

Economic and social value of the UK adult social care sector: Scotland

Independent research by Alma Economics

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About the authors



Alma Economics combines unparalleled analytical expertise with the ability to communicate complex ideas clearly.

www.almaeconomics.com

About the commissioning organisation

Skills for Care and Development is an Alliance of seven organisations in the UK and Republic of Ireland, that focuses on regulation and workforce development in social care, social work, and early years. The Alliance consists of Skills for Care; Northern Ireland Social Care Council; Scottish Social Services Council; Social Care Wales; CORU; Early Years Alliance and Social Work England.

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Scottish Social Services Council (SSSC) is the regulator for the social work, social care and children and young people workforce in Scotland. The SSSC is also responsible for publishing the official statistics on the sector's workforce. Their work means the people of Scotland can count on social work, social care and children and young people services being provided by a trusted, skilled, confident and valued workforce.

See: www.sssc.uk.com



Northern Ireland Social Care Council (NISCC) is a public body established by the Department of Health to support high quality standards of social work and social care. NISCC helps raise standards in the social care workforce in Northern Ireland.

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Skills for Care is the strategic workforce development and planning body for adult social care in England. They work with employers, Government and partners to ensure social care has the right people, skills and support required to deliver the highest quality care and support now and in the future.

See: www.skillsforcare.org.uk



Social Care Wales is the regulator for the social care workforce in Wales, as well as supporting service improvement in social care.

See: www.socialcare.wales

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Abbreviations

List of acronyms

Acronym	Definition
A&E	Accidents and Emergencies
ASC	Adult Social Care
ASCOF	Adult Social Care Outcomes Framework
ASCS	Adult Social Care Survey
ASC-WDS	Adult Social Care Workforce Dataset
ASHE	Annual Survey of Hours and Earnings
BCR	Benefit-Cost Ratio
DALY	Disability-Adjusted Life Year
EBITDAR	Earnings Before Interest Taxes Depreciation Amortisation and Restructuring or Rents
GOS	Gross Operating Surplus
GVA	Gross Value Added
INA	Immediate Needs Annuities
PAAs	Personal Assistants
PAYE	Pay as You Earn
PSSRU	Personal Social Services Research Unit
QALY	Quality-Adjusted Life Year
SCRQoL	Social Care-Related Quality of Life
WTE	Whole-Time Equivalent

List of definitions

Key term	Definition
Adult Social Care Survey	The Personal Social Services Adult Social Care Survey is an annual survey of all service users aged 18 and over who have received long-term support services in England. The aim of the survey is to understand how effective adult social care services are in supporting their users (NHS Digital, 2023).
Benefit-Cost Ratio (BCR)	The ratio of the estimated value of benefits compared to costs. If the BCR exceeds 1, this indicates that £1 of expenditure returns more than £1 of benefit.
Day care	Care provided for service users in a day care centre (non-residential) or the provision of activities outside the home.
Direct effects	The economic effects created by the operation of the adult social care sector itself. These include the earnings of employees in the sector, the gross operating surplus of independent care providers, and the number of jobs created.
Direct payment recipient	An individual who receives payment from the Government or local authority to pay for their own care, rather than having prescribed care provided to them.
Disability-Adjusted Life Year (DALY)	DALYs measure years lost and years lived adversely due to illness, disability, or injury. One DALY is equal to losing one year of healthy life due to premature death.

Domiciliary care	Care and support provided in a service user's own or family home.
Earnings Before Interest, Taxes, Depreciation, Amortisation, and Restructuring or Rents (EBITDAR)	EBITDAR is a standard measure of operating profitability for the private sector. EBITDAR focuses on a company's main operations, excluding expenses such as taxes, rent, and non-cash expenses. This facilitates comparison across companies as it minimises differences arising from factors not related to the core operations of a company.
Formal carer	Someone employed to provide paid help to adults with disabilities and or physical or mental illnesses.
Gross Operating Surplus (GOS)	The GOS is defined as income minus operating costs. It captures the income generated through profits and rents by independent providers of adult social care after subtracting, for instance, staff costs, costs associated with day-to-day services, and transportation costs.
Gross Value Added (GVA)	The amount of goods and services that have been produced, minus the cost of all inputs and raw materials that are directly attributable to that production.
Independent care	Private and voluntary sector providers of adult social care.
Indirect effects	Indirect are the effects created by the demand for intermediate goods and services by adult social care to provide its services.
Induced effects	Induced are the effects created by changes in the purchasing behaviour of individuals directly and indirectly employed in the adult social care sector.
Informal carer	Someone who provides unpaid help to a friend or family member needing support, perhaps due to illness, older age, disability, a mental health condition or an addiction (Department of Health & Social Care 2018).
Loss ratio	The loss ratio is a term used in the insurance sector, defined as the losses an insurer incurs from paying claims as a percentage of premiums earned. It represents the proportion of the income an insurer gains that is then claimed by insurance customers.
Macroeconomic impact	The macroeconomic impact includes the contribution of the adult social care sector to the economy, including wages of carers and operational profits of providers (direct impact), as well as the demand and income generated in other sectors because of adult social care (indirect and induced impacts).
Non-regulated care	Employers in the adult social care sector which are not subject to inspections or regulation.
Nursing care	Support provided to individuals with a higher level of needs. This support is delivered by specially trained carer and overseen by nurses.
Personal assistants (PAs)	Personal assistants are people hired directly by someone who requires support. They can also be employed by a family member or representative when the person they are supporting does not have the physical or mental capacity to be the employer. A PA works directly with the individual they are supporting in a person-centred way to enable them to live their life according to their wishes and interests.

Private care	Employers in the adult social care sector owned by for-profit private enterprises.
Public care	Employers in the adult social care sector owned and operated by local authorities and the NHS.
Quality-Adjusted Life Year (QALY)	A measure of the state of health of a person or group in which the benefits, in terms of length of life, are adjusted to reflect the quality of life. One quality-adjusted life year (QALY) is equal to 1 year of life in perfect health.
Regulated care sector	Employers in the adult social care sector that are inspected and regulated by the Care Inspectorate Officers.
Residential care	Care provided in a residential setting rather than in a service user's own or family home.
Social Care-Related Quality of Life (SCRQoL)	SCRQoL is part of the Adult Social Care Outcomes Framework (ASCOF) and Adult Social Care Survey (ASCS) captured in metric "1A: Quality of life of people who use services". This measures the care users' reported experience in eight outcome domains covering control, dignity, personal care, food and nutrition, safety, social participation and accommodation.
Socioeconomic impact	The socioeconomic impact includes wider benefits to the society, not captured in the macroeconomic models, such as wellbeing of adults receiving care.
Voluntary care sector	Service providers in the adult social care sector run by not-for-profit organisations.
Whole Time Equivalent (WTE)	A WTE is equal to the hours a person employed full-time would work in a week. While this varies across countries, it is equal to 37.5 hours in Scotland. As a result, a person working 0.5 WTEs works half as many hours as a person employed full-time would (i.e. 18.75 hours per week).

Executive summary

As of 2022, 147,300 people worked in the adult social care sector in Scotland (Scottish Social Services Council, 2022). The sector encompasses a diverse range of services tailored to support adults with care and support needs, spanning across public, private, and voluntary sectors. The demand for social care is expected to grow in the UK overall, as the number of people aged over 85 is projected to grow by 62% by 2037 (Office for National Statistics 2024a). Similarly, the number of people aged over 65 in Scotland is projected to increase by almost a third by mid-2045 (National Records of Scotland, 2023).

Recognising the importance of the adult social care sector, Skills for Care and Development (herein referred to as “the Alliance”) commissioned Alma Economics to analyse the economic and social value of the adult social care sector in the UK and each of the four nations. The findings of this project will be used by the Alliance to inform public policy and improve public understanding, as well as reframe social care as an essential social and economic investment. This report focuses on the adult social care sector in Scotland; the research team has produced separate reports discussing the findings for each of the four nations and the UK overall.

For this research, our team developed two types of models: one focusing on macroeconomic impacts and the other on socioeconomic impacts. The macroeconomic models estimate the contribution of the adult social care sector to the economy, including wages of carers and operational profits of providers (direct impact), as well as the demand and income generated in other sectors because of adult social care (indirect and induced impacts). The socioeconomic impact model includes wider benefits to society not captured in the macroeconomic models, such as wellbeing of adults receiving care. Both models consider a wide range of care settings (e.g. residential) and types of service provision (e.g. local authority), including informal care, across regulated and non-regulated sectors.

The direct impact in 2023, including wages and earnings of employees in the sector, as well as the operating profits of independent care, is estimated to comprise £3.2 billion in Gross Value Added (GVA) and 114,300 whole-time equivalent (WTE) jobs, with a labour productivity of approximately £28,400 per WTE. When informal care was included, the direct GVA is estimated at nearly £17.0 billion, and the number of WTEs at almost 934,700, yielding a labour productivity of £18,200 per WTE.

The research also considered the indirect and induced effects of adult social care. The indirect effect arises from increased demand in other sectors that are part of the adult social care sector’s supply chain, such as personal protective equipment or home adaptations. Both direct and indirect effects lead to a rise in household income across

the economy, driven by increased employment. A portion of this additional income is spent on other goods, which constitutes the induced effect. **The indirect effect, i.e., the value and employment created in other sectors due to the adult social care sector, is estimated at 34,300 WTEs and £900.0 million of GVA in 2023. Similarly, the induced impact, resulting from the additional spending of individuals directly or indirectly employed in the sector, is estimated at 22,900 WTEs and £1 billion of GVA in 2023.**

Overall, the adult social care sector in Scotland is estimated to support 171,400 whole-time equivalent (WTE) jobs and generate £5.2 billion in value when considering direct, indirect, and induced impacts, not including informal care.

The estimated GVA of the adult social care sector represents approximately 2.9% of the total GVA in Scotland in 2023, up from 1.7% in 2016 (ICF, 2018c; Office for National Statistics, 2024b). However, we recommend such direct comparisons be treated with caution, given methodological changes and data quality concerns.

The adult social care sector also creates a wide range of benefits that are not captured in GVA or employment measures, such as the wellbeing of adults receiving care and peace of mind for the general population. To estimate the magnitude of these socioeconomic impacts, we compared the costs and benefits of adult social care to a hypothetical scenario in which the adult social care sector (both formal and informal) ceases to exist. The results of this analysis suggest that the socioeconomic benefits of the adult social care sector in Scotland are £34.1 billion while costing £17.3 billion. This means that for every £1 spent, there are £1.98 in socioeconomic benefits.

1. Introduction

To ensure the sustainability of the sector, Skills for Care and Development has commissioned Alma Economics to analyse the economic and social value of the Adult Social Care sector in the UK and each of the four nations. The project estimated the value of the sector, and the findings will help inform investment cases and policymaking, and enhance public understanding of the sector's importance.

The chapters in this document are: 1. Introduction, 2. Methodological approach, 3. Findings, 4. Technical appendix, and 5. References.

1.1. Background

Skills for Care and Development is an Alliance of seven key organisations in the UK and Republic of Ireland that focuses on regulation and workforce development in social care, social work, and early years. The Alliance consists of Skills for Care; the Northern Ireland Social Care Council; the Scottish Social Services Council; Social Care Wales; CORU; the Early Years Alliance; and Social Work England.

To support the long-term sustainability of the sector, Skills for Care and Development is seeking to build upon the economic information the Alliance have and inform the economic case for investment in the adult social care sector. To that end, Skills for Care and Development commissioned Alma Economics to analyse the adult social care sector's economic and social value in the UK as a whole and in each of the four nations.

The overall aim of the project is to:

- inform the economic case for investment in the social care sector and its workforce in the UK as a whole (as well as having national breakdowns), influencing policymaking and national spending review decisions on investment.
- improve public understanding of the value of the sector, emphasising the importance of investing in social care.

1.2. Structure of the document

This document presents our methodological approach and key findings across the macroeconomic and socioeconomic analysis of the adult social care sector in Scotland.

The document includes the following sections:

- [Chapter 2](#) briefly outlines our methodological approach, including the (i) definition of the sector used; (ii) the groups of interest analysed; (iii) the direct, indirect, and induced effects considered; and (iv) the types of impacts included in the socioeconomic costs and benefits.

- [Chapter 3](#) presents key findings across the macroeconomic and socioeconomic analysis.
- [Chapter 4](#) is the Technical Appendix, detailing our methodology, sources, and assumptions used to arrive at the direct, indirect, and induced value of the sector, as well as the benefit-cost ratio from its operation.
- [Chapter 5](#) presents the sources referenced throughout the report.

2. Methodological approach

Following a thorough desk-based review, we identified key areas of impact of the adult social care sector, used to create two types of models, one including the macroeconomic impacts and another focusing on the socio-economic ones.

In the context of this analysis, adult social care is defined as “*[...] the support provided to adults (both older people and people of working age) with physical disabilities, learning disabilities, or physical or mental illnesses, and their carers. This may include personal care (such as support for eating, washing or getting dressed) or help with domestic routines (such as cleaning or going to the shops) .*” (Foster 2024)

This analysis considers a wide range of care settings (e.g. residential) and types of service provision (e.g. local authority), including informal care, across the regulated and non-regulated sectors.

The macroeconomic impact of the sector consists of direct, indirect, and induced effects. The direct impact has been estimated using the Gross Value Added (GVA), as the total value of wages and earnings of employees of the adult social care sector and the gross operating surplus of independent care providers. We also estimated the socioeconomic costs and benefits of the adult social care sector, encompassing both direct and induced costs, as well as tangible and intangible benefits.

2.1. Overview of the suggested approach

Our methodological approach involved three stages. Initially, we conducted scoping and impact mapping to pinpoint the primary areas of influence and create a comprehensive analysis plan. Then, we constructed an economic model to refine the analysis of direct, indirect, and induced impacts, while also assessing broader and wellbeing benefits. Finally, we compiled the findings into reports for each nation and for the entirety of the UK.

In particular, Phase 2 consisted of:

- Calculating the [macroeconomic impact](#) of adult social care in Scotland using quantifiable impacts. These include direct, indirect, and induced impacts (explained in a following section of this chapter).
- Estimating the [socioeconomic costs and benefits](#) of the adult social care sector in Scotland.
- Creating indicative case studies of interventions and programmes that have proven successful in adult social care (presented in the UK-wide report).

2.2. Sector Definition

Social care does not have an established definition and the range of people's care needs is wider than any definition. For the purposes of this work, we used the following definition: *“Adult social care is the support provided to adults (both older people and people of working age) with physical disabilities, learning disabilities, or physical or mental illnesses, and their carers. This may include personal care (such as support for eating, washing or getting dressed) or help with domestic routines (such as cleaning or going to the shops).”* (Foster, 2024)

The definition may vary depending on the country and context. The Scottish Government defines adult social care as comprising: *“all forms of personal and practical support for adults who need extra support (which also applies to children and young people). It describes services and other types of help, including care homes and supporting unpaid carers to help them continue in their caring role.”* (Jepson, 2020).

2.2.1. Groups of interest

For the purpose of this study, we built on the ICF (2018d) work and defined as part of adult social care the following groups: (i) regulated providers across the private, public, and voluntary sectors; (ii) non-regulated providers; and (iii) personal assistants. However, we recognise that informal care is a significant part of adult social care. To that end, we went beyond the ICF methodology and analysed the economic contribution of informal carers and the financial support provided to them.

We also accounted for different care settings in both the regulated and non-regulated sectors. In particular, we collated data on the following care settings:

- Residential¹
- Domiciliary (or homecare)
- Day care
- Other care settings

2.3. Impacts and approach to quantification

Following a detailed literature and evidence review, we have identified direct, indirect, induced, and wider impacts of adult social care. The direct, indirect, and induced impacts were used to calculate the macroeconomic impact of the adult social care sector in Scotland, while the wider socioeconomic impacts were used in our socioeconomic impact analysis.

¹ There is no separate nursing care provision in Scotland. For the remainder of this report, residential care will represent care homes both with and without nursing.

The subsections below present the impacts we quantified, the indicators used, and the underlying rationale. All figures are reported in 2023 values. Estimates before 2023 were adjusted to 2023 values using GDP deflators.

2.3.1. Gross Value Added (GVA)

Indicators:

- **Wages and earnings** of employees of the adult social care sector.
- **Gross Operating Surplus** to capture income generated by the sector, other than wages.

GVA is the standard metric to estimate the macroeconomic impact of a sector. GVA measures “*The value generated by any unit engaged in production and the contributions of individual sectors or industries to GDP. It is measured at basic prices, excluding taxes less subsidies on products.*” (Office for National Statistics, n.d.). There are alternative approaches to calculating GVA, namely income, expenditure and output approaches. However, based on all ICF reports, the three approaches to calculating GVA would have yielded similar results (ICF, 2018a; 2018b; 2018c; 2018d; 2018e).² As a result, we followed the approach of the KD Network Analytics and Skills for Care (2021) report and Office for National Statistics (2017), and calculated GVA using the income approach (i.e. quantified the total income generated by the sector). We chose the income approach because the required indicators are readily available, consistently defined, and robustly calculated. This facilitated aggregation to the UK level and comparisons across countries.

2.3.2. Labour productivity

Indicators:

- **GVA**
- **Whole Time Equivalent (WTE)**

Productivity is a key metric of macroeconomic value, as emphasised by the Green Book (HM Treasury, 2022). In particular, we focused on labour productivity, which is defined as GVA produced for a given measure of labour. The Office for National Statistics (2023) calculates productivity as GVA per hour worked, per worker, or job. To ensure comparability with previous reports on adult social care (i.e. ICF and KD Network Analytics and Skills for Care reports), we calculated labour productivity as GVA per Whole Time Equivalent (WTE).

² The KD Network Analytics and Skills for Care (2021) report notes that “in theory, and with perfect data, all three methods give the same answer”.

2.3.3. Avoided financial costs to the NHS

Indicators:

- **Hospital admissions**
- **Accidents and Emergencies (A&E) admissions**
- **Discharges from acute care**

The health and social care sectors function complementarily. Care workers play a crucial role in averting hospitalisations and accidents, thereby decreasing emergency admissions. Moreover, social care arrangements facilitate discharges from acute care. As a result, insufficient adult social care capacity would lead to additional NHS costs to accommodate individuals who are medically fit for discharge.

2.3.4. Peace of mind benefits

Indicator:

- **Loss ratio** of providers of private long-term care

Research indicates that individuals who purchase insurance pay higher premiums than the claims they receive (Forder, 2011). This suggests that they must derive other, non-monetary benefits from it. We suggest that individuals accept this monetary cost because they value the peace of mind that insurance offers. Consequently, we can proxy the magnitude of the peace-of-mind benefit by considering the monetary sacrifice individuals are willing to make for insurance. We expect that adult social care also provides peace of mind to the general population by ensuring that support will be available when needed.

2.3.5. Quality of life and wellbeing

Indicators:

- **Social Care-Related Quality of Life (SCRQoL)** as captured in the Adult Social Care Survey: The Green Book emphasises the importance of wellbeing in policy appraisal and evaluations and suggests various metrics (HM Treasury, 2022). Following the KD Network Analytics and Skills for Care (2021) report, we quantified and monetised the impact of adult social care on the Social Care-Related Quality of Life. We used the adjusted SCRQoL, following Forder et al. (2016), to account for (i) external factors that might influence the quality of services and (ii) different preferences across the SCRQoL metrics.
- **Quality of Life Adjusted Years (QALYs)**: Having access to social care substantially decreases the chances of individuals experiencing injuries and falls, thus improving health outcomes of adults in care. These outcomes are commonly measured using quality-adjusted life years (QALYs), representing the additional years in good health gained by individuals receiving care. As per HM Treasury (2022) Green Book guidance, QALYs can be monetised by applying a £70,000 value (in 2020 prices) for each QALY gained. For instance, if an intervention has

been found to create 0.4 QALYs (i.e. 40% of a year in perfect health and wellbeing), that means that the monetary benefit of the intervention is £28,000 in 2020 prices.

2.4. Indirect and induced effects

The adult social care sector generates added value through indirect and induced effects, in addition to its direct economic impact. Indirect effects stem from the demand for intermediary goods and services required by adult social care to deliver its services, such as medical supplies, employee education and training, cleaning services and products, furniture, and household items. Consequently, adult social care stimulates additional employment and Gross Value Added (GVA) beyond its direct contribution. Induced effects arise from the spending on goods and services by individuals employed in the adult social care sector (directly or indirectly).

Both indirect and induced effects were estimated in the form of multipliers, published as a part of an official statistical release on national accounts. These multipliers are then applied to the direct GVA and WTEs, as explained in the Technical Appendix.

2.5. Estimating the socioeconomic impact of the sector

This section outlines the approach used to estimate the economic and social costs and benefits of adult social care in Scotland. Subsection 2.5.1 outlines our methodological approach, detailing both the analytical scenario (i.e. comparison scenario) and the various types of impacts under consideration. Following this, subsection 2.5.2 elaborates on our approach to calculating the costs and benefits included in our analysis.

Our approach accounted for both direct and indirect costs, as well as both tangible and intangible benefits that can arise from the sector. The direct costs concerned the financial investment need for the day-to-day operations of the sector, such as the labour costs of care workers. Indirect costs include non-cash side effects of adult social care that arise indirectly from the operation of the sector and are not part of the operating expenses. In particular, we included the salaries of formal carers that would need to be paid to provide the same level of care currently offered by informal carers. Tangible benefits, such as the reduction of Accidents and Emergencies (A&E) admissions, were quantified and monetised based on avoided costs. Intangible benefits, such as peace of mind benefits, were monetised using evidence from the international literature on people's preferences and willingness to pay for such benefits. In the absence of robust UK-specific evidence, we followed the KD Network Analytics and Skills for Care (2021) report, which also used international evidence to supplement evidence gaps.

2.5.1. Analytical scenario

In order to quantify and assess the costs and benefits associated with adult social care, it was necessary to establish a baseline for comparison. Thus, we conducted a

comparison between the costs and benefits of the adult social care sector and a hypothetical scenario in which both formal and informal adult social care services are absent.

Under this analytical scenario, we anticipated that some individuals would not receive any support, while others would turn to the NHS for assistance that would otherwise be provided by adult social care. Those without support would likely experience adverse health and wellbeing outcomes due to the lack of care, potentially leading to increased injuries or illnesses, as adult social care helps prevent these in the baseline scenario. Those relying on the NHS would place additional strain on the healthcare system, as they would remain within the NHS for care in the absence of adult social care.

2.5.2. Socioeconomic costs and benefits

We considered the following costs and benefits for the baseline scenario where adult social care exists:

Costs:

- Salaries of formal carers: Earnings of people providing formal care.
- Replacement cost of informal carers: The equivalent costs required to provide the level of care offered by unpaid carers.
- Resources spent on the delivery of adult social care: Expenditure on other non-labour costs, such as buildings and land.

Benefits:

- Improved wellbeing due to receiving social care: The improved wellbeing benefit relates to satisfaction with social care services. It captures care users' reported experience in eight outcome domains of control, dignity, personal care, food and nutrition, safety, social participation and accommodation. It does not include the impact of avoiding injuries on wellbeing or quality of life
- Improved health/quality of life due to not getting injured and being hospitalised (prevention): This benefit reflects the impact on quality and quantity of life due to injuries avoided through social care. This does not include the 8 domains mentioned above.
- Increased peace of mind benefits for the general public: The peace of mind benefits concern a different population compared to the previous two. While the aforementioned benefits apply to adults receiving social care, the peace of mind benefits apply to the general public, reflecting the benefit of knowing that adult social care exists if needed (similar to insurance).
- Reduced NHS costs due to prevented hospitalisation and emergencies: As mentioned in the second benefit, adult social care helps prevent injuries. Apart from the impact on health and quality of life of adults in care, this also creates savings for the NHS through avoided hospitalisations.

- Increased efficiency in care provision from adult social care compared to the NHS: There is evidence that adult social care enables medically fit people to leave the hospital. The lack of available adult social care placements is one of the main reasons for delayed hospital discharges. As a result, the existence of the adult social care sector helps free up NHS capacity and could prevent additional discharge delays if sufficient placements were available.

3. Findings

The adult social care sector, covering formal care, in Scotland, creates approximately 171,400 WTEs and £5.2 billion in economic value across direct, indirect and induced impacts (excluding informal care). The calculated GVA is equivalent to approximately 2.9% of the total GVA in Scotland in 2023.

The direct impact constitutes the largest portion of this macroeconomic value, reaching more than £3.2 billion in GVA and 114,300 WTEs in 2023. As a result, each WTE in the adult social care sector creates approximately £28,400 in value. Including informal care in the calculations, the direct GVA increases to almost £17.0 billion, with the number of WTEs rising to almost 934,700 in 2023. Consequently, labour productivity is approximately £18,200 per WTE.

The adult social care sector also creates employment and economic value in other sectors due to the demand for intermediate goods and services (e.g. medical supplies) to provide care (indirect effects). Our analysis suggests that the indirect effects of formal care create 34,300 WTEs in other sectors, generating approximately £900 million in GVA. Furthermore, the spending of individuals directly or indirectly employed in the formal adult social care sector creates additional employment and economic value in other sectors (induced effects). In particular, the induced effects create 22,900 WTEs and generate £1.0 billion in GVA.

The adult social care sector also generates wider impacts on society, beyond employment and GVA. Our analysis suggests that the socioeconomic benefits of the adult social care sector in Scotland are £34.1 billion, while the costs are £17.3 billion. This would imply that for every £1 spent in adult social care in Scotland, £1.98 in benefits are generated.

This chapter presents our findings across the macroeconomic and socioeconomic analyses. A detailed presentation of the underlying methodology and sources is included in the Technical Appendix.

3.1. Macroeconomic impact findings

3.1.1. Formal care

To estimate the total macroeconomic impact due to the operation of the adult social care sector in Scotland, we considered direct, indirect, and induced effects. The following section presents our findings regarding the direct impacts. All figures presented have been rounded, so adding individual lines may not always add up to the quoted total.

Direct impact

The direct impact consists of GVA and employment. GVA was estimated using the (i) wages and earnings of all carers across provision types and care settings; and (ii) the Gross Operating Surplus of private and voluntary residential and domiciliary care providers. The subsection below presents the results for the first component, namely the wages and earnings of carers in Scotland. A detailed explanation of the underlying calculations and assumptions is presented in [section 4.1.1](#) of the Technical Appendix.

Wages and earnings

The results suggest that the total value of wages and earnings in the adult social care sector in Scotland, excluding informal care, is approximately £2.9 billion. Workers in domiciliary and residential care are the biggest contributors to this value, with earnings of £1.4 billion and £1.0 billion respectively.³

Table 1. Income of formal carers in Scotland, million pounds, 2023

Type of care	Local Authority ⁴	Private	Voluntary ⁵	Total
Residential care ⁶	£135.5	£729.6	£146.8	£1,011.9
Domiciliary care ⁷	£423.4	£365.7	£610.8	£1,400.0
Day care ⁸	£58.0	£5.7	£41.1	£104.9
Other ⁹	£208.1	£194.6	£1.9	£404.6
Total excluding personal assistants and informal care	£825.0	£1,295.6	£800.7	£2,921.3

³ All quoted figures relate to social care provided to adults. The Scottish Social Services Council collates data separately for the adult and children's care workforce in the regulated sector. The workforce in the non-regulated sector was also divided between adult and children's care using the assumptions and calculations detailed in the Technical Appendix.

⁴ Includes Local Authority staff for all types of care, as well as staff of Health Boards for adult day care, care homes for adults, and housing support/care at home.

⁵ The earnings of carers in the voluntary sector have been assumed to be equal to the earnings of those in the private sector, following (ICF 2018c).

⁶ All residential and domiciliary care services have been excluded from the non-regulated sector and have been assumed to be regulated in their entirety. This decision is in line with (ICF 2018c) and has been reached following discussion with Scottish representatives and sector experts.

⁷ As in footnote 6, all residential and domiciliary care services have been excluded from the non-regulated sector and have been assumed to be regulated in their entirety.

⁸ The earnings of employees in regulated day care services have been proxied by the average earnings of employees in other care settings. This is due to the fact that day care is not regulated in England, so there are no relevant earnings from England to be used. Additional details are included in the Technical Appendix. As with domiciliary and residential care, day care has been assumed to be entirely regulated.

⁹ Includes adult placement services and fieldwork services for adults and generic provision (regulated) as well as non-regulated providers.

Type of care	Local Authority ⁴	Private	Voluntary ⁵	Total
Personal assistants	Not applicable	Not applicable	Not applicable	£74.4 ¹⁰
Total including personal assistants but excluding informal care	£825.0	£1,295.6	£800.7	£2,995.7

Gross Operating Surplus

The table below presents the results of our analysis of the Gross Operating Surplus of private and voluntary providers by type of care. The results suggest that the total Gross Operating Surplus (GOS) in the adult social care sector is approximately £252.4 million, slightly increased from £251.9 million in 2016 (ICF, 2018c). Residential care providers constitute the vast majority of the total GOS, with £217.1 million.

Table 2. Gross Operating Surplus of private and voluntary providers by types of care, million pounds, 2023

Type of care	GOS
Residential	£217.1
Domiciliary	£35.3
Total	£252.4

Total direct impact

The total direct impact, consisting of GVA and employment, is presented in the table below. In addition, we calculated labour productivity as the ratio of GVA per WTE.

The findings suggest that there are approximately 114,300 direct WTEs in the sector, producing £3.2 billion of direct GVA. As a result, the labour productivity in the adult social care sector is almost £28,400 per WTE.

Table 3. Total direct impact and productivity, 2023

Type of impact	Excluding informal care
GVA (million pounds)	£3,248.1
Number of WTEs	114,300
Productivity (£ per WTE)	£28,400

Indirect and induced impacts

The adult social care sector also creates employment and value in other sectors due to the demand for intermediate goods and services (e.g. medical supplies) to provide care

¹⁰ Personal assistants employed through commissioning organisations are included in the relevant provision types. The remaining personal assistants are hired by direct payment recipients. As a result, we quote only the total figure and do not break this down into private, public, or voluntary provision.

(indirect effects). Furthermore, the spending of individuals directly or indirectly employed in the adult social care sector creates additional employment and value in other sectors (induced effects).

As shown in table 4, there are significant indirect and induced benefits resulting from the operation of the adult social care sector. In particular, the presence of the adult social care sector results in the indirect generation of 34,300 WTEs and £899.6 million of GVA across other sectors. Similarly, 22,900 WTEs are created due to the behaviour of individuals directly or indirectly employed by adult social care (induced), which leads to an additional value of £1 billion.

Table 4. Indirect and induced GVA and employment (excluding informal care), 2023

Type of impact	Indirect	Induced
GVA (million pounds)	£899.6	£1,049.2
Number of WTEs	34,300	22,900

Total macroeconomic impact

The following table summarises the direct, indirect, and induced impacts of adult social care in Scotland. These figures represent the total macroeconomic value of the sector in terms of GVA and employment for the year 2023. The table excludes the contribution of unpaid carers, who are typically family members or friends providing care informally.

As shown below, the existence of the adult social care sector in Scotland creates approximately 171,400 WTEs and £5.2 billion of value across direct, indirect and induced impacts. The estimated GVA is equivalent to approximately 2.9% of the total GVA in Scotland in 2023, up from 1.7% in 2016 (ICF, 2018c; Office for National Statistics, 2024b)¹¹.

Table 5. Direct, indirect, and induced impacts, 2023

Type of impact	Direct	Indirect	Induced	Total
GVA (million pounds)	£3,248.1	£899.6	£1,049.2	£5,196.9
Number of WTEs	114,300	34,300	22,900	171,400

Sensitivity analysis

This subsection presents a sensitivity analysis of the estimates of the gross operating surplus, direct GVA, and total GVA. As described in the methodology section and detailed in the technical appendix, our calculations involve several assumptions. To

¹¹ The latest available official data for GVA estimates is for 2022 (Office for National Statistics, 2024b). To calculate GVA in 2023, we applied the average annual growth rate between 1999 and 2022 (i.e. the complete time series available) to the 2022 estimate.

explore the importance of these assumptions to our final results, we varied one key assumption in our macroeconomic impact calculations.

Similar to the ICF (2018c) report, we explored how sensitive the overall results are to the change in the Earnings Before Interest, Taxes, Depreciation, Amortisation, and Restructuring or Rents (EBITDAR) applied to the output of the independent sector to estimate the GOS. In particular, we first compared the baseline estimates (i.e. the results presented in the previous sections) to the results if we used the EBITDAR from the ICF (2018c) report. This scenario was explored to facilitate comparison with the ICF’s macroeconomic value estimate. As a result, any comparisons with the ICF estimate for 2016 and this report should be made using the “ICF EBITDAR” scenario.

The second sensitivity test was varying the EBITDAR by 20% above and below the baseline estimate. Varying the baseline estimate by a fixed percentage is a common sensitivity analysis technique (e.g. Hamby, 1995), while the magnitude of the percentage was an arbitrary choice.

In summary, to assess the sensitivity of our results to changes in EBITDAR, we calculated the GOS, as well as the direct and total GVA, for 3 alternative EBITDARs: (i) baseline -20%, (ii) baseline +20%; (iii) ICF EBITDAR. The results suggest that the total GVA varies by approximately £81 million in the lower bound and £107 million in the upper bound of our estimates.

Table 6. Total macroeconomic impacts with varied assumptions, million pounds, 2023

Scenarios	GOS	Direct GVA	Total GVA
Baseline	£252.4	£3,248.1	£5,196.9
Baseline - 20%	£201.9	£3,197.6	£5,116.1
Baseline + 20%	£302.9	£3,298.6	£5,277.7
ICF EBITDAR	£319.5	£3,315.1	£5,304.2

3.1.2. Informal care

Informal carers, similar to formal carers, create significant value in the sector. This subsection presents the estimates for direct, indirect, induced, and total macroeconomic impacts, including the contribution of informal carers. In particular, if informal carers were replaced with formal carers, it would cost approximately £13.7 billion to maintain the same level of care, as shown in the table below.

This estimate assumes that the formal staff replacing informal carers would be paid the weighted average annual earnings of all formal carers. To calculate the weighted average annual earnings, we adjusted the earnings of formal carers in each care setting in England to the Scottish context using the Annual Survey of Hours and Earnings. These earnings were then weighted by the number of WTEs in each setting in Scotland

(Skills for Care, 2021; Office for National Statistics, 2022; Scottish Social Services Council, 2023). Additional details are included in the Technical Appendix.

Table 7. Replacement cost of informal carers in Scotland, million pounds, 2023

	Informal care¹²	Total excluding informal care	Total including informal care
Wages and earnings	£13,726.4	£2,995.7	£16,722.1

The table below shows the total direct impacts including informal care. In particular, there are more than 934,700 WTEs in the sector, which would contribute almost £17.0 billion, with a labour productivity of £18,200 per WTE.

The inclusion of informal carers reduces labour productivity, as the replacement cost of one informal carer is assumed to be equal to the earnings of a formal carer. However, one informal carer's WTEs are higher than those of a formal carer. As a result, the nominator of the productivity ratio, i.e. the total GVA including both formal and informal care, will not increase proportionately to the denominator, which is the WTEs of both formal and informal carers.

The WTEs for informal carers have been calculated by applying the hours of care per week from the Carer's Census to the latest estimates of the number of informal carers (Scottish Government 2022, 2023a). The figures for informal carers include a small proportion (approximately 4%) of young carers. These have been included in the calculations as there would still be a cost to replace the level of care they provide, proxied by the earnings of a formal carer. Additional details are presented in the Technical Appendix.

Table 8. Total direct impacts (including informal care), 2023

Type of impact	Excluding informal care	Including informal care
GVA (million pounds)	£3,248.1	£16,974.5
Number of WTEs	114,300	934,700
Productivity (£ per WTE)	£28,400	£18,200

Table 9 presents the indirect and induced impacts with the addition of informal carers. The indirect GVA, including informal carers, is approximately £992.4 million, and the associated indirect WTEs are 59,500. The induced GVA amounts to approximately £1.2 billion, while the induced WTEs are almost 39,600.

¹² The replacement cost of informal carers has been assumed to be equal to the average earnings of all adult social care employees, weighted by the number employed in each care setting and type of provision. This was then converted to a WTE basis using the ratio of WTEs per informal carer.

Table 9. Indirect and induced GVA and employment (including informal care), 2023

Type of impact	Indirect	Induced
GVA (million pounds)	£992.4	£1,157.4
Number of WTEs	59,500	39,600

Finally, the table below collates and aggregates the aforementioned direct, indirect, and induced impacts of the sector, including informal care. In total, the adult social care sector creates more than £19.1 billion of GVA and 1 million WTE jobs.

Table 10. Direct, indirect, and induced impacts (including informal care), 2023

Type of impact	Direct	Indirect	Induced	Total
GVA (million pounds)	£16,974.5	£992.4	£1,157.4	£19,124.3
Number of WTEs	934,700	59,500	39,600	1,033,800

3.1.3. Comparisons with past evidence

Previous attempts have been made to estimate the macroeconomic value of the adult social care sector in Scotland. Most notably, ICF published a report in 2018, using 2016 data.

The box below presents high-level comparisons of findings between this and ICF’s reports. It is important to note that the findings are not necessarily comparable due to differences in (i) data; (ii) methodology; and (iii) other external factors. As a result, we cannot comment on the causes of any changes in figures since 2016, since these are not necessarily attributable to the sector itself.

Our findings suggest that the adult social care sector, covering formal care, in Scotland, creates approximately, 171,400 WTEs and £5.2 billion in economic value across direct, indirect and induced impacts (excluding informal care).

The ICF report estimated that the adult social care sector in Scotland creates approximately 147,300 WTEs and £3.4 billion. The two estimates are broadly comparable as can be seen from the components’ comparison below. In particular, there are small increases in each of the direct, indirect, and induced impacts, which together generate the above difference of approximately £1.8 billion. Part of this difference could be attributed to the increases in the indirect and induced multipliers since 2016, especially the induced employment multiplier (1.5 from 1.34).

We estimated the direct impact at £3.2 billion in GVA and 114,300 WTEs, compared to £2.3 billion GVA and 109,600 WTEs in ICF. As a result, each WTE in the adult social care sector creates approximately £28,400 in value in 2023, compared to £20,800 in 2016. The increase in GVA between 2016 and 2023 is roughly 43%.

Our analysis also suggests that the indirect effects create 34,300 WTEs in other sectors, generating approximately £899.6 million in GVA. The ICF estimates are 21,800 WTEs and £512.1 million respectively, resulting in an increase of approximately 75% in GVA.

Finally, the induced effects in this report were estimated to create 22,900 WTEs and generate £1 billion in GVA. In contrast, ICF estimated the induced impacts to generate 15,900 WTEs and £650 million in GVA. This suggests an increase of approximately 61% in GVA from 2016.

If we look at the percentage differences between our estimates and ICF's, the direct impacts appear to have increased the least and the indirect impacts the most.

3.2. Socioeconomic impact

The second part of our analysis consisted of exploring the costs and benefits of the adult social care sector, compared to a hypothetical scenario where both the formal and informal care sectors cease to exist. Below, we present high level findings from this analysis. Additional details on our sources and methodology can be found in the technical appendix.

3.2.1. Costs

The following table presents the main costs associated with the adult social care sector in Scotland. As indicated below, the total cost of the adult social care sector in Scotland is estimated to be approximately £17.3 billion in 2023. The most significant cost within the adult social care sector is related to the value generated from informal care, which equals the replacement cost (i.e. the cost of paying formal carers to provide the same level of care – £13.7 billion in 2023).

Table 11. Costs due to the operation of adult social care, million pounds, 2023

Salaries of formal carers¹³	£3,051.8
Replacement cost of informal carers	£13,726.8

¹³ Please note that there is a small discrepancy between the total salaries of formal carers in the socioeconomic and macroeconomic models. This discrepancy arises because the macroeconomic impact model uses earnings per WTE, whereas the socioeconomic model uses earnings per person. The total earnings differ because the macroeconomic model calculates earnings per WTE based on care setting and provision type, while the socioeconomic model uses weighted average earnings to determine earnings per person. We chose different earnings measures for each model due to their distinct purposes. The macroeconomic model employs earnings per WTE for a more accurate bottom-up approach. In contrast, the socioeconomic model serves as a legacy tool for projecting future costs and benefits. To this end, using earnings per carer would be more suitable for projections as it allows the application of growth rates of cared-for individuals and carers.

Resources spent on the delivery of adult social care¹⁴	£472.8
Total costs	£17,251.3

3.2.2. Benefits

Similarly, the following table presents the benefits of adult social care. As shown below, the total socioeconomic benefits of the adult social care sector in Scotland, including informal care, were estimated to be around £34.1 billion in 2023. The most significant benefit is the improvement in wellbeing due to receiving social care, estimated at approximately £32.2 billion in 2023. This benefit represents the monetary value that care users would be willing to pay to achieve improvements in outcomes such as safety, personal care, and accommodation (as captured by the SCRQoL). The size of this benefit can be explained from: (i) the magnitude of the impact that care services have on wellbeing; (ii) the monetary value of wellbeing impacts; and (iii) the size of the populations affected (i.e. the entire population receiving unpaid care and those receiving formal care, excluding nursing care who are assumed to have the same wellbeing impact in the NHS as while in adult care).

Table 12. Benefits due to the operation of adult social care, million pounds, 2023

Improved wellbeing due to receiving social care	£32,156.2
Improved health/quality of life due to not getting injured and being hospitalised	£119.3
Increased peace of mind benefits for the general public	£732.0
Reduced NHS costs due to prevented hospitalisation and emergencies	£1,105.9
Increased efficiency in care provision from adult social care compared to NHS	£8.6
Total benefits	£34,121.9

Net benefits and Benefit-Cost Ratio

Overall, the analysis suggests that the benefits of the adult social care sector significantly outweigh the costs. In summary, the operation of the adult social care sector in Scotland creates more than £16.9 billion in net benefits (i.e. total benefits minus total costs). Furthermore, the adult social care sector achieves a Benefit-Cost ratio of £1.98, suggesting that for every £1 spent in adult social care in Scotland, £1.98 of benefits are generated.

¹⁴ Includes non-labour costs such as building costs, oncosts and land costs.

4. Technical appendix

This appendix presents in detail the calculations and data sources used to estimate the macro and socioeconomic impact of the adult social care sector in Scotland. Section 4.1 of this chapter outlines our approach to calculating the macroeconomic impacts. In particular, subsection 4.1.1 explores the direct benefits resulting from the operation of the adult social care sector, namely the Gross Value Added (GVA). Subsection 4.1.2 briefly outlines our approach to calculating the productivity benefits, while subsection 4.1.3 describes our methodology for calculating the indirect¹⁵ and induced¹⁶ impacts of adult social care, consisting of GVA and employment. **The direct, indirect, and induced effects together constitute the total macroeconomic impact of the adult social care sector.** Section 4.2 in this chapter outlines our approach to calculating the wider socioeconomic costs (subsection 4.2.1) and benefits (subsection 4.2.2) of the adult social care sector, as described in the previous chapter.

4.1. Macroeconomic impact

4.1.1. Direct effects

Gross Value Added

To calculate GVA, we summed the total earnings and profits generated by the adult social care sector. This includes:

- **Wages and earnings** of the employees in the regulated and non-regulated sectors, as well as personal assistants and informal carers. We first collated data on the number of jobs and WTEs in the adult social care sector. These were then multiplied by the average earnings per WTE for each type and setting of care.
- **Gross operating surplus** in the independent sector across care settings. Our aim was to capture the additional value generated by the sector due to the profits of private and voluntary providers, apart from wages and earnings. To that end, we applied average profitability ratios (EBITDAR)¹⁷ to the care home and domiciliary care placements provided by the private and voluntary sectors. Day care and any other types of care were not included in this calculation as there is no information available for their profitability.

¹⁵ Indirect are the effects created by the demand for intermediate goods and services by adult social care to provide its services (ICF, 2018a).

¹⁶ Induced are the effects created by changes in the purchasing behaviour of individuals directly and indirectly employed in the adult social care (ICF, 2018a).

¹⁷ Earnings Before Interest Taxes Depreciation Amortisation and Restructuring or Rents (EBITDAR) is a standard measure of operating profitability for the private sector (CMA, 2017).

Detailed technical discussion

1. Number of jobs and WTEs

We used Scottish Social Services Council (2023) estimates for the number of employees in the regulated sector in 2022. These were then projected to 2023 using the average annual growth rate of carers in each care setting between 2009-2022, shared by the Scottish Social Services Council. The total number of jobs in non-regulated services in Scotland was calculated by multiplying the number of non-regulated service sites by the number of posts/WTEs per site in England due to the lack of Scotland-specific data. The number of non-regulated service sites was estimated by: (i) identifying relevant Standard Industrial Classification (SIC) code classes¹⁸ in the Inter-Departmental Business Register, (ii) multiplying the above by the share of sites offering adult social care using the Adult Social Care Workforce Dataset (ASC-WDS), and (iii) subtracting from the above the number of regulated sites¹⁹ (Office for National Statistics, 2021; Skills for Care, 2021; Care Inspectorate, 2022).²⁰ The results of this calculation suggest there are approximately 200 non-regulated service sites in Scotland in 2023.

The number of informal carers in Scotland was taken from the Scottish Government (2022) statistics. To calculate the WTEs, we used evidence from the Carers' Census (Scottish Government, 2023a) showing the share of surveyed carers providing up to 19, up to 49, and over 50 hours of unpaid care per week. We then assumed the sample in the Census is representative of the entire informal care population and applied the breakdowns by hours of care to the total informal care population (including a small number of young carers, as mentioned in the findings section).

To estimate the actual income of informal carers (used in the socioeconomic analysis covered in 4.2.1), we calculated separately the number of informal carers claiming Carer's Allowance using Department for Work and Pensions (2024) benefit statistics. While Carer's Allowance is not explicitly exclusive to informal carers, the criterion of maximum net income of £139 per week makes it unlikely that a significant number of claimants are formal carers, given their gross weekly income is £393 (Office for National Statistics, 2022). As a result, we assumed that all claimants of Carer's Allowance are informal carers receiving support from local authorities.

To calculate the number of personal assistants in adult social care, we leveraged analysis done by Skills for Care (2023), showing the share of individuals employing

¹⁸ Following ICF (2018c), we included SIC 87: Residential care activities and SIC 88: Social work activities without accommodation.

¹⁹ These include sites exclusive to older people. However, we know that a significant number of people receiving adult social care have increased needs. As a result, we have also included sites that support individuals with learning disabilities, mental health problems, and physical or sensory impairments.

²⁰ The number of regulated care sites was calculated as the sum of care homes for learning disabilities, mental health problems, older people, physical and sensory impairment as well as support services for care at home and for care other than care at home.

personal assistants (PAs) directly (as opposed to employing through registered providers). This estimate was then multiplied by the number of individuals receiving direct payments to get to the number of people directly employing PAs (approximately 3,100 people) (Public Health Scotland, 2022). Lastly, we multiplied the result by the average number of workers per employer, as per the aforementioned Skills for Care report.

2. Wages and earnings

Earnings for the regulated sector in Scotland are collated in the Annual Survey of Hours and Earnings (ASHE) (Office for National Statistics, 2022). However, the ASHE does not include self-employed workers or those in non-Pay as You Earn (PAYE)²¹ registered jobs. As a result, we followed ICF (2018c) to proxy earnings in the Scottish regulated and non-regulated sector using data from the respective sectors in England, as described below:

- We calculated the average earnings in the adult social care sector in Scotland and in England using the Annual Survey of Hours and Earnings (Office for National Statistics, 2022). The results suggest that care workers and home carers across seniority levels in England earn £418 gross, per week, compared to £465 in Scotland.
- We calculated the ratio of the above-average earnings.
- The ratio was multiplied by the earnings in regulated and non-regulated settings in England. The earnings in the regulated sector were sourced from the ASC-WDS, while earnings for the non-regulated sector were provided by Skills for Care.

We recognise the limitations of this approach, given the significant regulatory differences between England and Scotland. For instance, we understand that housing support and adult day care services are considered care services in Scotland but not in England. To that end, we discussed the best approach with Scottish representatives. We ultimately decided to follow ICF (2018c), excluding all domiciliary and residential care services from the non-regulated sector.

The earnings estimate for the formal sector employees was also used to calculate the value of informal care. In particular, we used the average earnings of employees in the formal sector, weighted by the number of employees in each setting, as a proxy for the compensation that formal carers would receive to offer the same quantity of care. This was then converted to a WTE basis using the ratio of WTEs per informal carer. Finally, we applied this average to the hours of unpaid care provided by informal carers (Scottish Government, 2023a). Any benefits or allowances received by informal carers

²¹ Pay As You Earn (PAYE) is HM Revenue and Customs' system to collect Income Tax and National Insurance from employment. Employers with no employees earning £123 or more a week, getting benefits, or having another job or pension are not required to register in PAYE.

were not included in the direct economic contribution, as we were interested in the value of the output produced by informal carers.

3. EBITDAR

Following the KD Network Analytics and Skills for Care (2021) report, we combined various sources to estimate the EBITDAR in residential, nursing, and domiciliary care settings. In particular, we first created a time series for EBITDARs using the following sources:

- EBITDARs from 2012 to 2016 are taken from Competition & Markets Authority (2017)
- EBITDARs for 2017 and 2019 are taken from the National Audit Office (2021).
- EBITDAR for 2018 has been imputed from KDNA in the KD Network Analytics and Skills for Care (2021) report.

We then calculated the average annual growth rate of EBITDARs from the time series described above, and applied this growth rate to the latest available data to project the EBITDARs to 2023.

Output of the independent sector

To calculate the Gross Operating Surplus, we multiplied the EBITDAR for the domiciliary and homecare settings, calculated in the previous step, by the output of the private and voluntary sector in the respective care settings. The output was calculated by multiplying the number of occupants in private and voluntary residential and domiciliary care settings by the respective unit costs of care, including establishment costs, personal living expenses, and external services. Due to the lack of Scotland-specific data, we used unit cost information for England, taken from the Personal Social Services Research Unit (2021) and the Homecare Association (2023). These costs were then adapted to the Scottish context using the Annual Survey of Hours and Earnings. Lastly, we multiplied the respective unit costs by the number of adults in independent provision care homes and domiciliary care in Scotland (Public Health Scotland, 2023; 2022a).

4.1.2. Productivity

Following ICF (2018d) we calculated labour productivity as GVA per WTE. GVA, including the contribution of informal carers, was calculated as a standalone benefit, while WTE was an intermediate output in the calculation of GVA. These indicators were then divided to calculate labour productivity.

4.1.3. Indirect and induced impacts

The indirect and induced impacts on GVA and employment were estimated using impact multiplier tables. Type I multipliers were used to estimate the indirect impacts on employment and GVA, while Type II multipliers were used for induced impacts. The Scottish Government produces its own Input-Output tables, including both Type I and Type II GVA and employment multipliers (Scottish Government, 2023b). Both Type II

multipliers were applied to the direct and the indirect GVA and employment, excluding the contribution of informal carers.

In both the indirect and the induced impact, we have not included the contribution of informal carers as calculated in the direct impact. This is because indirect and induced impacts are created from realised spending, which cannot be achieved by the value of replacing informal carers with formal care staff (i.e. our proxy for their direct impact). As a result, to estimate the indirect and induced impact of informal carers we used Carer's Allowance payments, as these are realised earnings that could be spent and affect other sectors. The number of Carer's Allowance recipients and the amount claimed have been calculated using DWP data, as described in an earlier section (Department for Work and Pensions, 2024).

4.2. Socioeconomic impacts

4.2.1. Costs of Adult Social Care

Below, we present our approach to calculating the socioeconomic costs of the adult social care sector.

Salaries of formal carers

One of the main costs of the adult social care sector is the salaries of formal carers. We included the earnings of carers in both the regulated and non-regulated sectors and across the public, private, and personal assistant sectors. These were estimated as described in subsection 4.1.1 during the calculation of the macroeconomic impact of the sector. In summary, the earnings of employees in the regulated sector were sourced from the ASC-WDS and adapted to the Scottish context using the ASHE, as described in the wages and earnings section of the macroeconomic impact analysis (Skills for Care, 2021; Office for National Statistics, 2022).

Replacement cost of informal carers

We understand that informal carers make up a significant share of the adult social care service provision. As a result, we included their contribution both in the costs and benefits of the sector. To calculate the costs due to the existence of informal care, we replicated the approach described in subsection 4.1.1 of the macroeconomic analysis. In particular, we used the average earnings of employees in the formal sector, weighted by the number of employees in each setting. This figure was assumed to be equal to the value created by each informal carer and was then converted to a WTE basis using the ratio of WTEs per informal carer. The earnings were then multiplied by the number of WTEs that informal carers provide, as captured in the Carers Census (Scottish Government, 2023c). This means that informal carers create value equal to the earnings that formal carers would make to provide the same level of care.

Resources spent on the delivery of Adult Social Care

Apart from labour, the adult social care sector requires several other inputs. As a result, we have accounted for additional non-labour cost elements involved in the provision of adult social care. In particular, we used unit cost estimates from the Personal Social Services Research Unit (PSSRU) for items such as buildings and oncosts, and land costs (Personal Social Services Research Unit, 2021). These costs were again adapted to the Scottish context using the ASHE, as described in the wages and earnings section of the macroeconomic impact analysis.

We recognise that using unit costs for large-scale interventions does not represent best practice in estimating total costs, as costs are not always linear. This means that the cost of providing care for the first adult is not necessarily the same as the cost for the 100th adult. This is because services, programmes, or interventions can exhibit economies of scale or diminishing returns. However, at the time of writing, the PSSRU unit costs represented the best available evidence.

4.2.2. Benefits of Adult Social Care

This section includes our approach to quantifying and monetising socioeconomic benefits. In particular, we included: (i) quality of life and wellbeing impacts, (ii) peace of mind benefits, and (iii) avoided costs to the NHS.

Avoided costs to the NHS

1. Hospital admissions

Adult social care helps reduce the need for hospitalisation by offering care services. In the analytical scenario without adult social care, we expect an increase in hospitalisations. To estimate the share of hospital admission costs that are avoided through social care, we used evidence from Bakx et al. (2020), showing that a care home admission in the Netherlands reduces the probability of hospital admission by 28%. We then applied this coefficient to the number of admissions from adults receiving adult social care in the baseline scenario. To calculate how many adults from adult social care are hospitalised, we leveraged research by Smith et al. (2015), showing that 8.2% of all hospital admissions come from care home residents. We then applied this coefficient to the total number of hospital admissions in Scotland (Public Health Scotland, 2023a). Lastly, the number of avoided admissions from adult social care was monetised using unit costs for elective and non-elective inpatients from the NHS England National Cost Collection which were then adapted to Scotland using the ASHE, as previously described (NHS England, 2021).

2. A&E admissions

Adult social care also helps prevent accidents and emergency admissions, reducing the strain on the NHS. Under the analytical scenario, for example, people previously in care would be more likely to get injured and would receive care from the NHS. We explored

different approaches to calculating avoidable A&E admissions. Ultimately, we used estimates from Wolters et al. (2019), indicating that 41% of all A&E admissions of care home residents were potentially avoidable. The same percentage for the same-aged general population was 27%. We assumed that the 14 percentage point difference in avoidable admissions was due to the support provided by care homes. We then multiplied this percentage point difference to the average number of A&E admissions per care home resident aged over 65²², per year (Wolters et al., 2019). This calculation results in the number of A&E admissions that could be avoided per person, per year, which we then applied to all adults receiving informal care under the analytical scenario and all adults in non-nursing²³ residential, domiciliary, and personal care, calculated during the macroeconomic impact analysis.

3. Discharges from acute care

The existence of adult social care helps the NHS discharge people from the hospital, increasing the capacity of the NHS to accommodate new patients and reduce costs associated with bed days. As a result, avoiding delayed discharges is associated with reduced costs to the NHS due to fewer bed days.

We estimated two types of delayed discharges that could be avoided due to the existence of adult social care. First, we estimated the number of delayed discharges that could be avoided if adult social care had sufficient placements (thereafter “potentially avoidable delays”). To that end, we used estimates from Public Health Scotland (2023c), suggesting that 24% of all delayed discharges are due to waiting placement availability. While delays can also be caused by factors such as the unavailability of sheltered housing or the completion of care arrangements, evidence suggests that only increased capacity in care homes is associated with fewer delayed discharges (Spiers et al., 2018). As a result, we assumed that only 24% of all delayed discharges could be avoided through adult social care. However, it is important to note that this assumption does not significantly affect the final results. Even if we included the 33% of discharges delayed due to awaiting completion of care arrangements, the BCR would remain unchanged.

The second type of delays we examined were delays that are not realised in the baseline scenario due to the existence of adult social care. These delays are avoided because adult social care offers placements for people medically fit to be discharged. However, in the analytical scenario, these placements are no longer available, leading to additional discharges getting delayed. To estimate the share of all discharges that are

²² Due to data limitations, we used the incidence of hospital admissions among care home residents over 65 as a proxy for total hospital admissions among all care home residents.

²³ As previously mentioned, there is no separate nursing care in Scotland. To estimate the number of adults receiving nursing services we use data from Public Health Scotland (2023e) showing that 63% of all long-stay care home residents receive nursing care.

made possible due to the existence of adult social care placements, we used evidence from Public Health Scotland (2023b), showing the number of attendances resulting in a transfer of care.

The share of delayed discharges potentially avoidable due to adult social care, as well as the share of those not realising due to adult social care placements were then applied to (i) current NHS patients, (ii) additional NHS patients receiving care previously offered by adult social care, and (iii) additional people entering NHS through A&E that adult social care helped avoid under the baseline scenario. These impacts were then monetised using estimates for excess bed day costs (Department of Health & Social Care, 2017) and adapted to Scotland using the ASHE, as previously described.

Peace of mind benefits

There is a lack of evidence on peace of mind benefits due to adult social care in the UK. As a result, we have explored alternative approaches to calculating this benefit. In all reviewed studies, peace of mind benefits were calculated as the difference of insurance payments subtracting the insurance claims paid out. The claims divided by the total insurance payments represent the loss ratio. For instance, if a loss ratio is 40%, this means that someone paying for insurance can expect to get back only 40% of the money they pay in insurance premiums. As a result, the remaining 60% must represent another form of benefit to the insurance buyer, otherwise they would be willing to pay only the 40% they would get back in claims. Research suggests that the remaining value (60% in this case) represents peace of mind benefits.

Forder (2011) explored the peace of mind benefits of Immediate Needs Annuities (INA), one of the few private insurance products in the UK. The author concluded that the average person would pay a lifetime cost of care of up to £69,000 through an INA, while they would pay £66,000 without one. The difference of £3,000 (or 4% of the premium) is the minimum peace of mind benefit holders of INAs accept (or equivalently, 96% is the maximum loss ratio). A report by Buckle et al. (2019) on 15 private UK health insurers calculated the medical insurance loss ratio ranging from 59% to 73%. Lastly, evidence from the US long-term insurance market suggests that the loss ratio is between 40% to 60% (Department of Health & Social Care, 2022).

Overall, the loss ratios range from 40% to 96% across studies and sectors. Due to the lack of a single, widely accepted loss ratio in the UK, we used the average of the UK's lower and higher bound estimates (i.e., the average of 59% and 96%).

The resulting ratio (78% loss ratio or 22% peace of mind benefit) was multiplied by the fair price of care, calculated as the total net expenditure on adult social care from HM Treasury's Public Expenditure Statistical Analyses (HM Treasury 2023). In particular, we used the cost line of "personal social services" for old age and sickness and disability.

Quality of life and wellbeing benefits

1. Social care-related quality of life

To estimate the impact on wellbeing due to adult social care services, we followed the KD Network Analytics and Skills for Care (2021) report and used the SCRQoL, which captures satisfaction with adult social care services as opposed to wider wellbeing captured in other metrics (e.g. WELLBYs). The SCRQoL is part of the Adult Social Care Outcomes Framework (ASCOF)²⁴ and Adult Social Care Survey (ASCS) captured in metric “1A: Quality of life of people who use services”. This measures the care users’ reported experience in eight outcome domains of control, dignity, personal care, food and nutrition, safety, social participation and accommodation (Department of Health & Social Care, 2017b). As a result, the impacts captured are distinct from the wellbeing of avoided injuries, captured in QALYs below, thus avoiding the risk of double-counting.

To ensure that the measured quality of life impact is not affected by non-service related factors, we used metric “1B: Quality of life of people who use services” from the ASCS, which is the metric 1A adjusted for preferences of service users and external factors that might influence perceived wellbeing. Using this metric follows the methodological approach outlined in Forder et al. (2016). However, the ASCS is produced only for England. To estimate the impact of adult social care expenditure on SCRQoL for Scotland, we explored different approaches and ultimately decided to divide England’s expenditure on adult social care by the achieved SCRQoL (i.e. QALYs due to satisfaction with adult social care services). This allowed us to estimate the cost per SCRQoL, which was then applied to Scotland’s expenditure on formal adult social care. The expenditure per country was sourced from HM Treasury’s Public Expenditure Statistical Analyses, as described above (HM Treasury, 2022).

We then used evidence by Stevens et al. (2018) showing that the adjusted SCRQoL is the wellbeing equivalent of a QALY. As a result, we monetised the impact on SCRQoL by applying the monetary value of a QALY (HM Treasury, 2022). Lastly, the monetised impact was applied to adults receiving informal care under the baseline, as well as to those receiving formal care under the baseline but not receiving any support in the analytical scenario.

2. Quality of Life Adjusted Years

Access to social care significantly reduces the likelihood of individuals experiencing injuries, thereby preventing the deterioration of their health (Crawford et al., 2020). Thus, social care may result in increased “quantity and quality of life”, captured by Quality Adjusted Life of Years (QALYs), by preventing injuries and illnesses (Office for Health Improvement and Disparities, 2020). Under the analytical scenario, people would no longer receive adult social care and would potentially suffer preventable injuries.

²⁴ The ASCOF measures how well care and support services achieve the outcomes that matter most to people.

According to Wolters et al. (2019), the most common avoidable admissions are for pneumonia, urinary tract infections, and fractures or sprains. To estimate the number of these admissions, we applied their incidence rates to the number of potentially avoided A&E admissions due to the existence of adult social care (as calculated in 1.2) for adults who previously received care but would not access any support under the analytical scenario. The impact of these potentially preventable injuries or illnesses on the quantity and quality of life was then monetised to estimate the savings that adult social care generates by preventing injuries.

To estimate the impact of injuries and illnesses on quality and quantity of life, we first applied disability weights²⁵ for the most commonly avoided injuries and illnesses in care homes to Disability Adjusted Life Years (DALYs; Institute for Health Metrics and Evaluation, 2019).²⁶ To translate DALYs to QALYs, we explored different approaches and ultimately assumed that the gains in QALYs are broadly equal to losses in DALYs, following Bevan et al. (2007). These QALY impacts were then monetised using the latest monetary value for a QALY, which is £70,000 in 20/21 prices, according to the Green Book (HM Treasury, 2022).

²⁵ Disability weights are values representing the health impact associated with specific diseases and are generated through consultations with clinicians, experts, or community members. These are applied to Disability Adjusted Life Years (DALYs) to estimate mortality and morbidity of specific diseases (Hagell and Cheung, 2019).

²⁶ QALYs measure equivalent healthy years lived, whereas DALYs measure loss of health. A QALY value of 1 is equivalent to a year in perfect health, while a DALY value of 1 is equivalent to death (National Collaborative Centre for Infectious Diseases, 2015).

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