



# The Economic Value of the Adult Social Care sector - Scotland

Final report

05 June 2018



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## Final report

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## Abbreviations

### Acronyms and definitions

Acronym	Full title
ABS	Annual Business Survey
APS	Annual Population Survey
ASHE	Annual Survey of Hours and Earnings
CI	Care Inspectorate
CH	Companies House
CQC	Care Quality Commission
EBITDAR	Earnings before interest, taxes, depreciation, amortization, and restructuring or rent costs
EBITDA	Earnings before interest, taxes, depreciation, amortization
FTE	Full-Time Equivalent (37 hours a week)
GVA	Gross Value Added
IDBR	Inter-Departmental Business Register
I-O Tables	Input-Output tables
LFS	Labour Force Survey
NMDS-SC	National Minimum Dataset - Social Care
ONS	Office for National Statistics
PA	Personal Assistant
PAYE	Pay As You Earn
PSSRU	Personal Social Services Research Unit
SfC	Skills for Care
SfCD	Skills for Care and Development
SIC	Standard Industrial Classification
SSSC	Scottish Social Services Council

### Definitions of key terms

Key term	Definition
Agency	An organisation which provides temporary workers to service providers
Community Care	Social care services that take place out in the community and not in a fixed location
Day Care	Care provided for service users in a day care centre (non-residential) or the provision of activities outside the home.
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
Domiciliary care	Care provided in a service users own or family home
GVA	The measure of the value of goods and services produced by an economy. It is output minus intermediate consumption
Independent	Private and voluntary sector providers of adult social care

Key term	Definition
Non-regulated	Employers in the adult social care sector which are not subject to inspections or regulation
Nursing Care	Care provided in a residential setting which requires nursing care
Private	Employers in the adult social care sector owned by for profit private enterprises
Public	Employers in the adult social care sector owned and operated by the Government local authorities and the NHS
Regulated	Employers in the adult social care sector which are inspected and regulated by the national social care inspectors
Residential care	Care provided in a residential setting rather than in a service users own or family home
Service User	An individual who uses adult social care services
Voluntary	Service providers in the adult social care sector run by for not-for-profit organisations

## Key Findings

### *Sector characteristics*

- An estimated 2,980 sites were involved in providing adult social care in Scotland in 2016. Most of these sites provided domiciliary care. A further 2,200 individuals receive direct payments and employ Personal Assistants (PAs);
- There were an estimated 143,300 jobs in the adult social care sector in Scotland in 2016. Most of these jobs were involved in providing domiciliary care. There were a further 4,600 jobs due to individuals employing PAs, meaning there were a total of 147,800 jobs in the adult social care sector in 2016;
- There were an estimated 107,800 Full-Time Equivalents (FTEs) in the adult social care sector in Scotland, and a further 2,100 FTEs employed as PAs;
- Most of the adult social care workforce providing regulated services were employed at sites run by private sector providers (59,400);
- The level of employment in the adult social care sector represents 6% of total employment in Scotland; and
- The average earnings in the adult social care sector in Scotland was estimated to be £18,400.

### *Economic value of the sector (using the income approach)*

- It was estimated that in 2016, adult social care sector GVA was £2.3 billion. Most of this was estimated to be in residential and nursing care (£933 million, 42%);
- This represents 1.7% of total GVA in Scotland;
- It was estimated that the average level of productivity (GVA generated per FTE) in the adult social care sector was £20,800; and
- The GVA in the adult social care sector in Scotland was estimated to be higher than the Agriculture, forestry and fishing, Arts, entertainment and recreation and Water supply; sewerage and waste management sectors.

### *Indirect and induced value of the sector (using the income approach)*

- The indirect effect of the adult social care sector (resulting from the purchase of intermediate goods and services by the adult social care sector in delivering its services) was estimated to contribute a further 29,400 jobs (21,800 FTEs) and £512 million of GVA to the Scottish economy;
- The induced effect of the adult social care sector (resulting from purchases made by those directly and indirectly employed in the adult social care sector) was estimated to contribute a further 21,400 jobs (15,900 FTEs) and £650 million of GVA to the Scottish economy; and
- The total direct, indirect and induced value of the adult social care sector in Scotland was estimated to be 198,600 jobs (147,600 FTEs) and £3.4 billion in 2016.

## Executive summary

### Introduction

Skills for Care and Development (SfCD) required robust estimates of the economic value of the adult social care sector in each of the four nations of the UK. This included:

- The annual Gross Value Added (GVA) generated directly by the adult social care sector (including public sector activities within the sector as well as the independent sector) (direct impact);
- The supply chain multiplier for the adult social care sector (indirect impact); and
- The wage multiplier for the adult social care sector (induced impact).

This report provides estimates for these research aims for Scotland. It also provides estimates of employment due to the adult social care sector (direct, indirect and induced employment) and the level of productivity in the sector (GVA per worker).

## Sector characteristics

The adult social care sector is made up of public, private and voluntary sector service providers. Nearly 3,000 sites provide adult social care services (excluding direct employers, over 5,000 if direct employers are included). The largest number of sites (2,120) provide domiciliary care. The total number of sites providing adult social care in Scotland is summarised in Table ES1.1.

Table ES1.1 Estimated total sites providing adult social care in Scotland - 2016

Type of service	Number of sites where services are provided <sup>1</sup>
Residential care	1,150
Nursing care <sup>2</sup>	-
Domiciliary care	2,040
Day care	610
Other services	280
Direct employers	2,200
<b>Total – excluding direct employers</b>	<b>2,980</b>
<b>Total – including direct employers</b>	<b>5,160</b>

*All numbers rounded to nearest 10. Totals may not equal the sum of services due to rounding.*

There are estimated to be nearly 148,000 jobs (110,000 Full Time Equivalent, FTEs) in the adult social care sector in Scotland. Most these are in the private sector (41%). The majority of jobs are in the domiciliary care sector. The total number of jobs and FTE by type of provision is presented in Table ES1.2.

<sup>1</sup> Some sites offer more than one service, therefore the total number of sites is less than the sum of the sites providing different types of service

<sup>2</sup> In the Care Inspectorate Annual Returns (CIARs), the data for the care homes sector (residential care and nursing care) is not differentiated. Therefore, all information for the care homes sector is presented under residential care.

Table ES1.2 Estimated total number of jobs and FTEs in the adult social care sector in Scotland - 2016

Type of service	Jobs	FTE
Residential care	53,700	42,100
Nursing care <sup>3</sup>	-	-
Domiciliary care	69,000	49,300
Day care	9,500	6,700
Other services	11,100	9,300
Direct employers	4,600	2,100
<b>Total – excluding direct employers</b>	<b>143,300</b>	<b>107,500</b>
<b>Total – including direct employers</b>	<b>147,800</b>	<b>109,600</b>

All numbers rounded to nearest 100. Totals may not equal the sum of services due to rounding.

## Direct economic value of the adult social care sector

The direct economic value of the adult social care sector has been estimated using three different approaches: the input approach; the expenditure approach; and the output approach. This was to increase the robustness of the estimates, as there were strengths and weaknesses with the availability and quality of the data required for each approach.

### Income approach

The income approach estimates the total income received by representatives of the sector in the form of wages and other income. These types of income were estimated using earnings (for wages) and the Gross Operating Surplus (GOS) generated in the sector (other income). In the case of the adult social care sector, the large majority of income in the sector will be earned in wages paid to social care workers.

Table ES1.3 presents the results using the income approach. In Scotland in 2016, it was estimated that adult social care GVA was £2.3 billion using this approach. The largest proportion of GVA was estimated to be in the domiciliary care sector (42% of the total value of the sector).

Table ES1.3 Earnings estimates of adult social care and related GVA

	Earnings (£'000)	GOS (£'000)	GVA (£'000)
Residential care	764,541	168,510	933,051
Nursing care <sup>4</sup>	-	-	-
Domiciliary care	868,793	83,435	952,228
Day care	123,706	-	123,706
Other services	233,474	-	233,474
Personal Assistants	35,968	-	35,968
<b>Total</b>	<b>2,026,482</b>	<b>251,945</b>	<b>2,278,427</b>

Individual row totals may be not sum due to rounding. Totals may not equal the sum of services due to rounding.

<sup>3</sup> In the Care Inspectorate Annual Returns (CIARs), the data for the care homes sector (residential care and nursing care) is not differentiated. Therefore, all information for the care homes sector is presented under residential care.

<sup>4</sup> Ibid.

## Expenditure approach

The expenditure approach involves estimating the total level of expenditure on adult social care in Scotland (public and private funding). This is then converted to GVA (turnover less purchase of intermediate goods and services) based on turnover (represented by expenditure) to GVA ratios provided in the Annual Business Survey (ABS).

Table ES1.4 presents the results using the expenditure approach. In Scotland in 2016, it was estimated that adult social care GVA was £2.6 billion using this approach. The largest proportion of GVA was estimated to be in the residential and nursing care sectors (45% of the total value of the sector).

Table ES1.4 Expenditure estimates of adult social care and related GVA

	Total expenditure (£'000)	Turnover to GVA ratio	GVA (£'000)
Residential care	1,640,978	70%	1,140,600
Nursing care <sup>5</sup>	-	-	-
Domiciliary care	927,400	49%	453,724
Day care	286,089	49%	139,967
Other services	1,223,225	63%	765,208
Personal Assistants	93,795	63%	58,675
<b>Total</b>	<b>4,171,486</b>		<b>2,558,174</b>

Individual row totals may not sum due to rounding. Totals may not equal the sum of services due to rounding.

## Output approach

The output approach measures the output of the sector by estimating the number of units of each type of service provided and multiplying this by a unit cost for the service. This estimates the total level of output (the equivalent of turnover) in the sector, which is then converted to GVA.

Table ES1.5 presents the results using the output approach. In Scotland in 2016, it was estimated that adult social care GVA was £2.5 billion using this approach. The largest proportion of GVA was estimated to be in the residential and nursing care sectors (42% of the total value of the sector).

Table ES1.5 Output estimates on adult social care and related GVA

	Total output (£'000)	Turnover to GVA ratio	GVA (£'000)
Residential care	529,107	69%	364,835
Nursing care	952,041	71%	679,430
Domiciliary care	1,144,265	49%	559,824
Day care	213,852	49%	104,626
Other services	1,223,225	63%	765,208
Direct payments	33,283	49%	16,283
<b>Total</b>	<b>4,095,773</b>		<b>2,490,206</b>

Individual row totals may not sum due to rounding. Totals may not equal the sum of services due to rounding.

<sup>5</sup> In the Health and Social Care Integrated Resource Framework NHS Scotland and Local Authority Social Care Expenditure, the data for the care homes sector (residential care and nursing care) is not differentiated. Therefore, all information for the care homes sector is presented under residential care.

## Indirect and induced economic value of the adult social care sector

The estimations above describe the direct economic value of the adult social care sector. The sector also contributes to the economy through:

- **Indirect effects** - resulting from the purchase of intermediate goods and services by the adult social care sector in delivering its services, which support additional employment and GVA within its supply chain; and
- **Induced effects** - resulting from purchases made by those directly and indirectly employed in the adult social care sector, who use their earnings to buy other goods and services.

It was estimated that the indirect effects of intermediate purchases made by the adult social care sector contribute an additional 29,400 jobs<sup>6</sup> and between £512 million and £575 million of GVA in Scotland.

The induced effects (associated with the purchases of goods and services by individuals directly or indirectly employed by the sector) were estimated to support a further 21,400 jobs and £650 million to £730 million of GVA in the wider economy. The induced GVA effect is larger in size to the indirect effect and there are similar induced and indirect effects on jobs.

## Key indicators

The key findings from the research are presented in Table ES1.6. This presents estimates which show that:

- There were 148,000 jobs in the adult social care sector, and there were 109,600 FTEs. These jobs generated between £2.3 billion and £2.6 billion in GVA, and the level of productivity (GVA per worker) was estimated to be between £20,300 and £23,300 per FTE.
- The indirect effect of the adult social care sector was estimated to be 29,400 jobs (or 21,800 FTEs) and between £512 million and £575 million in GVA. The indirect effect is due to the purchase of intermediate goods and services by the adult social care sector.
- The induced effect of the adult social care sector (additional spending by those directly and indirectly employed through the adult social care sector) was estimated to be over 21,400 jobs (15,900 FTEs) and between £650 million and £730 million of GVA.

The total direct, indirect and induced value of the adult social care sector in Scotland was estimated to be 198,600 jobs, 147,300 FTE jobs and between £3.4 billion and £3.9 billion in GVA.

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<sup>6</sup> These are jobs, not FTE

Table ES1.6 Summary of findings

	Income approach	Expenditure approach	Output approach
Total direct employment		147,800	
Total FTE employment		109,600	
Total direct GVA (£'000)	2,278,427	2,558,174	2,511,150
Estimated productivity per job (£)	15,400	17,300	17,000
Estimated productivity per FTE (£)	20,800	23,300	22,900
Indirect employment (jobs)		29,400	
Indirect employment (FTE)		21,800	
Induced employment (jobs)		21,400	
Induced employment (FTE)		15,900	
Total jobs due to adult social care activity		198,600	
Total FTE jobs due to adult social care activity		147,300	
Indirect GVA (£'000)	512,108	574,985	564,415
Induced GVA (£'000)	650,031	729,842	716,427
<b>Total GVA due to adult social care activity (£'000)</b>	<b>3,440,565</b>	<b>3,863,001</b>	<b>3,791,991</b>

*All employment numbers rounded to nearest 100, productivity numbers rounded to the nearest £100. Totals may not equal the sum of services due to rounding.*

# 1 Introduction

Skills for Care and Development (SfCD) is the sector skills council for people working in early years, children and young people's services, and those working in social work and social care for adults and children in the UK. They have four partner organisations, one in each nation of the UK. These are Skills for Care (SfC) in England; Northern Ireland Social Care Council in Northern Ireland (NISCC); Scottish Social Services Council (SSSC) in Scotland; and Social Care Wales in Wales.

SfCD required robust estimates of the current economic value of the adult social care sector in each of the four nations of the UK. These estimates will be used in policy discussions and decisions about the sector. The evidence base will demonstrate how the sector contributes to the economy. The estimates may help to influence the views of decision-makers who see social care as a drain or burden to the economy.

## 1.1 Research aims

The objective for this research was to estimate the economic value of the adult social care sector services in the UK, and the value of the sector in each of the four nations individually. This included:

- The annual Gross Value Added (GVA) generated directly by the adult social care sector (including public sector activities within the sector as well as the independent sector) (direct impact);
- The supply chain multiplier for the adult social care sector (indirect impact); and
- The wage multiplier for the adult social care sector (induced impact).

This report presents additional key metrics which indicate the economic importance of the sector, including:

- Employment (direct employment, indirect and induced employment); and
- Productivity - GVA per worker for the adult social care sector. This is a key metric for the Treasury (HMT) when assessing economic value.

## 1.2 Purpose of this report

This report presents the estimated economic value of the adult social care sector in Scotland. The economic value of the sector has been calculated using three different approaches: the input approach; the expenditure approach; and the output approach. This was to increase the robustness of the estimates, as there were strengths and weaknesses with the availability and quality of the data required for each approach.

The methodology used to estimate the current economic value of the adult social care sector in Scotland was informed by consultations with the project steering group in Scotland and a review of relevant literature. A detailed mapping of appropriate and available data framed by the agreed methodological framework was undertaken. This was followed by the collection of suitable data and the subsequent estimation of the economic value of the sector.

## 1.3 Structure of this report

The report continues in the following sections:

- Section 2 describes the size and structure of the adult social care sector;
- Section 3 estimates the direct economic value of the adult social care sector using the input approach;
- Section 4 estimates the direct economic value of the adult social care sector using the expenditure approach;
- Section 5 estimates the direct economic value of the adult social care sector using the output approach;
- Section 6 estimates the induced and indirect economic value of the adult social care sector;
- Section 7 presents the conclusions from the research, including the key economic indicators and comparisons to other research and economic sectors;
- Annex 1 provides more details about the methodology used to estimate the economic impact of the adult social care sector in Scotland; and
- Annex 2 shows the results of a sensitivity analysis, where some of the assumptions used in the calculation of the economic value of the sector have been varied.

## 2 Sector characteristics

This section provides key characteristics for the adult social care sector in Scotland. These characteristics describe the size and structure of the sector in Scotland.

### 2.1 Number of service providers

A number of sector specific and Office for National Statistics (ONS) datasets have been used to provide a description of the adult social care sector in Scotland. Information collected by the SSSC and the Care Inspectorate (CI), data from the Inter Departmental Business Register (IDBR) and SfC make it possible to estimate the number of service providers in Scotland. More details about the methodology are presented in Annex 1.

#### 2.1.1 Regulated service providers

The CI collect data for regulated care providers in Scotland (through Annual Returns, CIARs). The services provided at these sites are categorised, which means that the number of sites providing each type of regulated adult social care services can be presented.

The data from the CIARs also provides details about the provider, therefore it is possible to identify the total number of providers, and whether they are public, private or voluntary service organisations.

The number of service providers and sites providing adult social care in Scotland is presented in Table 2.1 (this provides 100% coverage of regulated services in Scotland). In summary, there were over 2,400 sites providing regulated adult social care in 2016. These sites were run by over 1,000 service providers. Most regulated sites were providing domiciliary care (over 2,000 domiciliary care services).

It is important to note that the primary unit of data collection in the CIARs is services provided. This is different to the number of sites, as at some sites multiple services are provided (for example, a single site can provide residential and day care services). The total number of sites for each type of service will not necessarily equal the overall total number of sites, as some sites provide multiple services.

Table 2.1 Number of providers and sites - regulated employers, 2016

Type of provider	Type of service	Number of providers <sup>7</sup>	Number of sites providing services <sup>8</sup>
Public	Residential care	-	160
	Nursing care <sup>9</sup>	-	-
	Domiciliary care	-	310
	Day care	-	250
	Other services	-	30
	<b>Total</b>		<b>40</b>
Private	Residential care	-	690
	Nursing care	-	-
	Domiciliary care	-	560
	Day care	-	70
	Other services	-	0
	<b>Total</b>		<b>650</b>
Voluntary	Residential care	-	290
	Nursing care	-	-
	Domiciliary care	-	1,170
	Day care	-	180
	Other services	-	10
	<b>Total</b>		<b>400</b>
Total	Residential care	-	1,150
	Nursing care	-	-
	Domiciliary care	-	2,040
	Day care	-	500
	Other services	-	40
	<b>Total</b>		<b>1,090</b>

Source: CIARs: Number of registered services; Figures rounded to the nearest 10. Totals may not equal the sum of services due to rounding.

## 2.1.2 Non-regulated service providers

The CIAR and SSSC data does not contain any information about non-regulated adult social care providers in Scotland. Non-regulated service providers provide a form of adult social care but are not inspected by the CI.

To estimate the number of non-regulated service providers, information from the IDBR, SfC and the Core Minimum dataset was used. The estimation process involved:

<sup>7</sup> The number of providers has not been disaggregated by type of service provided. This is because many providers offer multiple services, and would therefore be counted twice if the providers were differentiated by service.

<sup>8</sup> The total number of sites for each type of service will not necessarily equal the overall total number of sites, as some sites provide multiple services.

<sup>9</sup> In the CIAR, the data for the care homes sector (residential care and nursing care) is not differentiated. Therefore, all information for the care homes sector is presented under residential care.

- Data was taken from the IDBR which showed the total number of local sites in the relevant Standard Industrial Classification (SIC) code classes.
- Information from SfC was used to estimate the proportion of these local sites which were providing adult social care (as the SIC code class includes providers of other caring and charitable services, such as children's services). This was multiplied by the number of local sites in the IDBR for Scotland to provide an estimate of the total number of adult social care sites. This was used as an estimated number of adult social care sites in Scotland.
- The number of regulated adult social care sites (taken from the CIARs) was subtracted from the total number of adult social care sites. This provided an estimate of the number of non-regulated adult social care sites in Scotland.

There are differences in services which are regulated between Scotland and England. An examination of the legislation in both nations was undertaken to further refine the estimates of the non-regulated adult social care sector in Scotland. This found that the non-regulated residential care services in England (homelessness shelters and women's refuges) were regulated in Scotland. Therefore, it was assumed that all residential care services in Scotland are regulated, and all residential care services were excluded from the non-regulated adult social care sector estimates. Additionally, all care delivered in a service users home (including non-personal care) is regulated in Scotland, whereas in England such non-personal care is not regulated. Therefore, the estimated non-regulated domiciliary care services have also been excluded from the analysis. The remaining non-regulated services are assumed to include support and outreach services for vulnerable people (for example advice and guidance and befriending services).

It should be noted that there are difficulties in how businesses identify themselves (SIC code category) and the coding provided in the CIARs. Large businesses can offer services across multiple SIC code categories, so may be in a different SIC code category whilst providing care. The calculations of non-regulated adult social care sites are based on assumptions and data manipulation, and are therefore less certain than the data taken from the CIARs.

Therefore, the estimates of the non-regulated sector are not as robust as the estimates of the regulated sector. More details of this methodology can be found in Annex 1.

Table 2.2 presents the number of non-regulated adult social care sites in Scotland. In summary, it is estimated that there are 360 locations providing non-regulated services. These are estimated to mainly (66%) provide other care services, such as outreach services for vulnerable people (see Table 2.2). It has not been possible to estimate the proportion of non-regulated service providers who are private or voluntary sector providers. However, it is assumed that the majority of these will be voluntary service providers.

Table 2.2 Number of service providers and sites – non-regulated employers, 2016

Type of provider	Type of service	Number of providers	Number of sites providing services
Total	Residential care	-	-
	Nursing care	-	-
	Domiciliary care	-	-
	Day care	-	120
	Other services	-	240
	<b>Total</b>	-	360

Source: IDBR; CIARs; SfC NMDS-SC; Figures rounded to the nearest 10. Totals may not equal the sum of services due to rounding.

### 2.1.3 Direct payment recipients

The number of individuals receiving direct payments is collected by the Scottish Government and in 2016 an estimated 7,500 adults received direct payments for their care. Individuals can use the money they receive from direct payments for a variety of purposes, including employing their own staff, residential or day care, or paying subscriptions and memberships to support themselves.

Some individuals receiving direct payments will directly employ Personal Assistants (PAs) to provide care. Of those employing PAs, some will employ social care workers from an existing service provider. These will be captured in the IDBR and CIARs. However, some direct payment recipients will choose to directly employ PAs. These individuals act as employers, but will be excluded from the IDBR and the annual workforce data collections (namely the CIARs and the SSSC collection from LASWS).

Operating on the assumption that the situation in Scotland is comparable with that in England, SfC estimates were used to estimate the number of direct payment recipients who directly employ PAs in Scotland. SfC estimate that in England, just under one third (29%) of people receiving direct payments directly employ PAs. In Scotland, this would mean that there are an estimated 2,200 individuals who are employers directly employing PAs (see Table 2.3).

Table 2.3 Number of individual employers, 2016

Type of service	
Number of individuals receiving direct payments	7,500
Percentage who directly employ PAs	29%
Estimated number of individuals who directly employer PAs in Scotland	2,200

Source: Scottish Government, *Self-directed Support*; Skills for Care 'Individual employers and personal assistants'; Figures rounded to the nearest 100

## 2.2 Number of jobs

A number of data sources have been used to estimate the number of jobs in the adult social care sector in Scotland. These include information collected by the Scottish Government, SSSC, the CI and research by SfC. More details about the methodology are presented in Annex 1. The number of jobs relates to all job roles

in adult social care services – those providing care to service users and all support staff (for example cleaners, security staff).

### 2.2.1 Regulated service and public sector provision

Workforce returns collated by the SSSC (WDR) contain information about all individuals who provide adult social care services for regulated services. It also contains information about all public sector workers in the sector. The data can be differentiated by type of provider and type of service delivered. The WDR data also includes estimates of the number of hours worked and the number of FTEs (derived from the average hours worked). Data for 2016 was provided by SSSC.

Table 2.4 presents the estimates of the size and structure of the regulated workforce. It shows that:

- There are an estimated 138,000 jobs in the regulated adult social care sector in Scotland in 2016. This equates to 103,300 FTEs.
- Most jobs are in the private sector. There are an estimated 59,400 jobs and 46,500 FTEs (43%).
- There are 35,100 public sector jobs, which fill 25,700 FTEs (25%).
- There are an estimated 43,400 jobs in the voluntary sector, which equates to 31,300 FTEs (30%).
- The largest proportion of jobs are in domiciliary care services (50%).

Table 2.4 Number of jobs - regulated services and public sector, 2016

Type of provider	Type of service	Jobs	Average hours	FTEs
Public	Residential care	6,900	26.5	4,900
	Nursing care <sup>10</sup>	-	-	-
	Domiciliary care	16,700	25.2	11,300
	Day care	4,100	27.9	3,100
	Other services <sup>11</sup>	7,500	31.2	6,300
	<b>Total</b>	<b>35,100</b>	<b>27.1</b>	<b>25,700</b>
Private	Residential care	38,100	29.7	30,600
	Nursing care <sup>9</sup>	-	-	-
	Domiciliary care	20,600	27.4	15,300
	Day care	700	25.2	500
	Other services	-	-	-
	<b>Total</b>	<b>59,400</b>	<b>29.0</b>	<b>46,500</b>
Voluntary	Residential care	8,600	27.9	6,500
	Nursing care <sup>9</sup>	-	-	-
	Domiciliary care	31,700	26.5	22,800
	Day care	3,000	24.8	2,000
	Other services	100	31.2	100
	<b>Total</b>	<b>43,400</b>	<b>26.7</b>	<b>31,300</b>
Total	Residential care	53,700	29.0	42,100
	Nursing care <sup>9</sup>	-	-	-
	Domiciliary care	69,000	26.4	49,300
	Day care	7,800	26.5	5,600
	Other services	7,500	31.2	6,400
	<b>Total</b>	<b>138,000</b>	<b>27.8</b>	<b>103,300</b>

Source: WDR: Number of regulated workers; Figures rounded to the nearest 100. Totals may not equal the sum of services due to rounding.

## 2.2.2 Non-regulated service providers

The following steps were used to estimate the number of workers in non-regulated adult social care services:

- The number of non-regulated service sites (see Table 2.2) was multiplied by the average number of jobs per site providing non-regulated adult social care services in England. This provided an estimate of the total number of jobs in non-regulated services in Scotland.
- The proportion of jobs in each type of non-regulated service in England (Day Care, Other services) was multiplied by the total number of non-regulated adult social care jobs in Scotland to provide an estimate of jobs by type of service.

<sup>10</sup> In the CIAR, the data for the care homes sector (residential care and nursing care) is not differentiated. Therefore, all information for the care homes sector is presented under residential care.

<sup>11</sup> Other services include fieldwork services (including qualified social workers)

- The average working hours per person for voluntary sector workers in the regulated sector in Scotland has been used to estimate the number of FTEs in the non-regulated sector. This is because the non-regulated services were assumed to be more likely to be delivered by the voluntary sector than the private sector.

As with the information provided in section 2.1.2, the differences in legislation in England and Scotland and the difficulties in how businesses are categorised makes estimating the number of non-regulated workers in Scotland challenging. Therefore, the data is less certain than the information taken from the WDRs.

Table 2.5 presents the estimated number of jobs in non-regulated adult social care services. It shows that there are an estimated 5,300 jobs and 4,200 FTEs. More details of this methodology can be found in Annex 1.

Table 2.5 Number of jobs – non-regulated services, 2016

Type of provider	Type of service	Jobs	Average hours	FTEs
Total	Residential care	-	-	-
	Nursing care	-	-	-
	Domiciliary care	-	-	-
	Day care	1,700	24.8	1,200
	Other services	3,600	31.2	3,000
	<b>Total</b>		5,300	-

Source: Inter-departmental Business Register; Core Minimum dataset, Number of registered services; Skills for Care Size and Structure of the Adult Social Care sector in England; Assumptions accepted as reasonable by SSSC; Figures rounded to the nearest 100. Totals may not equal the sum of services due to rounding.

### 2.2.3 Direct employers

There are no recent estimates of the number of directly employed PAs in Scotland. A recent study (SfC, 2017) in England provides robust estimates of the average number of people employing PAs (29%), the number of workers they employ (an average of 2.1 workers per employer) and the number of hours PAs work a week (17 hours per week). Using this research and the number of direct employers (Table 2.3), it was estimated that there are 4,600 PAs in Scotland. This equates to 2,100 FTEs.

Table 2.6 Number of Personal Assistants

Type of service	Jobs	Average hours	FTE
Personal Assistants	4,600	17 / week	2,100

Source: Scottish Government, Self-directed Support; Skills for Care 'Individual employers and personal assistants'; Figures rounded to the nearest 100

## 2.3 Summary

The summary tables below (Table 2.7 and Table 2.8) present a summary of the size and structure of the adult social care sector in Scotland. In 2016, it was estimated that there were nearly 3,000 sites providing adult social care in Scotland. If direct employers (who employ their own staff) are included, there are over 5,000 employers in the adult social care sector in Scotland. There are 143,000 jobs at

these sites (excluding directly employed PAs; 148,000 if PAs are included), which is the equivalent of around 108,000 FTEs (110,000 FTEs if PAs are included).

Table 2.7 Estimated total sites providing adult social care sector in Scotland - 2016

Type of service	Number of sites providing adult social care <sup>12</sup>
Residential care	1,150
Nursing care <sup>13</sup>	-
Domiciliary care	2,040
Day care	610
Other services	280
Direct employers	2,200
<b>Total – excluding direct employers</b>	<b>2,980</b>
<b>Total – including direct employers</b>	<b>5,160</b>

Source: Table 2.1 to Table 2.6. Totals may not equal the sum of services due to rounding.

Table 2.8 Estimated total number of jobs in the adult social care sector in Scotland - 2016

Type of service	Number of workers	Number of FTE
Residential care	53,700	42,100
Nursing care <sup>14</sup>	-	-
Domiciliary care	69,000	49,300
Day care	9,500	6,700
Other services	11,100	9,300
Personal Assistants	4,600	2,100
<b>Total – excluding Personal Assistants</b>	<b>143,300</b>	<b>107,500</b>
<b>Total – including Personal Assistants</b>	<b>147,800</b>	<b>109,600</b>

Source: Table 2.1 to Table 2.6. Totals may not equal the sum of services due to rounding.

<sup>12</sup> Some sites offer more than one service, therefore the total number of sites is less than the sum of the sites providing different types of service

<sup>13</sup> In the CIAR, the data for the care homes sector (residential care and nursing care) is not differentiated. Therefore, all information for the care homes sector is presented under residential care.

<sup>14</sup> Ibid.

### **Evidence 1 Employment by nationality in Scotland**

The adult social care sector, like many others in the UK employs workers from other nations. The SSSC undertook an analysis of the social care workforce by nationality, using data from the APS, for all nations of the UK. It was not possible to disaggregate adult and children's services for this analysis and the number of relevant responses in the APS was small, therefore percentages were reported.

In Scotland, since 2011 the percentage of workers from the UK in the social care sector has increased slightly (from 93.7% to 94.5%). The make-up of the non-UK (or migrant) workforce has also altered in this time. Although representing a small proportion of the total workforce, the percentage of non-EU workers has decreased (3.6% in 2011, to 1.1% in 2016). At the same time, the percentage of the workforce made up of EU workers has increased from 2.7% to 4.4%.

The effect of Brexit on EU workers in the adult social care sector is unknown. If Brexit reduces the supply of adult social care workers from other EU countries, employers will have to recruit from other sources. This could lead to an increase in the proportion of the workforce who are born in the UK, or buck the trend of a decreasing proportion of workers being recruited from non-EU countries.

### 3 Income approach

The first approach used to produce estimates of GVA in the sector is the income method. The total income received by representatives of the sector in the form of wages and other income provides an estimate of the value added by the sector. These types of income are estimated using earnings (for wages) and the Gross Operating Surplus generated in the sector (for other income). In the case of the adult social care sector, the large majority of income in the sector will be earned in wages paid to social care workers.

#### 3.1 Earnings - regulated and public sector

The main source of information for earnings in Scotland is the Annual Survey of Hours and Earnings (ASHE). However, the data from ASHE overestimates actual earnings in the adult social care sector due to how the data is collected.<sup>15</sup> Therefore, data collected by SfC in England (NMDS-SC) has been used alongside data from ASHE to estimate the earnings in the adult social care sector in Scotland.

Earnings information provided by SfC has been adjusted using information from ASHE. The average earnings in the adult social care sector in ASHE in Scotland have been divided by the average earnings from the sector in ASHE in England, to obtain the ratio of earnings in the sector between the two nations. This ratio was then multiplied by the value of earnings in England from the NMDS-SC.<sup>16</sup> An additional benefit of using data from SfC is that it allows earnings to be disaggregated by type of provider and type of service provided.

The average earnings for an FTE in the adult social care sector in Scotland is presented in Table 3.1. This shows that:

- The average earnings in the sector are £18,500 per FTE.
- The average earnings per FTE in the public sector are estimated to be higher than in the private and voluntary sectors, for all types of service (more than 12% higher for all types of service).
- The total value of earnings in the adult social care sector in Scotland is estimated to be £1.9 billion.
- Although earnings per FTE are higher in the public sector, the highest proportion of total earnings are in the private sector (£815 million, 43%), since this is where most of the workforce is employed.

Earnings in the adult social care sector in Scotland are lower than average earnings in Scotland. The average earnings for a worker in the regulated adult social care sector in Scotland was estimated to be £18,500. Average (mean) earnings for an FTE in Scotland are estimated to be £32,900 (average earnings for a full-time

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<sup>15</sup> ASHE estimates do not include self-employed workers, or jobs in businesses which are not required to be PAYE registered (most likely small firms with low levels of pay). Therefore the ASHE estimates exclude many low paying jobs, which can lead to an overestimation of earnings.

<sup>16</sup> This approach was used to estimate the earnings in all types of service provision with one exception – domiciliary care in the private and voluntary sectors. The calculations using this approach led to an estimate of earnings that was below the National Living Wage in Scotland, and all adult social care providers are required to pay the living wage. Therefore, for domiciliary care in the private and voluntary sectors, a wage slightly higher than the living wage has been used.

worker) in 2016. Therefore, the earnings in the adult social care sector represent 56% of average earnings.

Table 3.1 Estimated average and total earnings in the regulated adult social care sector, 2016

Type of provider	Type of service	Number of FTEs	Earnings per FTE	Total (£'000)
Public	Residential care	4,900	20,700	102,014
	Nursing care <sup>17</sup>	-	-	-
	Domiciliary care	11,300	19,400	219,882
	Day care	3,100	19,700	61,039
	Other services	6,300	28,300	178,218
	<b>Total</b>		<b>25,700</b>	
Private	Residential care	30,600	17,800	546,246
	Nursing care <sup>16</sup>	-	-	-
	Domiciliary care	15,300	17,100	260,384
	Day care	500	17,300	8,236
	Other services	-	-	-
	<b>Total</b>		<b>46,500</b>	
Voluntary	Residential care	6,500	17,800	116,282
	Nursing care <sup>16</sup>	-	-	-
	Domiciliary care	22,800	17,100	388,526
	Day care	2,000	17,300	34,349
	Other services	100	18,200	918
	<b>Total</b>		<b>31,300</b>	-
Total	Residential care	42,100	-	764,541
	Nursing care <sup>16</sup>	-	-	-
	Domiciliary care	49,300	-	868,793
	Day care	5,600	-	103,624
	Other services	6,400	-	179,136
	<b>Total</b>		<b>103,600</b>	<b>18,500</b>

Source: WDR – social care; Assumptions accepted as reasonable by SSSC; Figures rounded to the nearest 100. Individual row totals may be not sum due to rounding. Totals may not equal the sum of services due to rounding.

## 3.2 Earnings - non-regulated sector

Table 3.2 presents the earnings in the non-regulated adult social care sector in Scotland. Again, the estimated number of FTEs has been multiplied by the average earnings for an FTE (the approach described in section 3.1). The value of earnings in the non-regulated adult social care sector in Scotland is estimated to be £74 million.

<sup>17</sup> In the CIAR and WDR – Social care, the data for the care homes sector (residential care and nursing care) is not differentiated. Therefore, all information for the care homes sector is presented under residential care.

Table 3.2 Estimated average and total earnings in the non-regulated adult social care sector, 2016

Type of provider	Type of service	Number of FTEs	Earnings per FTE	Total (£'000)
Total	Residential care	-	-	-
	Nursing care	-	-	-
	Domiciliary care	-	-	-
	Day care	1,200	17,300	20,082
	Other services	3,000	18,200	54,339
	<b>Total</b>	<b>4,200</b>	<b>-</b>	<b>74,421</b>

Source: IDBR; Core Minimum dataset; Annual Survey of Hours and Earnings; Labour Force Survey: Skills for Care National Minimum dataset – social care; Assumptions accepted as reasonable by SSSC; Figures rounded to the nearest 100. Individual row totals may be not sum due to rounding. Totals may not equal the sum of services due to rounding.

### 3.3 Gross Operating Surplus

In addition to earnings / wages, additional economic income is generated by the adult social care sector. This is estimated by the Gross Operating Surplus (GOS). GOS is defined as income minus operating costs. In estimating GOS, it is assumed that only private sector care providers are run 'for profit', and therefore generate a GOS (further details on the calculation of GOS can be found in Annex 1 (A1.1 and A1.3.2)).

The estimation of the GOS in the adult social care sector will include the following costs:

- Staff costs;
- Materials required to deliver day to day services;
- Transportation costs; and
- Other day to day costs associated with providing adult social care.

Costs which are excluded from the estimation of GOS are:

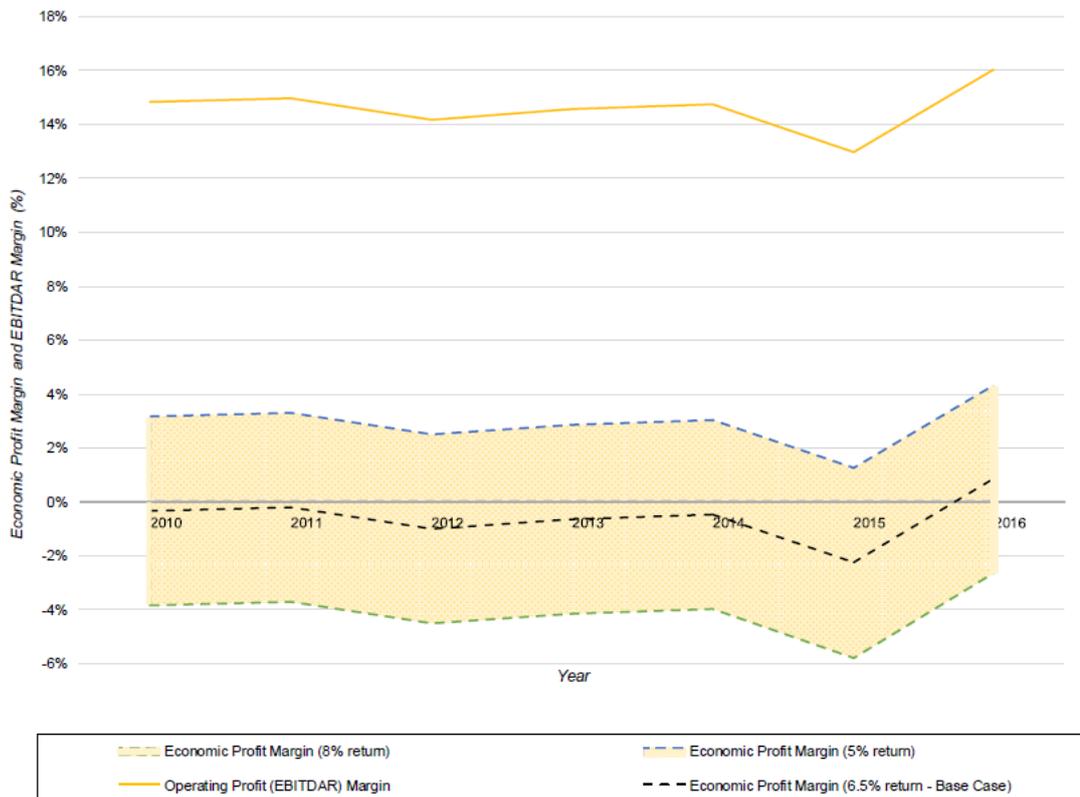
- Rents;
- Exceptional purchases (such as repairing property or capital equipment);
- Depreciation and amortisation of capital assets (the decrease in value of an asset as it is used and aged, for example vehicles or computer systems);
- Interest payments on money owed; and
- Taxation.

**It is important to note that the GOS does not equal the profit taken by owners and shareholders.** Only a subset of total costs are included in the GOS calculation. The GOS is the equivalent of earnings before interest, taxes, depreciation, amortization and restructuring or rent costs (EBITDAR).<sup>18</sup>

<sup>18</sup> The EBITDAR value has been used in the analysis as it is the preferred measure in both the LaingBuisson report and the CMA market analysis. The EBITDA measure, where rents and restructuring costs are assumed to be operating costs is used in the sensitivity analysis in Annex 2

**A positive GOS can lead to small or even negative overall profits. This is because the costs which are excluded from the estimated GOS can equal or exceed the value of the GOS.** Figure 3.1 (taken from Competition and Markets Authority (CMA), 2017) illustrates this. Despite an average GOS of between 14% and 16%, the level of overall economic profit in the adult social care sector (where all costs are included) is estimated to be close to zero.

Figure 3.1 Residential care industry operating surplus profile, 2010-2016



Source: CMA (2017) Care Homes Market Study – figure 4.3

Two main studies have provided insights into the GOS in the residential care sector. LaingBuisson (2017) provides detailed information for the accounts of the big six residential care providers. This shows an average GOS (or EBITDAR earnings) of nearly 20%; but this leads to a significant overall loss.

The CMA (2017) provides a more detailed assessment of GOS in the residential care sector. This examined the annual accounts of all residential care operators in the UK that are required to file their accounts at Companies House (CH). This found that in 2015/16 (the most recent year that comprehensive information was available), the GOS in the sector was around 16%, only marginally lower than in the LaingBuisson report.

For this study, a detailed examination of the financial returns of all adult social care providers was not undertaken. To estimate the GOS in residential care, the average GOS (EDITBAR) value from the CMA study has been used as an assumed GOS margin. This is because the CMA estimate includes all adult social care providers in

the UK who filed reports at CH, and is assumed to be a reasonable measure of GOS in each nation of the UK.

To estimate the value of GOS, the percentage of GOS (16%) was multiplied by the total output from the private residential sector. This gave an estimate of nearly £169 million in the residential adult social care sector in Scotland.

The GOS for domiciliary care providers has been estimated using information taken from the United Kingdom Homecare Association (UKHCA, 2018). This research provided information which was used to estimate an equivalent of the EBITDAR value to represent GOS. It was estimated that the GOS margin in the home care market was 11.3% for private domiciliary providers and 8.3% for voluntary providers.<sup>19</sup> This is a lower estimated value of GOS than for residential care services. This could be because there are lower rental costs and less capital equipment is used (meaning there is less depreciation and exceptional purchases).

The estimated GOS in the domiciliary sector is estimated by multiplying these values by the output of the private and voluntary domiciliary care sector. This is estimated to be nearly £83 million in Scotland in 2016.

There is no information available for the value of GOS for day care and other services. Therefore, no attempt has been made to estimate the GOS in these services. Finally, it has been assumed that there is no GOS in the employment of PAs – it is assumed that they are directly employed and there is no additional income above their pay.

### 3.4 Direct employers

It has been assumed that directly-employed PAs earn the average wage of an FTE in the independent domiciliary care sector.<sup>20</sup> This is estimated to be £17,100 (see Table 3.3).<sup>21</sup> It is estimated that there are 2,100 FTE PAs in Scotland. This means that the total earnings of PAs in Scotland are estimated to be £36 million. More details of this methodology can be found in Annex 1.

Table 3.3 Estimated average and total earnings of Personal Assistants, 2016

Type of service	Earnings per FTE	FTEs	Total (£'000)
Personal Assistants	£17,100	2,100	35,968

Source: Annual Survey of Hours and Earnings; Labour Force Survey: Skills for Care National Minimum dataset; Scottish Government, Self-directed Support; Skills for Care 'Individual employers and personal assistants'; Figures rounded to the nearest 100. Individual row totals may be not sum due to rounding.

### 3.5 Estimated GVA

The estimated level of GVA is calculated by summing the value of total earnings and GOS generated in the income approach. In Scotland in 2016, it was estimated that adult social care GVA was £2.2 billion using this approach (see Table 3.4). The

<sup>19</sup> UKHCA (2018) A Minimum Price for Homecare. Indicators excluded in the estimated GOS were: Net profit / surplus; Premises, utilities and services; and Other Business overheads. Indicators included in the GOS estimate were: care worker costs; staffing, recruitment and training; consumables and professional costs. For voluntary providers, the net profit / surplus was assumed to be zero. These indicators were excluded as it is assumed the costs would be included in the EBITDAR measure.

<sup>20</sup> This value has been used so that

<sup>21</sup> This is a wage which is slightly above the national living wage in Scotland.

largest proportion of GVA was estimated to be in the domiciliary care sector (42% of the total value of the sector).

**Table 3.4 Earnings estimates on adult social care and related GVA**

	Earnings (£'000)	GOS (£'000)	GVA estimates (£'000)
Residential care	764,541	168,510	933,051
Nursing care <sup>22</sup>	-	-	-
Domiciliary care	868,793	83,435	952,228
Day care	123,706	-	123,706
Other services	233,474	-	233,474
Personal Assistants	35,968	-	35,968
<b>Total</b>	<b>2,026,482</b>	<b>251,945</b>	<b>2,278,427</b>

Source: Source: Inter-departmental Business Register; WDR and CIARs: Number of registered services; Skills for Care Size and Structure of the Adult Social Care sector in England; Annual Survey of Hours and Earnings; Labour Force Survey: Skills for Care National Minimum dataset – social care; LaingBuisson (2017) Care of Older People; Assumptions accepted as reasonable by SSSC. Individual row totals may be not sum due to rounding. Totals may not equal the sum of services due to rounding.

### Evidence 2 Anticipated growth in demand for services in Scotland

The population of Scotland is estimated to grow by over 285,000 people by 2039 (Scottish Government population projections), to a total population of 5.7 million (a 5% growth in population). However, the population of individuals aged 65 or over is anticipated to grow by nearly 440,000 (from 998,900 in 2016). This represents a growth of 44% in the number of people aged 65 or over in Scotland (and a decrease in the number of people aged under 65).

This is expected to drive an increase in demand for adult social care in future years in Scotland. The UK Commission for Employment and Skills (UKCES) produced estimates of future demand for employment in different occupational groups. The research projected future demand until 2024. The adult social care sector was not modelled as a specific sector, and the most appropriate category for the sector would be the occupational group “Caring, Leisure and other service activities”. In Scotland, employment in this group was estimated to grow by an average of 1.5% each year between 2014 and 2024. This provides further evidence that the demand for adult social care is likely to increase in the future in Scotland.

<sup>22</sup> In the CIAR and WDR – Social care, the data for the care homes sector (residential care and nursing care) is not differentiated. Therefore, all information for the care homes sector is presented under residential care.

## 4 Expenditure approach

The second method to estimate the economic value of the adult social care sector is the expenditure approach. This approach involves estimating the total level of expenditure on adult social care in Scotland (public and private funding). This is then converted to GVA (output less purchase of intermediate goods and services) on the basis of turnover (represented by expenditure) to GVA ratios provided in the Annual Business Survey (ABS).

Expenditure flows from funders to the providers of adult social care services. However, there are different sources of funding such services, these are:

- Public sector funding – individuals using care services who are wholly funded by the state. This includes expenditures made directly between the public sector and the provider of adult social care services to deliver services to individuals, and funding given directly to service users to purchase their own care (direct payments);
- Self-funders – individuals who use care services and pay the full costs themselves; and
- Co-funding – individuals who receive some public sector funding, but who are required to ‘top-up’ the public funding to pay the full care charges.

### 4.1 Public sector funding and co-funding

The Scottish Government publishes data on the public sector funding of adult social care. It also collects data on public sector “income” for adult social services. This is defined as payments from arrangements with other organisations and client contributions to services. This information is presented in Table 4.1, and shows:

- The total value of public sector expenditure was over £2.2 billion in 2015/16, with a further £745 million coming from client contributions and joint arrangements. This gives a total estimate of nearly £3.0 billion of gross expenditure of adult social care in Scotland.
- Most of the public sector and co-funding expenditure was for older people (60% of gross expenditure).
- Most of the joint arrangements or co-funding was for older people (58%); however, the proportion of co-funding was highest for adults with mental health needs (40% of gross funding).

Table 4.1 Public and co-funding of adult social care, 2015-16

Type of service	Public sector funding (£'000)	Co-funding (£'000)	Total (£'000)
Older people (65+)	1,344,448	438,723	1,783,171
Physically disabled (18+)	203,728	30,451	234,179
Learning disabled (18+)	527,422	186,950	714,372
Mental health needs (18+)	99,993	65,634	165,627
Other	49,946	23,453	73,399
<b>Total</b>	<b>2,225,537</b>	<b>745,211</b>	<b>2,970,748</b>

Source: Scottish Local Government Finance Statistics. Totals may not equal the sum of services due to rounding.

## 4.2 Self-funding

The size and scale of expenditures on adult social care by self-funders is difficult to estimate. This is because there is no relevant data source which estimates either the level of expenditure or the number of individuals who fund their own care.

There are a number of recent studies that have explored self-funding of residential adult social care services. LaingBuisson (2017) estimate the proportion of residential and nursing care residents who are self-funders in Scotland (36%). Previous studies have estimated that in England over 40% of care home places are for self-funders (IPC, 2011, 2015). These estimates are similar to those presented in LaingBuisson (2017), therefore the estimate of 36% for Scotland appears to be consistent with other studies. There is less evidence about the number of self-funders for non-residential adult social care. A review of existing evidence was undertaken to establish the size of the self-funder market for non-residential social care in the UK. A summary of the findings from these studies is presented in Annex 1. From this, it has been estimated that the proportion of older people who fund their own domiciliary, day and other care in Scotland is 25%.

Individuals who self-fund their own care are unlikely to pay the same price for their care as those funded by the state.<sup>23</sup> Several sources suggest that self-funders are likely to pay a higher fee for the same care services. The reasons for these differences could be due to market pressures (local authorities and the NHS buying services in bulk through tendering, and achieving favourable rates), or because providers are having to cross subsidise public sector clients by charging a premium to self-funders.

LaingBuisson (2017) includes an analysis of prices charged to self-funders, and found that on average the price for a self-funder was 46% (41% for nursing care) higher than the price for a publicly funded client. The CMA (2017) have also recently estimated the mark-up for self-funders as being over 40% in residential care. The Care Home Census (2016) in Scotland also produces estimates of the prices for publicly funded clients and self-funders, which shows a mark-up of 44% for residential care and 34% for nursing care. These are higher mark-ups than previous estimates (which were closer to 20%, LaingBuisson and Joseph Rowntree Foundation, 2008; BUPA, 2011; University of East Anglia, 2011). The CMA (2017) suggests that this could be due to the margins providers can make from publicly funded residents falling in recent years, therefore the higher mark-up for self-funders is needed to make the business sustainable.

The mark-ups from the Care Homes Census (2016) in Scotland have been used in this analysis. For domiciliary, day care and other services, a 20% mark-up for self-funders has been used. These unit costs are presented in Table 4.2.

The analysis of self-funding is presented in Table 4.2, by type of care provision. The Scottish Local Government Finance Statistics do not disaggregate funding by type of service. However, Information Services Division Scotland (ISD Scotland) data does disaggregate gross public spending on adult social care by type of provision. The total level of expenditure in the ISD data is slightly higher than the Scottish Local Government Finance Statistics (in Table 4.1). However, both totals are similar (around £3 billion in expenditure), so no adjustments have been made.

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<sup>23</sup> In Scotland, the cost for publicly funded residential care is set by the National Care Home Contract (NCHC). This means that the cost for publicly funded residential care is uniform across all of Scotland. However, self-funders can still be charged more than publicly funded service users.

Table 4.2 suggests that in Scotland, the total value of self-funded adult social care expenditure is over £1 billion. The largest proportion of self-funding expenditure is for residential and nursing care (46% of the self-funded total). The total estimated value of expenditure on adult social care in Scotland is £4.2 billion.

Table 4.2 Estimated total expenditure in adult social care sector, 2015-16

	Public and co-funded (£'000)	Unit cost for self-funders (£ per year)	Number of self-funders	Self-funded expenditure (£'000)	Total expenditure (£'000)
Residential care	1,166,805	41,600	11,400	474,173	1,640,978
Nursing care <sup>24</sup>	-	-	-	-	-
Domiciliary care	686,818	16,500	14,600	240,600	927,400
Day care	213,852	10,900	6,700	72,200	286,100
Other services	981,656			241,600	1,223,200
Direct payments	93,795				93,800
<b>Total</b>	<b>3,142,926</b>			<b>1,028,600</b>	<b>4,171,500</b>

Source: Health and Social Care Integrated Resource Framework NHS Scotland and Local Authority Social Care Expenditure - Financial Years 2012/13 - 2015/16; LaingBuissson (2017) Care of Older People; Scottish Government Home Care Statistics; PSSRU Unit Cost of Health and Social Care; Values for unit cost and number of self-funders is rounded to the nearest 100. Individual row totals may be not sum due to rounding. Totals may not equal the sum of services due to rounding.

### 4.3 Estimated GVA

The expenditures calculated above have been converted into GVA using turnover to GVA ratios for the adult social care sector from the ABS. Turnover to GVA ratios indicate the level of GVA that is expected to result in a particular sector, from a given level of expenditure. Applying these ratios to the estimated expenditures provides an estimate of GVA for the sector of £2.6 billion in 2015/16 in Scotland (see Table 4.3). The largest proportion of GVA is from the residential and nursing care sub-sectors (£1.1 billion; 45% of total GVA).

Table 4.3 Expenditure estimates on adult social care and related GVA, 2015-16

	Total expenditure (£'000)	Turnover to GVA ratio	GVA (£'000)
Residential care	1,640,978	70%	1,140,600
Nursing care <sup>25</sup>			
Domiciliary care	927,400	49%	453,724
Day care	286,089	49%	139,967
Other services	1,223,225	63%	765,208
Direct payments	93,795	63%	58,675
<b>Total</b>	<b>4,171,486</b>		<b>2,558,174</b>

Source: Health and Social Care Integrated Resource Framework NHS Scotland and Local Authority Social Care Expenditure - Financial Years 2012/13 - 2015/16; LaingBuissson (2017) Care of Older

<sup>24</sup> In the Health and Social Care Integrated Resource Framework NHS Scotland and Local Authority Social Care Expenditure, the data for the care homes sector (residential care and nursing care) is not differentiated. Therefore, all information for the care homes sector is presented under residential care.

<sup>25</sup> Ibid.

*People; Scottish Government Home Care Statistics; PSSRU Unit Cost of Health and Social Care; Annual Business Survey. Individual row totals may be not sum due to rounding. Totals may not equal the sum of services due to rounding.*

### **Evidence 3 Effect of public funding of adult social care**

There are different types of goods and services in an economy, and the markets for different types of goods and services need to be treated differently to ensure that the market functions efficiently. Examples of different types of goods are:

Private goods – a good or service which can be purchased, and when the good is purchased it prevents other individuals from consuming it. This is the most common type of good.

Public goods – a good or service which when one individual benefits from its use it does not prevent anyone else benefitting from the good, and when it is used it does not reduce the amount available to others.

Quasi-public goods – a good or service which falls between public and private, possessing some of the qualities of a public good.

Merit good – a good which provides wider benefits to the economy when consumed.

Private goods with market failures – goods or services which are private goods but where the market does not function correctly, for example due to a lack of information.

If adult social care was treated as a 'private good' (all individuals have to self-fund their own adult social care) there would be market failure. This is because some individuals do not have the resources to buy the adult social care they require. Other individuals do not have complete information about their need for social care or the cost of the adult social care they require (for example the health conditions they could develop and their life expectancy), and therefore underestimate the quantity of social care they require.

There are also positive externalities (such as the prevention of healthcare, allowing family members and informal carers to remain in work). This means that individuals underestimate the value of adult social care they would need to purchase.

Therefore, a private market for adult social care would not operate efficiently and would be seen as a market failure. Adult social care should be viewed as a quasi-public good (as all individuals in a society can benefit from it) or a merit good (generating further benefits). Rather than crowding out private investment, the public funding supports a better functioning adult social care market.

## 5 Output approach

The final approach to measure the GVA of the adult social care sector is the output approach. This measures the output of the sector by estimating the number of units of each type of service provided, and multiplying this by a unit cost for the service. This estimates the total level of output (the equivalent of turnover) in the sector, which can then be converted to GVA (output less purchase of intermediate goods and services).

### 5.1 Output from the residential care

#### 5.1.1 Residential care for older people

The Care Home Census (2016) in Scotland provides useful data relating to the provision of care services for older people. This data includes the capacity of nursing and residential care homes in Scotland and the occupancy rate. LaingBuisson (2017) also provide statistics for the capacity and usage of residential and nursing care in Scotland. The figures are closely aligned to those produced in the Care Home Census. The values from the Care Home Census (2016) have been used in the analysis. The data for capacity and occupancy has been disaggregated into residential and nursing care provision using information from LaingBuisson (2017).

The data shows that the private sector is the largest provider of adult social care in Scotland, and represents 48% of the total residential care capacity, and 91% of total nursing care capacity for older people (a total of 30,000 beds across the residential and nursing sector).

The Care Home Census (2016) in Scotland provides estimates of the unit cost of residential and nursing care provision in Scotland. These estimates have been used in the analysis.

Table 5.1 presents an estimate of the total output of residential and nursing care for older individuals in Scotland. This was calculated by multiplying the number of occupants by the weekly cost. The total output of the residential and nursing care sector for older people was estimated to be nearly £1.3 billion. The private sector has the largest output (£980 billion; 75% of total output), and the output for nursing care is higher than for residential care (nursing care represents 72% of the total residential and nursing care sub-sector).

Table 5.1 Capacity and estimated output of care home sector – older people

		Private	Voluntary	Public	Total
Capacity (Total places)	Nursing	25,200	1,300	1,200	27,700
	Residential	4,900	2,100	3,100	10,100
Occupancy (places)	Nursing	22,200	1,200	1,100	24,400
	Residential	4,300	2,000	2,600	8,900
Output (£'000)	Nursing	840,352	44,907	66,782	952,041
	Residential	139,386	64,459	150,608	354,453
Unit cost (£ per week)	Nursing	730	730	1,220	
	Residential	630	630	1,110	

Source: LaingBuisson (2017) *Care of Older People*; Information Services Division (2016) *Care Home Census*; Capacity and occupancy rounded to the nearest 100. Output totals may not sum due to rounding.

### 5.1.2 Residential care for younger adults

The Care Home Census (2016) provides statistics for the number of beds available for younger adults and occupancy in residential care facilities in Scotland. The data is differentiated by type of provider (public, private and voluntary). These statistics have been used to estimate the output for residential care for younger adults requiring adult social care.

The Care Home Census (2016) does not provide a unit cost for residential care of younger adults. The Personal Social Services Research Unit (PSSRU) provide annual estimates for the unit costs of adult social care in England (PSSRU, 2016), which includes estimates of unit costs for the residential care of younger adults. The PSSRU estimates have been used to calculate a unit cost for Scotland. The unit cost has been weighted based on the number of individuals with different types of disabilities in Scotland, and the prices have been adjusted to Scottish prices using information from the LaingBuisson (2017).

Using the information described above, Table 5.2 presents the estimated output for residential care of younger adults with learning disabilities and mental health needs. In 2015/16, it is estimated that this sub-sector has an output of £175 million in Scotland.

Table 5.2 Capacity and estimated output of care home sector – younger adults

		Private	Voluntary	Public	Total
Capacity	Nursing	-	-	-	-
	Residential	1,600	2,000	200	3,700
Occupancy (places)	Nursing	-	-	-	-
	Residential	1,400	1,800	200	3,300
Output (£'000)	Nursing	-	-	-	-
	Residential	73,450	90,138	11,066	174,654
Unit cost (£ per week)	Nursing	-	-	-	-
	Residential	1,000	1,000	1,300	

Source: PSSRU Unit Cost of Health and Social Care (2016); LaingBuisson (2017); Scottish Care Home Census; Capacity and occupancy rounded to the nearest 100. Output totals may not sum due to rounding.

## 5.2 Output from non-residential adult social care

An approach using data from the Scottish Government (Social Care Services statistics) and PSSRU has been used to estimate the output of the non-residential care sector in Scotland.

The Social Care Services statistics provide data for the number of individuals receiving home care services in Scotland. This provides details of the number of people receiving funding for care (59,800), but not the number of self-funders. The Scottish Government also previously collected information for the number of people receiving adult day care in Scotland. However, these statistics were discontinued in 2007. Evidence from multiple sources has been used to estimate the number of people who receive publicly funded day care in Scotland. The discontinued day care statistics alongside population estimates, information from the Learning Disability Scotland Statistics and data from the self-directed support data series has been used to estimate the number of day care service users in Scotland (20,400).

The total number of self-funders for non-residential care was estimated to be 38,000. The total number of individuals receiving care is the sum of self-funders and those receiving payment for their care.

There are no statistics which estimate the unit cost of non-residential care in Scotland. Therefore, the unit costs for non-residential care has been calculated from the PSSRU (2016) estimates. The total output is estimated by multiplying the unit cost by the number of users and the volume of care used per year. It was not possible to estimate the usage and unit cost of other services, due to the wide variety of services included in other services and a lack of available data. Therefore, the level of expenditure has been used as the value of output for other services.

Table 5.3 presents the output of the non-residential care sector. This shows that the total output of the sector in Scotland was estimated to be nearly £2.7 billion in 2015/16. The domiciliary care sector has the largest output in the non-residential care sector in Scotland.

Table 5.3 Estimated output of other adult social care sectors

	Number of users	Unit per person per year	Unit cost (£)	Total output (£'000)
Domiciliary care	79,300	598	24	1,144,265
Day care	27,000	130	73	256,661
Other	-	-	-	1,223,225
Direct payments <sup>26</sup>	2,500	884	15	33,283
<b>Total</b>				<b>2,657,433</b>

Source: Scottish Government Social Care Statistics; LaingBuisson (2017); PSSRU Unit Cost of Health and Social Care (2016); ICF analysis. Output totals may be not sum due to rounding.

### 5.3 Estimated GVA

The estimated value of GVA in the adult social care sector in Scotland is presented in Table 5.4. The GVA has been calculated using the estimated output in the sector described above, and turnover to GVA ratios from the ABS for relevant industries. Applying these ratios to the estimated expenditures provides an estimate of GVA for the sector of nearly £2.5 billion in 2015/16 in Scotland. The residential and nursing care sectors have the largest estimated GVA (£1.0 billion; 42% of total GVA).

Table 5.4 Output estimates on adult social care and related GVA

	Total output (£'000)	Turnover to GVA ratio	GVA (£'000)
Residential care	529,107	69%	364,835
Nursing care	952,041	71%	679,430
Domiciliary care	1,144,265	49%	559,824
Day care	213,852	49%	104,626
Other services	1,223,225	63%	765,208
Direct payments <sup>27</sup>	33,283	49% <sup>28</sup>	16,283
<b>Total</b>	<b>4,095,773</b>		<b>2,490,206</b>

Source: Scottish Government Social Care Statistics; LaingBuisson (2017); PSSRU Unit Cost of Health and Social Care (2016); Scottish Care Home Census; Annual Business Survey; ICF analysis. Individual row totals may be not sum due to rounding. Totals may not equal the sum of services due to rounding.

<sup>26</sup> Only including individuals who directly employ either Personal Assistants.

<sup>27</sup> Ibid.

<sup>28</sup> The turnover to GVA ratio is different here to the one used in section 4.3. This is because this estimate is only for individuals who directly employ either Personal Assistants (therefore the turnover to GVA ratio is estimated to be the same as for domiciliary care). In section 4.3, all individuals receiving self-directed funding are included in the Direct Payments line, therefore the turnover to GVA ratio reflects all the care activities they could use their funding for.

#### Evidence 4 Additional economic benefits of the adult social care sector

In addition to the direct economic value of the adult social care sector, the activities provided also deliver additional benefits and impacts for the wider economy. These additional impacts include:

**Health:** The provision of high quality adult social care can help to reduce hospital admissions and Accident and Emergency unit attendances among the cared for. It can also help to reduce pressure on the health service by reducing delays for people who are ready to leave hospital. A further benefit of a high quality adult social care sector is that it reduces the stress on unpaid carers. This means that unpaid carers are less likely to need to take absence from their paid employment or have absences from their job (if they are employed) due to the stresses of providing care.

**Employment:** A high quality adult social care sector can help to support individuals who receive care and unpaid carers remain in employment or (re)-enter the workforce. When an individual receiving care is provided with regular support that meets their needs, both they and any unpaid carers providing them with support can make appropriate arrangements if they want to enter/remain in work. This helps the UK economy by providing a supply of workers who can potentially address skills gaps and Hard to Fill Vacancies in the economy.

## 6 Indirect and induced effect

### 6.1 Introduction

The previous sections estimate the direct economic contribution of the adult social care sector in Scotland. This section builds on that analysis to present estimates of the additional contribution of the adult social care sector to the wider economy through:

- **Indirect effects** - resulting from the purchase of intermediate goods and services by the adult social care sector in delivering its services, which support additional employment and GVA within its supply chain; and
- **Induced effects** - resulting from purchases made by those directly and indirectly employed in the adult social care sector, who use their earnings to buy other goods and services.

### 6.2 Indirect Effects

The adult social care sector purchases a wide range of goods and services from suppliers in other sectors to support the delivery of adult social care services. Common examples of purchases made by the adult social care sector will include cleaning products and services, food and drink, building maintenance services, utilities, financial services, education and training, furniture and household goods, medical supplies, transport services and fuel, etc.

These are known as intermediate purchases, and those made by the adult social care sector will support employment and GVA among supply chain businesses. Indirect effects are estimated using Type I multipliers (supply linkage effects). The Scottish Government produces estimates of Type I multipliers, which can be used to estimate the indirect effects of different products and services on the wider Scottish economy.

The latest Scottish Government I-O analytical tables<sup>29</sup> provide estimates of Type I GVA and output multipliers. They provide separate GVA and employment multiplier effects. The relevant product group for this study is Residential care and Social work. This product group covers SIC divisions 87 and 88 and therefore covers all adult social care activities as well as children-related social care activities. It is unlikely that the indirect effects in the adult social activities differ from those in children's social care services. Therefore, it has been assumed that these multipliers are appropriate for estimating the indirect impacts of adult social care activities.

The Type I multiplier effect for the sector in Scotland is estimated to be 1.22. The multiplier is not disaggregated by type of provider. This implies that for every £1 of GVA generated by adult social care activities in the private sector, a further £0.22 of GVA is generated in the rest of the economy; the employment multiplier is estimate to be 1.20 – for every one job in the adult social care sector another 0.2 jobs in the wider economy are dependent on the sector. These Type I multipliers for Scotland are lower than the ONS Type I multipliers for the whole of the UK.

The Type I multipliers are applied to the estimates of the direct economic contribution of the adult social care sector in Table 6.1. The table show that indirect

<sup>29</sup> Scottish Government, <http://www.gov.scot/Topics/Statistics/Browse/Economy/Input-Output>

effects of intermediate purchases made by the adult social care sector contribute an additional 29,400 jobs<sup>30</sup> and £512 million to £575 million of GVA in Scotland.

The additional GVA experienced by supply chain businesses is 22% of the direct contribution of the sector. Indirect effects are largest in the private sector, reflecting their relative importance in the sector. The additional jobs generated in supply chain businesses because of adult social care activities represent 20% of the total employment in the sector.

Table 6.1 Direct and indirect economic value of the adult social care sector

	Income approach	Expenditure approach	Output approach
<b>GVA</b>			
GVA (public sector) (£'000)	561,153	727,327	618,685
GVA (private sector) (£'000)	1,059,184	1,048,930	1,197,424
GVA (voluntary sector) (£'000)	658,089	781,917	695,041
<b>Total GVA (£'000)</b>	<b>2,278,427</b>	<b>2,558,174</b>	<b>2,511,150</b>
Type I multiplier		1.22	
Indirect GVA (public sector) (£'000)	126,127	163,477	139,058
Indirect GVA (private sector) (£'000)	238,066	235,761	269,137
Indirect GVA (voluntary sector) (£'000)	147,915	175,746	156,220
<b>Total indirect GVA (£'000)</b>	<b>512,108</b>	<b>574,985</b>	<b>564,415</b>
<b>Total direct and indirect GVA (£'000)</b>	<b>2,790,534</b>	<b>3,133,159</b>	<b>3,075,565</b>
<b>Employment</b>			
Direct employment (public)		35,100	
Direct employment (private)		64,000	
Direct employment (voluntary)		48,700	
<b>Total direct employment</b>		<b>147,800</b>	
Type I multiplier		1.20	
Indirect employment (public sector)		7,000	
Indirect employment (private sector)		12,700	
Indirect employment (voluntary sector)		9,700	
<b>Total indirect employment</b>		<b>29,400</b>	
<b>Total direct and indirect employment</b>		<b>177,200</b>	

Source: ICF analysis; Employment figures rounded to the nearest 100. Totals may not equal the sum of services due to rounding.

<sup>30</sup> These are jobs, not FTEs.

### 6.3 Induced Effects<sup>31</sup>

Induced effects are assessed using Type II multipliers that capture both indirect and induced effects. The Scottish I-O tables provide estimates of Type II multipliers. The estimated Type II multiplier is 1.51 for GVA. The employment multiplier is estimated to be 1.34.

The Type II multipliers are divided by the Type I multipliers to provide the induced multiplier value (1.23 for GVA, 1.12 for employment). These induced multipliers are similar to those estimated by the ONS for the UK. The induced multipliers have been multiplied by the direct and indirect employment and GVA values to estimate the induced effects. The results are presented in Table 6.2.

The results suggest that induced effects (associated with the purchases of goods and services by individuals directly or indirectly employed by the sector) are similar to the indirect effects. The induced effects are estimated to support a further 21,400 jobs (lower than the indirect effect) and between £650 million and £730 million of GVA in the wider economy (higher than the indirect effect).

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<sup>31</sup> ICF believes it can be misleading to attribute all induced effects to the economic contribution of a particular sector at the national level. Indirect effects related to purchases of intermediate goods and services can clearly be attributed to the adult social care sector as they would not take place if the adult social care sector did not exist. The same is not true for induced effects. If the adult social care sector did not exist, it is unlikely that the purchases of goods and services made by the majority of workers in the sector would change significantly. Workers who in the absence of the adult social care sector would be unemployed (and receiving benefits) would provide induced effects (net of the value of state benefit payments). However, many of those directly or indirectly employed by the adult social care sector would be employed in other jobs in other sectors if the adult social care sector did not exist. This is the case for all sectors and industries. Therefore it can be misleading to represent these induced effects as being attributable to the sector and would cease to exist in the absence of the sector.

Table 6.2 Induced and total economic value of the adult social care sector

	Income approach	Expenditure approach	Output approach
<b>GVA</b>			
GVA (public sector) (£'000)	561,153	727,327	618,685
GVA (private sector) (£'000)	1,059,184	1,048,930	1,197,424
GVA (voluntary sector) (£'000)	658,089	781,917	695,041
<b>Total GVA (£'000)</b>	<b>2,278,427</b>	<b>2,558,174</b>	<b>2,511,150</b>
Type II multiplier		1.51	
Induced multiplier		1.23	
Induced GVA (public sector) (£'000)	160,096	207,505	176,510
Induced GVA (private sector) (£'000)	302,183	299,258	341,623
Induced GVA (voluntary sector) (£'000)	187,752	223,079	198,294
<b>Total induced GVA (£'000)</b>	<b>650,031</b>	<b>729,842</b>	<b>716,427</b>
<b>Total direct, indirect and induced GVA (£'000)</b>	<b>3,440,565</b>	<b>3,863,001</b>	<b>3,791,991</b>
<b>Employment</b>			
Direct employment (public)		35,100	
Direct employment (private)		64,000	
Direct employment (voluntary)		48,700	
<b>Total direct employment</b>		<b>147,800</b>	
Type II multiplier		1.34	
Induced multiplier		1.12	
Induced employment (public sector)		5,100	
Induced employment (private sector)		9,300	
Induced employment (voluntary sector)		7,100	
<b>Total induced employment</b>		<b>21,400</b>	
<b>Total direct, indirect and induced employment</b>		<b>198,600</b>	

Source: ICF analysis; Employment figures rounded to the nearest 100. Totals may not equal the sum of services due to rounding.

## 6.4 The total economic contribution of adult social care sector in Scotland

The adult social care sector is estimated to support a total of 198,600 jobs and £3.4 billion to £3.9 billion of GVA in Scotland. This includes all direct, indirect and induced effects. The indirect and induced effects are smaller than the direct economic effects of the adult social care sector. The indirect and induced effects account for around 32% the GVA generated, and nearly a quarter of total employment (24%).

The overall direct, indirect and induced effects of associated expenditures are estimated to represent 2.6% to 3% of all GVA and 8% of all jobs in Scotland.

### **Evidence 5 Value of informal care in Scotland**

This research provides evidence of the economic value of the formal adult social care sector in Scotland. However, the work of the sector is supported by unpaid individuals providing informal care to family members or friends. CarersUK have estimated the value of the informal care provided in Scotland.

The research uses data from the 2011 Census and population estimates to calculate that over 220,000 individuals were providing over 600 million hours of informal care to adults in Scotland in 2015. Using an estimate of £17 per hour of care provided, the value of informal care in Scotland was estimated to be nearly £11 billion in 2015 – larger than the value of the formal adult social care sector in Scotland.

## 7 Conclusion

This section provides a summary of the key findings of the economic analysis, including the five key indicators specified in the research aims. The economic indicators are then compared to other sectors within Scotland, so that the size and scale of the adult social care sector can be identified.

### 7.1 Summary of findings

The key findings from the research are presented in Table 7.1. This shows that in 2016, it was estimated that there were 147,800 jobs in the adult social care sector, and 110,000 FTEs. These individuals generated between £2.3 billion and £2.6 billion in GVA, and the level of productivity (GVA per worker) was estimated to be £20,800 to £23,300 per FTE.

The indirect effect of the adult social care sector was estimated to be the employment of nearly 30,000 people (or 22,000 FTEs) and between £512 million and £575 million in GVA. The indirect effect is due to the purchase of intermediate goods and services by the adult social care sector.

The induced effect of the adult social care sector (additional spending by those directly and indirectly employed through the adult social care sector) was estimated to be 21,400 jobs (15,900 FTEs) and between £650 million and £730 million of GVA.

The total direct, indirect and induced value of the adult social care sector in Scotland was estimated to be 198,600 jobs and 147,300 FTEs and £3.4 billion to £3.9 billion in GVA.

Table 7.1 Summary of findings

	Income approach	Expenditure approach	Output approach
Total direct employment		147,800	
Total FTE employment		109,600	
Total direct GVA (£'000)	2,278,427	2,558,174	2,511,150
Estimated productivity per person (£)	15,400	17,300	17,000
Estimated productivity per FTE (£)	20,800	23,300	22,900
Indirect employment (jobs)		29,400	
Indirect employment (FTE)		21,800	
Induced employment (jobs)		21,400	
Induced employment (FTE)		15,900	
Total employment as a result of adult social care activity (jobs)		198,600	
Total employment as a result of adult social care activity (FTE)		147,300	
Indirect GVA (£'000)	512,108	574,985	564,415
Induced GVA (£'000)	650,031	729,842	716,427
<b>Total GVA as a result of adult social care activity (£'000)</b>	<b>3,440,565</b>	<b>3,863,001</b>	<b>3,791,991</b>

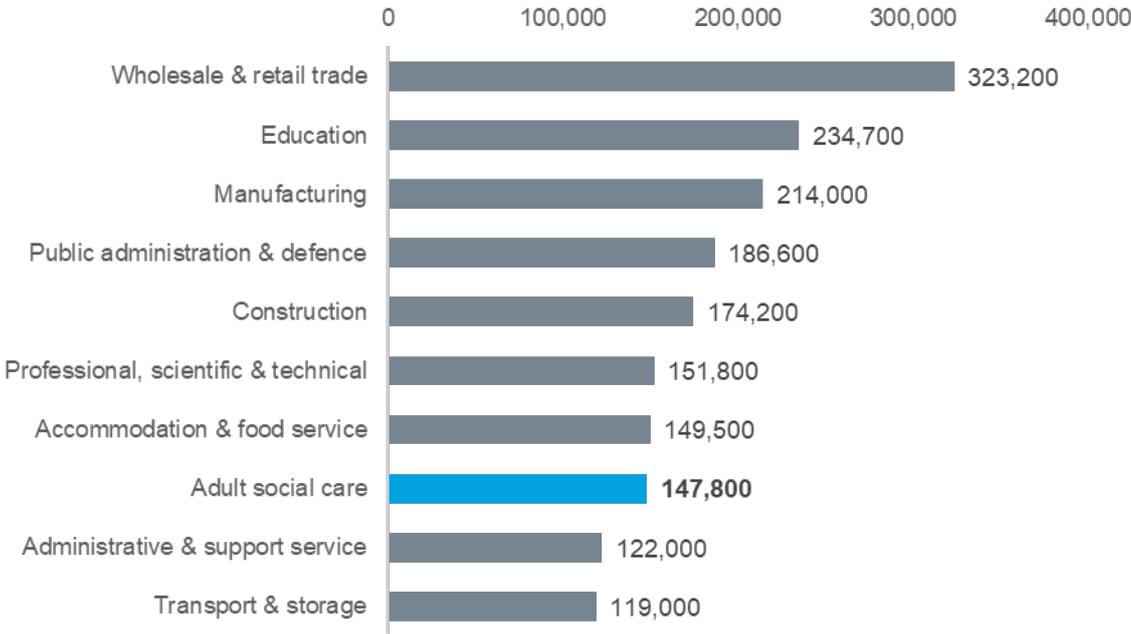
Source: ICF analysis; Employment and productivity figures rounded to the nearest 100. Totals may not equal the sum of services due to rounding.

## 7.2 Benchmarking

The Annual Population Survey (APS) provides estimates of the number of individuals working in each broad sector in Scotland. This allows the scale of employment in the adult social care sector to be compared to other sectors.

Figure 7.1 presents the employment by sector analysis, combining the findings from this research with data from the APS. This shows that the adult social care sector directly employs more workers than the transport and storage and administrative and support services sectors. Direct employment in adult social care represents 6% of total employment in Scotland. This shows that adult social care is an important sector in terms of current employment in Scotland.

Figure 7.1 Employment by sector in Scotland (sectors with highest employment), 2016

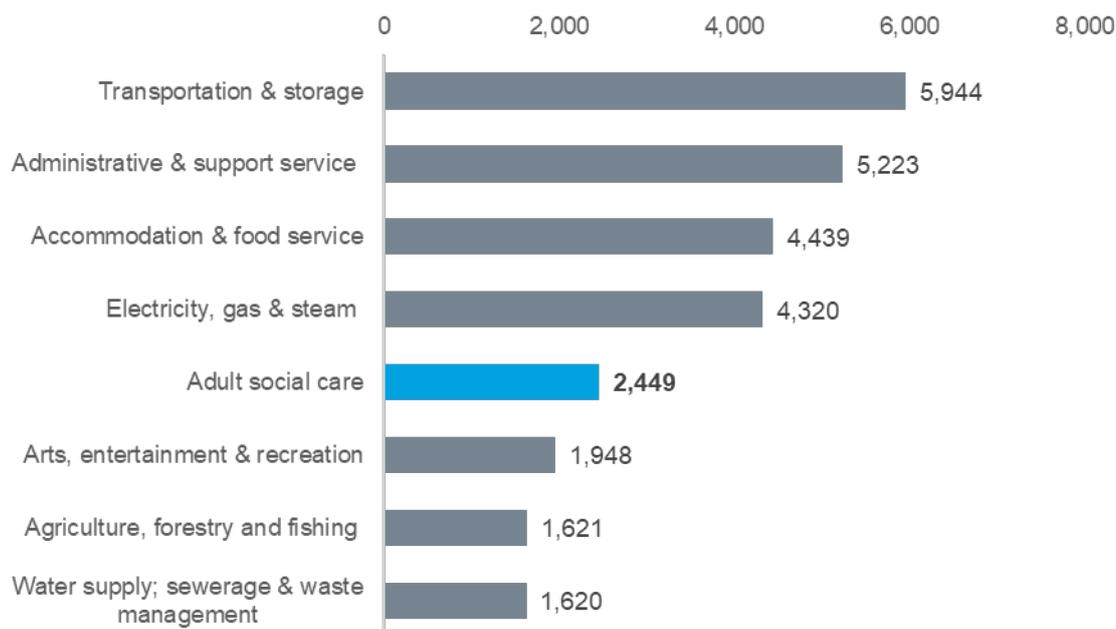


Source: Annual Population Survey; ICF analysis. Employment rounded to nearest 100. Human health and social work activities excluded from analysis

The estimated value of GVA by industry in Scotland is presented in the Regional Gross Value Added statistical series. This presents GVA by broad industrial group. The total value of GVA in Scotland in 2016 was estimated to be over £134 billion. The adult social care sector (direct GVA of £2.4 billion – arithmetic average of the three estimates) is estimated to represent 1.8% of total Scottish GVA.

Figure 7.2 presents GVA estimates by sector, for a selection of economic sectors. This shows that adult social care generates lower values of GVA than the sectors with similar levels of employment (for example transport and storage and accommodation and food service). However, it still generates a significant proportion of Scottish GVA, and the value of GVA in the sector can be expected to rise in the future as demand for adult social care services grows.

Figure 7.2 GVA by broad sector (selected sectors), £millions, 2016



Source: Regional GVA statistical series; ICF analysis. Human health and social work activities excluded from analysis

The estimated value of productivity (GVA per FTE) in Scotland has been estimated using data from the ONS Labour Productivity data series. The estimated value of productivity in England was £63,400. Productivity in the adult social care sector was estimated to be between 32% and 37% of the average productivity in Scotland. The estimated level of productivity in the adult social care sector in Scotland was lower than any specified sector in the Labour Productivity data series.

### 7.3 National comparisons

This research involved estimating the value of the adult social care sector in all the nations of the UK. The key findings from all nations are summarised in Table 7.2. This shows that the total value of the adult social care sector in Scotland is smaller than in England, but larger than in Northern Ireland and Wales in absolute terms. This is expected given the population of Scotland. The estimates show that:

- The level of productivity in the workforce is higher in Scotland than all other nations;
- The estimated GVA per capita and GVA per person aged over 65 in Scotland is higher than in all other nations;
- The estimated values from the income approach are lower than the estimates for the expenditure and output approaches in all nations; and
- The value of adult social care GVA is broadly comparable across all the nations of the UK. Scotland has the highest values of GVA per capita in each approach.

Some of the reasons behind the differences in GVA per capita in each nation are:

- In the income approach, earnings are higher in Scotland than the other UK nations. One reason for this is the introduction of the living wage in the adult social care sector in Scotland. Despite the higher earnings, there are a comparable number of FTEs (per capita) in Scotland and the other UK nations.

- In Northern Ireland, the estimated number of jobs and FTEs in the adult social care sector does not cover non-regulated services or PAs, and the earnings from these jobs (and subsequent GVA) are not estimated. This helps to explain why the estimate of GVA per capita using the income approach is lower in Northern Ireland than in the other nations, and why the productivity values for Northern Ireland are much higher than in the income estimate.
- The amount of public spending per capita on adult social care is higher in Scotland than in the other nations. There are also a comparable number of FTEs (per capita) in Scotland and the other UK nations. The higher level of public expenditure and higher average wages in the adult social care sector in Scotland helps to explain why the estimated value of GVA per capita is higher in Scotland.

Table 7.2 Comparison of the value of the adult social care sector across the UK

	England	Northern Ireland	Scotland	Wales	UK
<b>Direct economic value</b>					
Income approach (£'000)	20,277,218	544,333	2,278,427	1,153,549	24,253,526
Expenditure approach (£'000)	20,420,586	605,163	2,558,174	1,202,959	24,786,883
Output approach (£'000)	21,651,931	550,653	2,511,150	1,184,262	25,897,996
Jobs	1,488,000	38,500	147,800	83,400	1,756,100
FTE jobs	1,027,900	28,900	109,600	61,600	1,228,000
<b>Productivity per FTE</b>					
Income approach (£)	19,700	18,800	20,800	18,700	19,700
Expenditure approach (£)	19,900	20,900	23,300	19,500	20,200
Output approach (£)	21,100	19,100	22,900	19,200	21,100
<b>GVA per capita</b>					
Income approach (£)	370	290	420	370	370
Expenditure approach (£)	370	320	470	390	380
Output approach (£)	390	300	460	380	390
<b>GVA per capita 65+</b>					
Income approach (£)	2,050	1,830	2,280	1,820	2,050
Expenditure approach (£)	2,070	2,030	2,560	1,900	2,100
Output approach (£)	2,190	1,850	2,510	1,870	2,190

ICF analysis

# Part A: ANNEXES

## Annex 1 Methodology

This annex presents more details about the assumptions and calculations used to estimate the size, structure and economic value of the adult social care sector in Scotland. It aims to provide more technical detail about the methodology used to establish the estimates.

### A1.1 Introduction to the three approaches to measure GVA

The economic value of the sector has been calculated using three different approaches: the input approach; the expenditure approach; and the output approach. This was to increase the robustness of the estimates, as there were strengths and weaknesses with the availability and quality of the data required for each of approach. A brief overview of the methodologies is presented here.

The income approach to measuring GVA attempts to measure the total income generated by the sector. There are two main components of income: the earnings / wages generated by workers in the sector; and additional income generated by the sector. The approaches to measuring these two components of income are:

- **Earnings / wages.** The number of jobs and FTEs in different adult social care services and in different types of provider was estimated. This was then multiplied by the estimated average earnings for a FTE for each type of service / provider. This gave an estimate of the total earnings in the sector.
- **GOS.** The other income generated by the sector has been estimated using the GOS. The GOS is income minus operating costs (for example the income received for providing an hour of domiciliary care minus staff, transport and material costs). It is not the profit in the sector, as it does not include costs such as rent, interest payments, the depreciation of capital goods and exceptional purchases. **Therefore, it is possible for a provider to generate a GOS and still make an economic loss.** The average EDITBAR value for the care home sector (CMA, 2017) and the average value of surplus for the domiciliary care sector in the UK (UKHCA, 2018) have been multiplied by the total value of output for these services to estimate the GOS.
- These two types of income were summed together to estimate the GVA in the adult social care sector.

The expenditure approach to measuring GVA involves estimating the total level of expenditure on adult social care (public and private funding). The level of expenditure is used as a measure of spending in the sector, which is the equivalent of business turnover (value of goods and services sold). This is then converted to GVA on the basis of turnover to GVA ratios provided in the Annual Business Survey (ABS). This represents the removing of intermediate purchases. The expenditure approach for the adult social care sector requires estimates of two types of expenditure:

- Public and co-financing expenditure – the level of expenditure by the state. Data for this was collected from national statistics; and
- Self-funding. This is more difficult to estimate as there is no data available that shows the number of self-funders. The number of self-funders was estimated using findings from a rapid evidence review. The number of self-funders was multiplied by an average cost for self-funders and their demand for services (the number of hours of adult social care they needed) to estimate the total value of self-funded expenditure.
- These two types of expenditure were summed together to estimate the GVA in the adult social care sector. The total expenditure was then converted to GVA by multiplying the expenditure by the turnover to GVA ratios.

The output approach to measuring GVA involves multiplying the number of hours of adult social care that was provided by the average cost of adult social care. This provided an estimate of spending in the sector, which is the equivalent of business turnover (value of goods and services sold). This is then converted to GVA on the basis of turnover to GVA ratios provided in the Annual Business Survey (ABS). This represents the removing of intermediate purchases. The expenditure approach for the adult social care sector involved three main steps estimates:

- Identifying the hours of adult social care provided. For the care homes sector, this was estimated using capacity and average occupancy information for care homes. For the non-residential sector, the number of service users receiving non-residential care was collected and this was multiplied by the average number of hours a service user needs the service.
- The number of hours used of each service is multiplied by the average cost of the service to estimate the total value of the services used (business turnover).
- The total value of output was then converted to GVA by multiplying the expenditure by the turnover to GVA ratios.

## A1.2 The size and structure of the adult social care sector in Scotland

### A1.2.1 Number of adult social care sites

The number of sites providing regulated adult social care services in Scotland has been taken directly from the Care Inspectorate data. The database included sites which provided social care which fell outside the adult social care footprint (such as child minding). The services in the database were categorised by service provided, so non-adult social care sites were filtered out. To identify sites that provided multiple services, the postcode and service provider name variables were analysed, and duplicate sites were removed from the total number of sites. This provided the estimates of the number of provider sites in the regulated adult social sector.

No data was collected on the number of sites providing non-regulated adult social care. Non-regulated activities could include outreach activities to vulnerable individuals, advice and guidance and befriending services. To estimate the number of sites providing non-regulated adult social care in Scotland, data from the IDBR, Care Inspectorate data and SfC in England was used.

- Data was taken from the IDBR which showed the total number of local sites in the relevant Standard Industrial Classification (SIC) code classes.
- Information from SfC was used to estimate the proportion of these local sites which were providing adult social care (as the SIC code class includes providers of other caring and charitable services, such as children's services). This was multiplied by the number of local sites in the IDBR for Scotland to provide an estimate of the total number of adult social care sites. This was used as an estimated number of adult social care sites in Scotland.
- The number of regulated adult social care sites (taken from the CIARs) was subtracted from the total number of adult social care sites. This provided an estimate of the number of non-regulated adult social care sites in Scotland

An examination of the legislation in both nations was undertaken to further refine the estimates of the non-regulated adult social care sector in Scotland. This found that the non-

regulated residential care services in England (homelessness shelters and women’s refuges) were regulated in Scotland. In addition, it also found that housing support services provided in an individual’s own home are regulated in Scotland but not in England. Therefore, these services were excluded from the non-regulated adult social care sector estimates.

This gave an estimate of the number of non-regulated adult social care sites. This information is summarised in Table A1.1.

**Table A1.1** Number of non-regulated local sites

	Residential care (SIC 87)	Non-residential (SIC 88)	Total
IDBR	2,430	4,100	6,530
Proportion assumed to be adult social care	77%	32%	
Estimated number of adult social care sites in IDBR	1,870	1,300	3,180
Number of regulated sites in Care Inspectorate database <sup>32</sup>	1,770	870	2,640
Estimated number of non-regulated adult social care sites from the data	100	430	530
Removed after inspection of the legislation	100	80	180
Estimated number of non-regulated adult social care sites	0	360	360

*Source: IDBR; CIARs regulated services database; SfC data; ICF calculations; All numbers rounded to the nearest 10.*

### A1.2.2 The size and structure of the adult social care workforce

The number of workers in the regulated<sup>33</sup> adult social care sector is collected by Care Inspectorate and SSSC. This data disaggregates staff by the type of service they provide and the type of provider they work for. The data provides an estimate of the number of hours worked, which allowed an estimate of the number of FTEs to be made.

The above describes the workforce in the regulated adult social care sector in Scotland. The non-regulated workforce (those not subject to CI inspections) has been estimated using the estimate of non-regulated sites (see Table A1.1). The number of jobs per non-regulated site in England (based on SfC data) has been multiplied by the number of non-regulated sites in Scotland (see Table A1.2). The distribution of jobs across different types of adult social care provision is based on the distribution of non-regulated workers in England, calculated using SfC data (see Table A1.3).

<sup>32</sup> Excluding services relating to the care of children and removing double counting of sites. Where a Service provider supplies residential care at any site, all sites belonging to service provider have been included in the residential care category.

<sup>33</sup> By “regulated” are meant all registered adult social care services and non-registered local authority social work services.

Table A1.2 Estimated number of non-regulated employees

	Residential care	Non-residential	Total
Estimated number of non-regulated adult social care sites	0	360	360
Estimated number of jobs per site	16.5	14.9	
Estimated number of non-regulated jobs	0	5,300	5,300

Source: IDBR; CIARs and WDR regulated services database; SfC data; ICF calculations; Sites rounded to the nearest 10, workers to the nearest 100

Table A1.3 Estimated distribution of non-regulated sites and workers

Sub-sector	Number of sites	Number of jobs	%
Residential	0	0	100% (of residential)
Domiciliary	0	0	0% of non-residential
Day care	120	1,700	33% of non-residential
Other	240	3,600	67% of non-residential
Total	360	5,300	

Source: IDBR; CIARs and WDR regulated services database; SfC data; ICF calculations; Sites rounded to the nearest 10, workers to the nearest 100. Totals may not equal the sum of services due to rounding.

## A1.3 The income approach to economic value

### A1.3.1 Earnings

The earnings information provided in ASHE, according to adult social care experts (SfC), overestimated the earnings in the sector in all UK nations. No other information is collected in Scotland which presents earnings in the adult social care sector. Therefore, the value of earnings in Scotland was estimated using SfC estimates of earnings in England and information from ASHE showing the relative value of earnings in Scotland and England.<sup>34</sup>

The value of hourly earnings<sup>35</sup> in Scotland was divided by the average hourly earnings in England to establish the ratio of earnings between the two countries. The ratio was then multiplied by the values collected by SfC.<sup>36</sup>

Table A1.4 shows the estimated earnings in Scotland in 2016 by sector. The earnings are separated by type of service and type of provider (public and independent sector).

These values have been used to estimate the total value of earnings by multiplying the earnings by the number of FTEs in the adult social care sector.

<sup>34</sup> Data was collected from both ASHE and the LFS on earnings in the adult social care sector, based on appropriate SIC codes. The ratios between earnings in each nation was similar in both ASHE and the LFS. ASHE data was selected as the values are based on a larger sample.

<sup>35</sup> Hourly earnings were selected as the number of responses for hourly earnings was larger and it does not include any other potential differences in hours worked or employee benefits.

<sup>36</sup> This approach was used to estimate the earnings in all types of service provision with one exception – domiciliary care in the private and voluntary sectors. The calculations using this approach led to an estimate of earnings that was below the National Living Wage in Scotland, and all adult social care providers are required to pay the living wage. Therefore, for domiciliary care in the private and voluntary sectors, a wage slightly higher than the living wage has been used.

Table A1.4 Estimated earnings in Scotland 2016

Sector	Earnings in England (FTE)	ASHE ratio	Earnings in Scotland
<b>Public sector</b>			
Residential care (including nursing)	£19,500	106%	£20,700
Domiciliary care	£20,400	96%	£19,400
Day care	£20,700	96%	£19,700
Other	£29,700	96%	£28,300
<b>Independent sector</b>			
Residential care (including nursing)	£16,900	106%	£17,800
Domiciliary care <sup>37</sup>	£16,200	-	£17,100
Day care	£18,100	96%	£17,300
Other	£19,000	96%	£18,200
Personal Assistants <sup>38</sup>	£17,500	-	£17,100

Source: SfC data; ASHE; ICF calculations; Figures rounded to the nearest 100

### A1.3.2 Gross Operating Surplus

GOS is defined as income minus operating costs (for example the income received for providing an hour of domiciliary care minus staff, transport and material costs). In estimating GOS, it is assumed that only private sector care providers are run 'for profit', and therefore generate a GOS.

**It is important to note that the GOS does not equal the profit taken by owners and shareholders.** Only a subset of total costs are included in the GOS calculation. Long term costs such as the use of fixed capital (depreciation and amortisation), exceptional purchases, the payment of interest and taxation and rents are not removed. It is the equivalent of earnings before interest, taxes, depreciation, amortization and restructuring or rent costs (EBITDAR).<sup>39</sup>

The Competition and Markets Authority (CMA, 2017) provides a more detailed assessment of GOS in the residential care sector. This examined the annual accounts of all residential care operators in the UK that are required to file their accounts at Companies House. This found that in 2015/16 (the most recent year that comprehensive information was available), the GOS in the sector was around 16%. The 16% has been used in the analysis. It should be noted that this is a simplifying assumption for the calculation, rather than conducting primary research (examining all adult social care providers annual accounts) to estimate the level of GOS. 16% has been multiplied by the output of the residential and nursing care sectors.

The GOS for domiciliary care providers has been estimated using information taken from the United Kingdom Homecare Association (UKHCA, 2017). This research provided information which was used to estimate an equivalent of the EBITDAR value to represent GOS. It was

<sup>37</sup> The value for earnings in the domiciliary care sector has not been calculated in the same way. This is because the calculation estimated earnings to be below the Scottish Living Wage value. Therefore, the earnings used were 105% the Scottish Living Wage.

<sup>38</sup> Ibid.

<sup>39</sup> The EBITDAR value has been used in the analysis as it is the preferred measure in both the LaingBuisson report and the CMA market analysis. The EBITDA measure, where rents and restructuring costs are assumed to be operating costs is used in the sensitivity analysis in Annex 2

estimated that the GOS margin in the home care market was 11.3% for private domiciliary providers and 8.3% for voluntary providers. The estimation of GOS included the following cost indicators to calculate the GOS (attempting to be the equivalent of EBITDAR):

- Care worker costs;
- Staffing, recruitment and training;
- Consumables; and
- Professional costs.

The cost indicators which were excluded from the estimation of the GOS in the domiciliary care were:

- Net profit / surplus (3%) – included for the estimation of GOS in the private sector, but assumed to be zero in the estimation of GOS in the voluntary sector;
- Premises, utilities and services (5.8%); and
- Other business overheads (3%).

There is no information available for the value of GOS for day care and other services. Therefore, no attempt has been made to estimate the GOS in these services. Finally, it has been assumed that there is no GOS in the employment of PAs – it is assumed that they are directly employed and there is no additional income above their pay.

### A1.3.3 Direct employers

The estimation of the number of direct employers and the number of PAs they employ is based on Scottish Government data and SfC research. The Scottish Government provide publicly available statistics which show the number of individuals receiving direct payments. There are no recent Scottish estimates of the number of PAs. SfC estimate that just under one third (29%) of individuals receiving direct payments directly employ their own staff. Each individual employing staff employs an average 2.1 workers.

On average, each direct employer requires 17 hours of care per week (0.46 FTEs). A PA is assumed to be paid the average wage for an independent worker in the domiciliary care sector.

The number of FTEs per employer (0.46) is multiplied by the average earnings per FTE and the number of direct payments recipients employing a Personal Assistant to estimate the value of direct employment in Scotland.

## A1.4 The expenditure approach to economic value

Data which presents the value of public sector spending and co-funding in the adult social care sector was collected from the Scottish Government Local Authority expenditure dataset, and from the Health and Social Care Integrated Resource Framework NHS Scotland and Local Authority Social Care Expenditure - Financial Years 2012/13 - 2015/16. The data is disaggregated by type of user and type of service.

However, this data does not cover the expenditure by self-funders. There is no data which provides statistics on the number of self-funders or the value of their expenditure. Therefore, information was taken from existing literature to estimate the number and value of self-funding in Scotland.

LaingBuisson (2017) estimate the proportion of individuals in residential care who are self-funders. In Scotland, 36% of residents are estimated to be self-funders. The report also produces estimates of the total capacity of the sector and occupancy rates. Using these figures, it was possible to estimate the number of self-funders (see Table A1.5).

The Scottish Government and other organisations produce statistics which show the number of people receiving funding for domiciliary and day care. The number of people receiving domiciliary (home care) is collected in the Social Care Services statistical release. The number of people receiving day care was harder to estimate. Up until 2007, the Scottish Government collected this information, but it is no longer collected. The Learning Disability Statistics Scotland produce evidence of the number of people with learning difficulties, disaggregated by age, who receive day care. The self-directed Support Scotland statistics produce estimates of the number of people who use self-directed care to attend social, educational and recreational activities (assumed to be day care). Using information from these sources, it was estimated that over 20,000 individuals received day care in Scotland in 2016.

There are no statistics available to show the number of individuals who fund their own care. An evidence review was conducted to find evidence of the number of people who fund their own non-residential social care. This found a wide range of estimates, including:

- 20% of individuals receiving homecare in the UK fund their own homecare;<sup>40</sup>
- 21% of individuals receiving homecare in the UK fund their own domiciliary care;<sup>41</sup>
- Between 20% and 25%, of individuals receiving homecare based on studies between 2004 and 2011;<sup>42</sup>
- 30% of individuals receiving homecare in England;<sup>43</sup> and
- 35% of expenditure on home care in England.<sup>44</sup>

These were used to help to estimate the number of individuals who self-fund their care. In the analysis in the main report, it has been assumed that 25% of individuals self-fund their domiciliary and day care in Scotland. This is based on the analysis that 30% of individuals in England self-fund their non-residential care – however, in England 43% of individuals self-fund their residential care (compared to 36% in Scotland). Adjusting the 30% figure in line with this leads to an estimate that 25% of individuals in Scotland self-fund their non-residential care.

For other services, it is not possible to disentangle the number of individuals who pay for their own care, due to the diverse nature of services and prices for services. Therefore, it has been assumed that 25% of the total output for other services in Scotland is self-funded.

**Table A1.5** Estimates of the number of self-funders, Scotland

Type of provision	Total number of individuals receiving support	Proportion of individuals who are self-funders	Number of self-funders
Residential care	4,500	36%	2,500
Residential care with nursing	16,100	36%	8,900
Domiciliary care	59,800	25%	19,500
Day cases	20,400	25%	6,700

*LaingBuisson; Scottish Government statistics (Social Care Services and Home Care Census); ICF calculations; Figures rounded to the nearest 100*

<sup>40</sup> HM Government (2012) Caring for our future: reforming care and support; Institute of Public Care, Oxford  
Brookes (2015) Understanding the self-funding market in social care A toolkit for commissioners

<sup>41</sup> UK Care Homes Association (2016) An overview of the Domiciliary Care Market in the UK

<sup>42</sup> National Institute for Health research (2014) People who fund their own social care

<sup>43</sup> Personal Social Services Research Unit (2015) Projections of Demand for and Costs of Social Care for Older People and Younger Adults, 2015 to 2035

<sup>44</sup> LaingBuisson (2017) Care of Older People

The usage of services by self-funders is assumed to be the same as the usage of services by funded individuals. This means that:

- Residential care users require 52 weeks of care;
- Domiciliary care users require 11 hours of care per week (598 hours per year); and
- Day care users require 2.5 sessions of day care per week (130 sessions per year).

The unit cost for self-funders is assumed to be higher than for those for funded individuals. Previous research estimated that this mark-up was 20%, but the more recent studies by LaingBuisson (2017) and the CMA (2017) estimate that the mark-up is over 40%, and data from the Scottish Care Home Census (2016) confirm this. A mark-up of 20% of the unit cost has been used in the domiciliary and day care sectors. This mark-up has been added to the value of funded care. The unit cost of social care for self-funders in Scotland is presented in Table A1.6.

The number of self-funders was multiplied by the unit cost of care for self-funders and the volume of care they require. This gives the total value of the self-funded market in Scotland. This was then added to the value of public and co-funded expenditure to estimate the total expenditure in the adult social care sector.

Table A1.6 Unit costs for care in Scotland

	Unit cost for funded individuals	Unit cost for self-funders
Residential care	£530 / week	£760 / week
Residential care with nursing	£610 / week	£810 / week
Domiciliary care	£23 / hour	£28 / hour
Day cases	£70 / session	£84 / session

*ISD (2016) Care Home Census; PSSRU, Unit Cost of Health and Social Care, 2016; LaingBuisson; ICF calculations*

### A1.5 The output approach economic value

The output approach to estimating the economic value of adult social care multiplies the quantity of services used by individuals in Scotland by the unit cost of each type of provision.

The number of individuals using each type of service is presented in Table 5.1, Table 5.2 and Table 5.3 in the main report. This includes individuals who receive funding for their care and individuals who self-fund their care. The unit costs for residential and nursing care were taken from the Care Home Census (2016). The unit costs used in the calculations for non-residential care are taken from the PSSRU (2016) report. The cost of adult social care in Scotland (taken from LaingBuisson, 2017) was divided by the costs in England, to establish the ratio of earnings between the two countries. The ratio was then multiplied by the unit costs from the PSSRU research to estimate the costs in Scotland.

### A1.6 Indirect and induced effects

In order to attribute output / expenditure to public sector providers, workforce and care home capacity data was used. The Scottish Government I-O tables produce estimates of Type I and Type II multipliers. These values have been taken directly from the Scottish I-O tables.

In order to estimate the indirect and induced effect disaggregated by sector, the output / expenditure generated by public, private and voluntary sector providers needed to be calculated. This has been done using information about the output of public, private and

voluntary sector providers in the residential and nursing care sectors, and the percentage of total employment which is public / private / voluntary sector from the workforce data.

## Annex 2 Sensitivity analysis

This annex provides a sensitivity analysis of the estimates of the size, structure and economic value of the adult social care sector in Scotland. Some of the calculations used to estimate the size, structure and economic value of the sector involve assumptions and data manipulation. In the sensitivity analysis, some of these assumptions are varied, to show how sensitive the overall results are to these assumptions. The sensitivity analysis presents a range of values (a high and a low estimate) of the value of the adult social care sector in Scotland.

The sections below show the assumptions which have been varied, and the values used in the calculations. Other than these changes, the calculations undertaken are exactly as set out in the main report and Annex 1. The final results of the sensitivity analysis (Employment, expenditure / output and GVA) are presented, but the intermediary tables (included in the main report) are not recreated.

### A2.1 The size and structure of the adult social care sector in Scotland

The assumptions around the number of unregulated sites providing adult social care and the number of workers at each unregulated site has been varied in the sensitivity analysis. The varied assumptions are presented in Table A2.1.

The results of the varied assumptions are presented in Table A2.2. This shows that despite varying the assumptions, the estimated number of sites providing adult social care does not alter significantly. This is because the majority of sites providing adult social care are regulated.

The number of FTEs in the sector also varies. Again, the difference in total employment is negligible (a difference of nearly 4,000 between the highest and lowest estimate, or 4% of the low estimate). Again, this is because the large majority of the workforce is in the regulated sector.

Table A2.1 Assumptions varied in the sensitivity analysis of the size and structure of the adult social care sector

	Low	Central	High	Calculation
Number of unregulated sites providing adult social care	290	360	430	+/- 20%, to reflect uncertainty
Number of worker per unregulated site – social work	13.4	14.9	16.4	+/- 5%, to reflect uncertainty

Table A2.2 Results of the sensitivity analysis of the size and structure of the adult social care sector in Scotland

	Low	Central	High
<b>Sites</b>			
Residential care	1,150	1,150	1,150
Nursing care	0	0	0
Domiciliary care	2,040	2,040	2,040
Day care	590	610	640
Other services	230	280	330
<b>Total sites</b>	<b>2,910</b>	<b>2,980</b>	<b>3,050</b>
<b>Jobs (FTE)</b>			
Residential care	42,100	42,100	42,100
Nursing care			
Domiciliary care	49,300	49,300	49,300
Day care	6,400	6,700	7,200
Other services	8,500	9,300	10,300
<b>Total</b>	<b>106,700</b>	<b>107,800</b>	<b>110,300</b>

## A2.2 The income approach to economic value

Table A2.3 presents the assumptions which have been varied for the income approach estimates. These include the number of workers in the sector, the average estimated earnings and the level of profit generated by the sector. These have been varied as they all include assumptions and calculations, rather than being taken directly from data sources.

Table A2.3 Assumptions varied in the sensitivity analysis of the income approach

	Low	Central	High	Calculation
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	Low	Central	High	Calculation
Number of workers	See Table A2.2			
<b>Average earnings – public sector</b>				+/- 5% to reflect uncertainty; with a minimum value of 17,100, due to Scottish Living Wage
Residential care (£)	19,600	20,700	21,700	
Nursing care (£)	19,000	20,000	21,000	
Domiciliary care (£)	18,500	19,400	20,400	
Day care (£)	18,700	19,700	20,700	
Other services (£)	26,900	28,300	29,700	
<b>Average earnings – private and voluntary sector</b>				
Residential care (£)	17,100	17,800	18,700	
Nursing care (£)	17,100	17,800	18,700	
Domiciliary care (£)	17,100	17,100	17,900	
Day care (£)	17,100	17,300	18,100	
Other services (£)	17,200	18,200	19,100	
Personal Assistants (£)	17,100	17,100	17,900	
GOS – residential care	7.5%	16%	19.5%	EBITDA, EBITDAR (CMA); EBITDAR (LaingBuisson)
GOS – private domiciliary care	8.3%	11.3%	15.3%	UKHCA report
GOS – voluntary domiciliary care	6.3%	8.3%	10.3%	UKHCA report

The results of the sensitivity analysis are presented in Table A2.4. This shows that when the assumptions for the calculations are varied, the total value of GVA generated in the adult social care sector varies by £413 million. This represents 20% of the low estimate of the adult social care sector. The largest differences are seen in the residential and nursing care sectors, as more elements of GVA have been altered (earnings, workers and profit levels).

Table A2.4 Results of the sensitivity analysis of the income approach

GVA estimate	Low (£'000)	Central (£'000)	High (£'000)
Residential care	806,300	933,051	1,018,409
Nursing care	-	-	-
Domiciliary care	913,426	952,228	1,033,590
Day care	114,745	123,706	137,483
Other services	207,556	233,474	263,932
Direct payments	35,968	35,968	37,766
<b>Total</b>	<b>2,077,994</b>	<b>2,278,427</b>	<b>2,491,180</b>

Individual row totals may be not sum due to rounding. Totals may not equal the sum of services due to rounding.

## A2.3 The expenditure approach to economic value

The assumptions which have been varied for the sensitivity analysis of the expenditure approach to measuring the value of the sector are presented in Table A2.5. Where data was taken directly from official statistics and did not require further estimation or manipulation, no sensitivity analysis has been undertaken. Therefore, the only areas where sensitivity analysis has been conducted is for self-funders – the proportion of service users who self-fund, and the unit cost for self-funded care.

Table A2.5 Assumptions varied in the sensitivity analysis of the expenditure approach

	Low	Central	High	Calculation
Proportion of individuals who are self-funders				+/- 5% to reflect uncertainty; Assumed 25% of non-residential care services in England are self-funders (low); 32% are self-funders (high)
Residential care	33.8%	35.6%	37.4%	
Nursing care	33.8%	35.6%	37.4%	
Domiciliary care	19.6%	24.6%	27.6%	
Day care	19.6%	24.6%	27.6%	
Proportion of 'other services' which are self-funded	19.6%	24.6%	27.6%	
Unit cost of self-funded care				+/- 5% to reflect uncertainty
Residential care	£720 / week	£760 / week	£790 / week	
Nursing care	£770 / week	£810 / week	£860 / week	
Domiciliary care	£26 / hour	£28 / hour	£29 / hour	
Day care	£79 / hour	£84 / session	£88 / hour	

The results from the sensitivity analysis are presented in Table A2.6. This shows a range in the estimates of £147 million due to the changes in the assumptions. This represents 6% of the low estimate of total GVA of the adult social care sector.

Table A2.6 Results of the sensitivity analysis of the expenditure approach

GVA estimate	Low (£'000)	Central (£'000)	High (£'000)
Residential care		1,140,600	
Nursing care			
Domiciliary care	447,839	453,724	459,609
Day care	129,701	139,967	147,965
Other services	734,453	765,208	783,580
Direct payments	58,675	58,675	58,675
<b>Total</b>	<b>2,478,323</b>	<b>2,558,174</b>	<b>2,625,073</b>

Individual row totals may be not sum due to rounding. Totals may not equal the sum of services due to rounding.

## A2.4 The output approach economic value

As with the sensitivity analysis for the expenditure approach, the only values that have been altered are those which required estimation and data manipulation. For the output approach, this meant the unit cost of adult social care and the number of care users. The values used in the sensitivity analysis are presented in Table A2.7.

Table A2.7 Assumptions varied in the sensitivity analysis of the output approach

	Low	Central	High	Calculation
Unit cost of adult social care				+/- 5% to reflect

	Low	Central	High	Calculation
Residential care – public provision	£1,050 / week	£1,110 / week	£1,160 / week	uncertainty
Residential care – private provision	£590 / week	£630 / week	£670 / week	
Nursing care	£690 / week	£730 / week	£770 / week	
Domiciliary care	£23 / hour	£24 / hour	£26 / hour	
Day care	£71 / session	£73 / session	£75 / session	
Residential care for younger adults	£960 / week	£1,010 / week	£1,060 / week	
Direct payment recipients	£14 / hour	£15 / hour	£16 / hour	
Number of self-funded care users	See Table A2.5			

The results of the sensitivity analysis are presented in Table A2.8. This shows that by varying the assumptions for the unit cost of care and the number of individuals who self-fund their care, the results for the value of adult social care varies from £2.4 billion to £2.7 billion. This represents a £303 million difference between the high and low estimates, or 13% of the low value of the sector.

Table A2.8 Results of the sensitivity analysis of the output approach

GVA estimate	Low (£'000)	Central (£'000)	High (£'000)
Residential care	346,594	364,835	383,077
Nursing care	645,458	679,430	713,401
Domiciliary care	500,327	559,824	628,082
Day care	114,491	125,570	134,305
Other services	734,453	765,208	783,580
Direct payments	15,198	16,283	17,369
<b>Total</b>	<b>2,356,520</b>	<b>2,511,150</b>	<b>2,659,815</b>

*Individual row totals may be not sum due to rounding. Totals may not equal the sum of services due to rounding.*

## Annex 3 Bibliography

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