from wider economic impacts	0.5	1.4

Source(s): Cambridge Econometric calculations