Appendix H: Quantitative Analysis of Indicators of Competition and Investment

Introduction

H.1 This appendix sets out quantitative analysis to explore the impact of the operation of the Act on competition and investment. This seeks to identify broad sector-level relationships between the value of subsidy spend and measures of competition and investment by analysing correlations.

H.2 Given the limited period of time that the Act has been in operation, this analysis should be considered exploratory in nature and as a building block for possible future analysis. It is not intended to be interpreted as providing direct evidence on the impact or the effect of the subsidy control regime, or subsidies given under the Act, on competition and investment in a definitive or causal way. [1]

H.3 We first describe the main findings of the analysis. We then set out in detail the methodology (and limitations) and findings of the competition indicator analysis, and then for investment measures.

Main findings

H.4 The analysis of the available data found no evidence of a widespread relationship between sector-level measures of subsidy value and indicators of competition and investment.[2] Any relationships found were not robust to the exclusion of 'outlier' observations. In particular:

(a) We only found relationships between measures of concentration and subsidy value (in absolute terms and relative to sector size) when sector D ('Electricity, gas, steam and air conditioning supply') was included in the analysis; and

(b) We only found relationships between investment rates and measures of subsidy value (in absolute terms and relative to sector size) when the combined sectors D ('Electricity, gas, steam and air conditioning supply') and

[1] A causal analysis may be possible in the future if data becomes available at a more granular sector level and covers a longer time-period since the Act came into force. There may still be challenges with a causal analysis in the future, for example due to uncertainty over what would have happened in the counterfactual.
[2] Subsidy values should be interpreted as estimates for the purposes of this analysis due to the limitations relating to calculating them using the Subsidy Database. For example, the value of some subsidy awards may be an explicit estimate of unknown future amounts, or provided as a range, and/or may be attributed to an individual year on the database despite the subsidy payments being spread across more than one year, such as Contracts for Difference awards. Such limitations are discussed in detail in the Methodology section of Appendix G.

E ('Water supply; sewerage, waste management and remediation activities') were included in the analysis.

H.5 This evidence suggests that public authorities are not generally spending more on sectors (in total and relative to sector size) which tend to be more, or less, competitive or attract higher or lower levels of investment on average. However, sector D ('Electricity, gas, steam and air conditioning supply') and combined sectors D and E ('Electricity, gas, steam and air conditioning supply' and 'Water supply; sewerage, waste management and remediation activities') are exceptions to this when it comes to some measures:

(a) sector D receives a large amount of subsidy value (in total and relative to the sector's size) and on average it is a more concentrated sector; and

(b) together sector D and E receive a large amount of subsidy value (in total and relative to the combined size of the sectors) and on average have a higher investment rate.

Competition Indicators

H.6 In this section we present our analysis of the correlation between the value of sector-level subsidy spend and the following indicators of competition:

(a) price-cost markup ratios;

(b) market concentration measures; and

(c) business dynamism measures.

H.7 Such correlations would indicate whether subsidies tend to be targeted at sectors which are more, or less, competitive on average.

H.8 We have performed this analysis (i) including all sectors for which we have sufficient data,[3] and (ii) excluding sector D ('Electricity, gas, steam and air conditioning supply'). This is because sector D receives a significantly larger overall subsidy value compared to any other sector, making it an outlier in terms of subsidy spend.

Price-Cost Markup Ratios

H.9 Price-cost markups reflect how much higher the price of a good or service is than the marginal cost of producing that good or service (ie the cost of producing the final unit of that good or service). Competitive pressure tends to push prices down

[3] Data was not available for all indicators for each sector. For example, cost mark-up data was not available for sector D ('Electricity, gas, steam and air conditioning supply') and sector E ('Water supply; sewerage, waste management and remediation activities'), among others.

to where firms can just cover marginal cost. However, in less competitive markets firms may be able to increase prices above marginal costs by restricting production.[4] This means that markets with greater price-cost marks ups may be less competitive.

H.10 This analysis uses a price-cost markup ratio measure, capturing the size of sector-level markups relative to that of the whole UK economy. This indicates if a sector is more or less competitive on average compared to the wider economy.[5]

Methodology

H.11 The data underlying this section of analysis comes from the subsidy database, the Office of National Statistics (ONS), and the CMA's Microeconomics Unit (MU).

H.12 Data on subsidies was sourced from the subsidy database and is described in detail in the Methodology section of Appendix G (see paragraphs G.16 to G.22).[6] This was obtained on 31 March 2026 and was used to produce a single dataset covering Standalone subsidies and Subsidies under Schemes awarded between 4 January 2023 and 31 December 2025, based on the subsidy award dates listed in the Database.[7] The dataset includes subsidy and scheme-level information such as:

(a) the public authority providing the award;

(b) details of the award beneficiary (eg business name, size, sector classification at the broad SIC-1 (Section) level[8]); and

(c) details of the award (eg date, subsidy value,[9] instrument type,[10] purpose,[11] and region the subsidy is allocated to).

H.13 This analysis draws on the subsidy value variable. We aggregated this per sector across the period 4 January 2023 to 31 December 2025 to obtain a measure of the total subsidy value awarded to a sector during the Regime.

H.14 The assumptions used in producing the dataset covering Standalone subsidies and Subsidies under Schemes awarded between 4 January 2023 and 31 December 2025 are set out in the Methodology section of Appendix G (see

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[4] CMA (2024), The State of UK Competition Report 2024, paragraphs 2.3 and 2.4.
[5] If a sector has a price-cost markup ratio greater than 1, then that sector has a greater average markup than the UK economy. If the ratio is less than 1, the sector has a smaller average markup than the UK economy.
[6] View subsidies awarded by UK public authorities - GOV.UK
[7] This analysis does not make use of the dataset including information on Minimal Financial Assistance and Services of Public Economic Interest Assistance subsidies.
[8] For example: Manufacturing; Construction; Arts, entertainment and recreation.
[9] Where a public authority did not provide an exact subsidy value then the mid-range of the provided estimate or range is used. For example, tax relief rate subsidies are provided in ranges as the exact subsidy value will depend on beneficiaries' future taxable revenues and/or returns subject to the tax rate relief.
[10] For example: Direct Grant; Loan; Equity Stake.
[11] For example: Research and Development; Environmental Protection; Cultural or Heritage.

paragraphs G.21 and G.22). As noted there, our analysis is limited by the quality of the database. For example, there may be a degree of misreporting through human data entry error.

H.15 We have also sourced data from the ONS on Gross Value Added (GVA).[12] GVA is a measure of the contribution to Gross Domestic Product (GDP) made by an individual producer, industry, sector, or region.[13] This was used with the data from the database described above to produce an additional variable capturing relative subsidy value. The GVA data and steps taken to produce the relative subsidy value variable are described in the Methodology section of Appendix G (see paragraphs G.23 to G.26).[14]

H.16 Relative subsidy value is used in this analysis to capture the total subsidy value awarded to a sector relative to that sector's size. This variable enables analysis of correlations between competition and investment indicators and subsidy value relative to sector size, in addition to total subsidy value. This helps identify and avoid placing weight on any correlations that are driven by correlation between sector size and the variables of interest.

H.17 Price-cost markup data was sourced from the MU.[15] As set out in more detail in the 'State of Competition Report 2024', price-cost markups were estimated as a ratio of price to marginal cost at the firm level.[16] Marginal costs cannot be directly observed and therefore the MU estimated these using a production function approach. Some sectors are not suitable for this approach, for example those dominated by public-sector firms and those where firms do not follow the standard cost-minimising behaviour required by the method, and so multiple sectors were excluded from the analysis.[17]

H.18 To obtain markups at the broad SIC-1 level and the economy-wide level, a weighted average of firm markups by firm turnover was used. Sector-level and economy-wide estimates for the last five years of available data at the time of analysis (2017 to 2021) were averaged to obtain average markups for each sector and the whole economy over time. An average price-cost markup ratio was then

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[12] Office for National Statistics (2025), Regional gross value added (balanced) by industry: all ITL regions - Office for National Statistics, Table 1c 'ITL1 & UK current price estimates'.
[13] OECD (2008), *OECD Glossary of Statistical Terms*, OECD Publishing, Paris, https://doi.org/10.1787/9789264055087-en.
[14] Relative subsidy value was calculated at the sector-level by dividing the total subsidy value to a sector (between 2023 and 2025) by its average GVA (between 2019 and 2023).
[15] This is presented in CMA (2024), The State of UK Competition Report 2024. For example, see Figure 5.
[16] CMA (2024), The State of UK Competition Report 2024 provided a detailed methodology of how these were calculated (see paragraphs D.1 to D.33). Note that a component of markups, the elasticity of substitution, is estimated by pooling firms at the SIC-2 level.
[17] The data covering price-cost markup ratios did not include the following sectors that appear in the database: A (Agriculture, forestry and fishing); B (Mining and quarrying); D (Electricity, gas, steam and air conditioning supply); E (Water supply; sewerage, waste management and remediation activities); K (Financial and insurance activities); L (Real estate activities); O (Public administration and defence; compulsory social security) ; P (Education); Q (Human health and social work activities); and T (Activities of households as employers; undifferentiated good- and services-producing activities of households for own use).

created by comparing the five-year average sector markups against that of the whole economy.

H.19 Finally, we assessed the correlation between sector-level five-year average price-cost markup ratios, and total subsidy value and relative subsidy value.

H.20 Throughout this appendix sectors are identified by SIC-1 codes. Table H.1 below sets out the SIC-1 codes and the associated Section level name of the sector, based on the UK SIC structure from the ONS.

Table H.1: UK SIC-1 (Section) Codes

SIC-1 Code	*Section Name*
A	Agriculture, forestry and fishing
B	Mining and quarrying
C	Manufacturing
D	Electricity, gas, steam and air conditioning supply
E	Water supply; sewerage, waste management and remediation activities
F	Construction
G	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	Transport and storage
I	Accommodation and food service activities
J	Information and communication
K	Financial and insurance activities
L	Real estate activities
M	Professional, scientific and technical activities
N	Administrative and support service activities
O	Public administration and defence; compulsory social security
P	Education
Q	Human health and social work activities
R	Arts, entertainment and recreation
S	Other service activities
T	Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use
U	Activities of extraterritorial organisations

Source: UK Standard Industrial Classification 2007 (UK SIC 2007 - Office for National Statistics).
Note: Sector U does not appear in the Database.

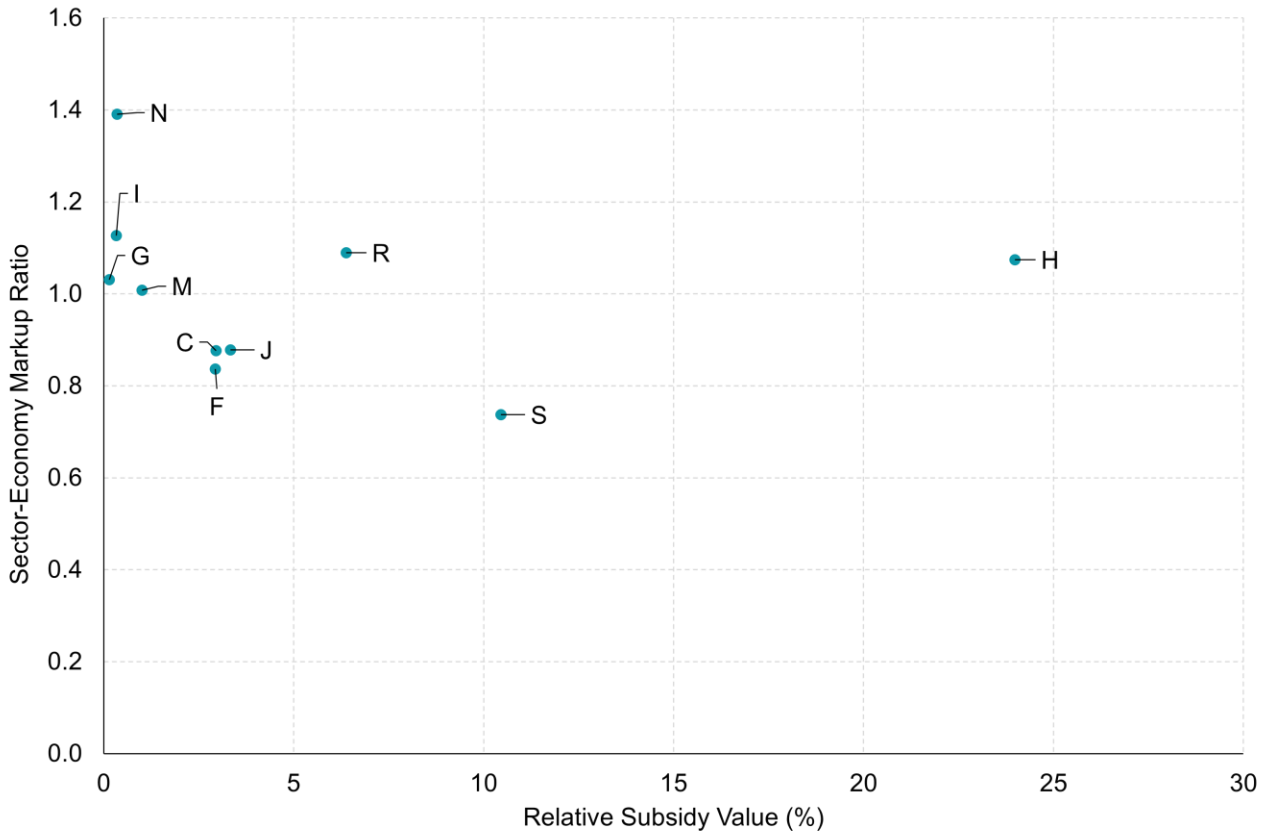
Results

H.21 Our analysis of the available data found no evidence of a relationship between sector-level price-cost markup ratios and subsidy value (in both absolute terms and relative to sector size). In particular, we found weak and statistically insignificant negative correlations between these measures.

H.22 For example, Figure H.1 below shows for each sector the relative subsidy value received plotted against the average price-cost markup ratio of each sector relative to that of the wider economy. This shows that there is a weak and statistically insignificant negative correlation, implying that there is no relationship

between subsidy value (relative to sector size) and price-cost markup ratios in the sectors available in the data.

Figure H.1: Sector-Economy Price-Cost Markup Ratio against Relative Subsidy Value by Sector



Sources: SAU analysis of data from the UK Subsidy Database (2023-2025), ONS balanced UK regional GVA data by industry (current price estimates) (2019-2023), and cost markups estimated by the CMA's Microeconomics Unit for the State of Competition Report 2024.
Notes: See Table H.1 for the Section names associated with the SIC-1 codes included on the figure. Relative subsidy value is calculated as total subsidy value as a percentage of average Gross Value Added. Cost markup data was provided by the CMA's Microeconomics Unit, calculated as weighted averages of firm turnover at the SIC-2 level. Where subsidy values were reported as ranges the middle of the range has been used. Subsidy value has not been adjusted to account for inflation.

H.23 This suggests that subsidies granted under the Act are not being targeted at sectors which tend to have higher or lower price-cost markups (and are therefore less or more competitive respectively) relative to the wider economy.

Market Concentration Measures

H.24 Market concentration measures the extent to which a market or industry is dominated by a small number of large firms. Higher levels of concentration mean that a smaller number of firms control a larger share of the market, which may lead to weaker competitive pressures and greater market power.[18]

[18] CMA (2024), The State of UK Competition Report 2024, paragraph 1.14.

H.25 This analysis uses the following measures of concentration, defined in the Methodology section below (see paragraph H.29 (a) and (b)):

(a) Herfindahl-Hirschman Index (HHI);

(b) Concentration Ratio for the five largest firms in an industry (CR5); and

(c) Concentration Ratio for the ten largest firms in an industry (CR10).

H.26 For each measure, a higher number indicates that a sector may be less competitive.

Methodology

H.27 The data underlying this section of analysis comes from the subsidy database, the ONS, and the MU.

H.28 The data on subsidies is the same as that described in the price-cost markup ratio methodology section above (see paragraphs H.12 to H.16).

H.29 Concentration data for the HHI, CR5 and C10 measures was obtained from the MU.[19] As set out in more detail in the State of Competition Report 2024, these were produced in the following ways:

(a) HHI is the sum of the squares of the market shares of all firms in an industry. Squaring market shares places a greater weight on the presence of larger firms. A market is thought to be moderately concentrated if its HHI is above 1,500, and highly concentrated if its HHI is above 2,500.[20]

(b) The Concentration Ratio for the N largest firms in an industry is calculated by summing the market shares of the N largest firms. It represents the share of an industry's turnover accounted for by the N largest firms.[21]

H.30 Each concentration measure was calculated at the SIC-4 level. To obtain these at the broad SIC-1 level, a SIC-4 turnover-weighted average was used.[22] The sector-level measures were then averaged across the last five years of available data at the time of analysis (2017 to 2021) to obtain average concentration measures for

[19] This is presented in CMA (2024), The State of UK Competition Report 2024. For example, see Figure 14 and 15.
[20] CMA (2024), The State of UK Competition Report 2024, paragraphs 3.9 and 3.10.
[21] CMA (2024), The State of UK Competition Report 2024, paragraph 3.8.
[22] CMA (2024), The State of UK Competition Report 2024 sets out that HHIs were calculated at the SIC-4 level. By the usual standards competition agencies use, average concentration levels are therefore stable and moderate. However, we expect most markets to be smaller than SIC-4 industries, and market-level HHIs therefore to be higher. (See Figure 15 and paragraph 3.14).

each sector over time. Like markups, these measures were not available for all sectors.[23]

H.31 Finally, we assessed the correlation between sector-level five-year average concentration measures, and sector-level total subsidy value and relative subsidy value.

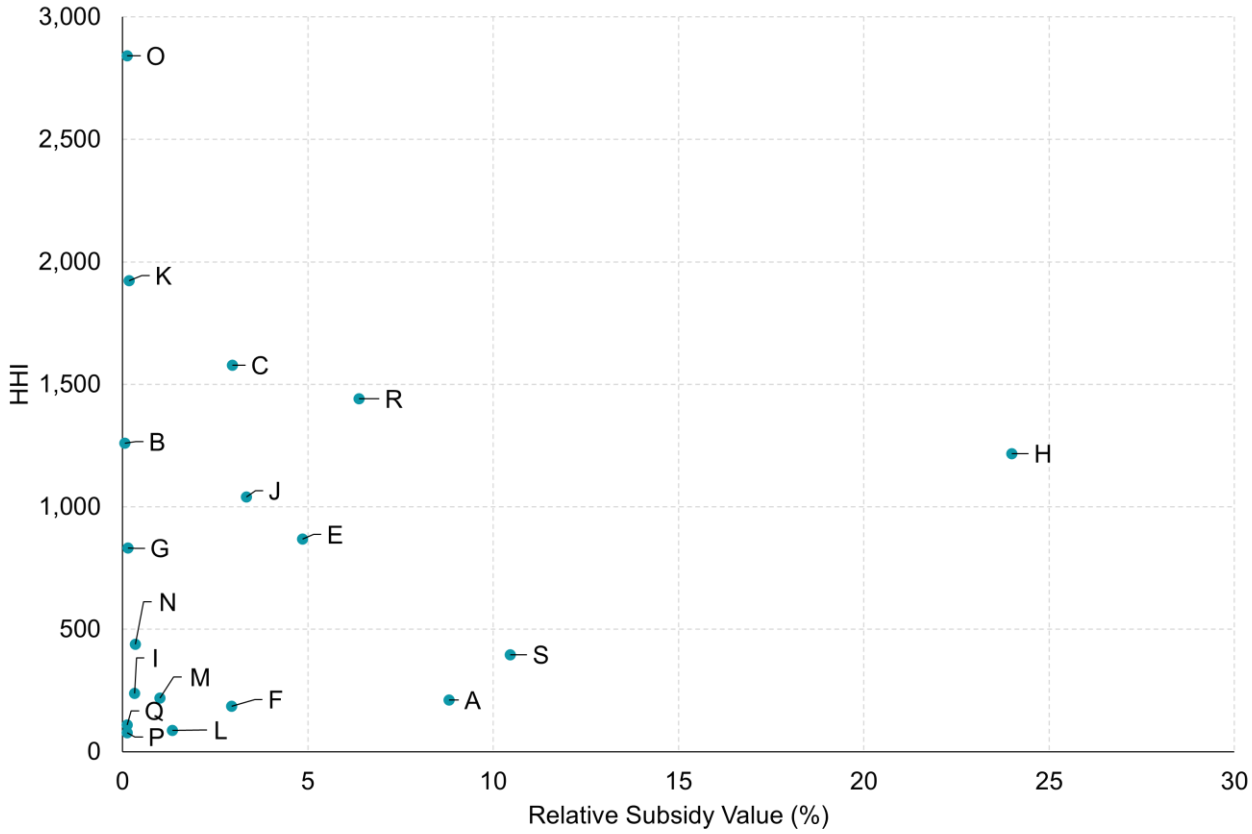
Results

H.32 Our analysis of the available data found no evidence of a widespread relationship between sector-level measures of concentration and subsidy value (in both absolute terms and relative to sector size). Any relationships found were not robust to the exclusion of 'outlier' observations. In particular, we only found (positive) relationships between measures of concentration and subsidy value when sector D ('Electricity, gas, steam and air conditioning supply') was included in the analysis.

H.33 For example, Figure H.2 below shows relative subsidy value plotted against HHI for each sector, excluding sector D ('Electricity, gas, steam and air conditioning supply').[24] This shows that there is a weak but statistically insignificant positive correlation, implying that there is no relationship between the two measures for the sectors included.

[23] Data for concentration measures data did not include sector T ('Activities of households as employers; undifferentiated good- and services-producing activities of households for own use').
[24] This sector is an outlier given the large value of subsidies awarded to this sector (even when relative to its large size). When it is included on the figure the axes are stretched such that the relationship becomes unclear for all other sectors.

Figure H.2: HHI against Relative Subsidy value by sector



Sources: SAU analysis of data from the UK Subsidy Database (2023-2025), ONS balanced UK regional GVA data by industry (current price estimates) (2019-2023), and HHI estimated by the CMA's Microeconomics Unit for the State of Competition Report 2024.
Notes: See Table H.1 for the Section names associated with the SIC-1 codes included on the figure. Relative subsidy value is calculated as total subsidy value as a percentage of average Gross Value Added. HHI values were provided by the CMA's Microeconomics Unit, calculated at the SIC-4 level and aggregated to the SIC-1 level by turnover-weighted average. Sector D ('Electricity, gas, steam and air conditioning supply') is not included on the chart as it is an outlier with a relative subsidy value that significantly exceeds other sectors. Where subsidy values were reported as ranges the middle of the range has been used. Subsidy value has not been adjusted to account for inflation.

H.34 This suggests that subsidies granted under the Act are not generally being targeted at sectors which tend to be more, or less, concentrated (and are therefore less or more competitive respectively) relative to the wider economy. However, sector D ('Electricity, gas, steam and air conditioning supply') is an exception to this as it receives a large amount of subsidy value (in total and relative to sector size) and is more concentrated than other sectors.

Business Dynamism Measures

H.35 Business dynamism refers to the degree of churn in an economy. Higher levels of business dynamism may be indicative of a vibrant and competitive economy where new ideas are constantly introduced, resources are reallocated to their most productive use, and more productive firms replace less productive ones.[25]

[25] CMA (2024), The State of UK Competition Report 2024, paragraphs 1.16, 4.3, and 4.7.

H.36 This analysis uses the following measures of business dynamism, defined in detail in the Methodology section below (see paragraph H.40 (a), (b) and (c)):

(a) firm entry rates and firm exit rates;

(b) the job reallocation rate; and

(c) persistence.

H.37 For persistence, a higher value indicates that a sector may be less competitive. For all other measures a lower value does.

Methodology

H.38 The data underlying this section of analysis comes from the subsidy database, the ONS, and the MU.

H.39 The data on subsidies is the same as that described in the price-cost markup ratio methodology section above (see paragraphs H.12 to H.16).

H.40 Data for the business dynamism measures was obtained from the MU.[26] As set out in the State of Competition Report 2024, the measures were calculated in the following way:

(a) Firm entry rates (or firm exit rates) capture the number of entering (or exiting) firms compared to the number of active firms in market within a period. Entry and exit rates were estimated using data from the Longitudinal Business Database (LBD). Annual entry rates (and exit rates) were produced by comparing firm entry (and exit) over four quarters with the average number of active local units during the four quarters prior within an industry.[27] Both entry and exit rates consider changes in a firm's SIC code as entry into and/or exit from a sector.[28]

(b) The job reallocation rate reflects the share of employment in an industry that changes hands from one year to the next. This was estimated using data from the LBD. Annual job reallocation rates were produced by comparing the total number of jobs created and destroyed over four quarters with the average total employment within reporting units in the four quarters prior

[26] This is presented in CMA (2024), The State of UK Competition Report 2024. For example, see Figure 24, 26, and 29.
[27] The State of UK Competition Report 2024, paragraph 1.17(a), and D.38 – D.42. Local units are defined as individual sites or establishments belonging to an enterprise.
[28] The State of UK Competition Report 2024, paragraph D.42.

within an industry. This accounts for both job creation and destruction from incumbent firms, firms that enter, and firms that exit.[29]

(c) Persistence reflects the extent to which the same largest firms remain at the top of an industry across multiple years. This was estimated using data from the Business Structure Database. Persistence was calculated by determining what fraction of the largest firms in an industry (by turnover) maintained their position across multiple years.[30]

H.41 Each of these measures was calculated at the SIC-1 level.[31] The sector-level measures were then averaged across the last five years of available data at the time of analysis (2017 to 2021) to obtain average business dynamism measures for the sectors over time. As for other measures of competition, business dynamism measures were not always available for all sectors.[32]

H.42 Finally in this section, we assessed the correlation between sector-level five-year average business dynamism measures, and sector-level total subsidy value and relative subsidy value.

Results

H.43 Our analysis of the available data found no evidence of a relationship between sector-level measures of business dynamism and subsidy value (in both absolute terms and relative to sector size). In particular, we found:

(a) weak and statistically insignificant negative correlations when considering the job reallocation rate; and

(b) weak to moderate and statistically insignificant positive correlations when considering firm entry rates, firm exit rates, and persistence.

H.44 This suggests that subsidies granted under the Act are not being targeted at sectors which tend to display higher or lower levels of business dynamism (and are therefore more or less competitive respectively) relative to the wider economy.

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[29] CMA (2024), The State of UK Competition Report 2024, paragraph 1.17(b), and D.43 – D.48. The measure is calculated based on changes at the reporting unit level. Reporting units usually correspond to one enterprise but it can also consist of a group of enterprises, or parts of an enterprise.
[30] CMA (2024), The State of UK Competition Report 2024, figure 29, paragraph 1.17(c), and 4.22 – 4.24.
[31] CMA (2024), The State of UK Competition Report 2024, paragraph D.42; Figure 26; and paragraph 4.23 and Figure 29.
[32] The data covering persistence included all sectors included in the database. The data covering firm entry rates, firm exit rates, and the job reallocation rate did not include 10 out of 20 of the sectors in the database. The sectors not included were: A (Agriculture, forestry and fishing); B (Mining and quarrying); D (Electricity, gas, steam and air conditioning supply); E (Water supply; sewerage, waste management and remediation activities); K (Financial and insurance activities); L (Real estate activities); O (Public administration and defence; compulsory social security) ; P (Education); Q (Human health and social work activities); and T (Activities of households as employers; undifferentiated good- and services-producing activities of households for own use).

Investment Indicators

H.45 In this section we present our analysis of the correlation between the value of sector-level subsidy spend and the following indicators of investment:

(a) Business Investment (BI);

(b) Investment Rates; and

(c) Inward Foreign Direct Investment (FDI).[33]

H.46 Such correlations would indicate whether subsidies tend to be targeted at sectors which receive more, or less, investment on average.

H.47 We have performed this analysis (i) including all sectors for which we have sufficient data,[34] and (ii) excluding sector D ('Electricity, gas, steam and air conditioning supply') and any sectors this was combined with in the analysis.[35] This is because sector D receives a significantly larger overall subsidy value compared to any other sector, making it an outlier in terms of subsidy spend.

Business Investment

H.48 Gross Fixed Capital Formation (GFCF) measures economy-wide net investment in assets for use in the production of goods and services, including business and public sector investment.[36] It is a key investment component used to calculate GDP.[37]

H.49 BI is a component of GFCF excluding (i) expenditure on dwellings, (ii) costs associated with the transfer of ownership of non-produced assets, and (iii) expenditure by local and central government.

H.50 Both GFCG and BI are widely used, readily available measures of regional and sector-level investment.[38]

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[33] Although the Subsidy Advice Unit: Proposed approach to monitoring under the Subsidy Control Act 2022 - GOV.UK indicated that the UK Innovation Survey may aid this analysis, we have not included insights from this because the version available at the time (UKIS 2023) did not include data for the relevant period.
[34] Data was not available for all indicators for each sector. For example, business investment data was not available for the 'Public administration and defence; compulsory social security' and 'Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use' sectors.
[35] As explained in more detail in the following sections, sector D was combined with sector E ('Water supply; sewerage, waste management and remediation activities') for the purposes of the investment indicator analyses.
[36] Business investment in the UK - Office for National Statistics and Investment (GFCF) | OECD [Accessed 22/01/2026]. Examples of investment include spending on plant and machinery, transport equipment, software, new dwellings and other buildings, and major improvements to existing buildings and structures such as roads. It excludes the acquisition of non-produced assets such as land and natural resources.
[37] A short guide to gross fixed capital formation and business investment - Office for National Statistics [Accessed 22/01/2026]
[38] For example these are used by Government to assess progress against the Industrial Strategy (see DBT (2025), The UK's Modern Industrial Strategy, page 11 and 158).

Methodology

H.51 The data underlying this section of analysis comes from the subsidy database and the ONS.

H.52 The data on subsidies is the same as that described in the price-cost markup ratio methodology section above (see paragraphs H.12 to H.16).

H.53 BI data was obtained from the ONS. Chained volume estimates of BI at a sector-level have been used,[39] as these have the effect of changes in prices removed.[40] The industry codes included in the BI data and sectors included in the database did not fully match, and therefore a manual mapping exercise was conducted to obtain comparable data at the sector-level.[41] This involved aggregating the data for some industries and excluding those for which BI data was unavailable, including combining sectors D ('Electricity, gas, steam and air conditioning supply') and E ('Water supply; sewerage, waste management and remediation activities').[42] The sector-level BI estimates were then averaged across the last five years of available data at the time of analysis (2021 to 2025) to obtain average BI for the sectors over time.

H.54 Finally in this section, we assessed the correlation between sector-level five-year average business investment, and sector-level total subsidy value and relative subsidy value.

Results

H.55 Figure H.3 below shows BI for the SIC-1 sectors that appear in the subsidy database for the last five years of available ONS data. This shows that BI has increased on average over time, but some sectors had lower BI in 2025 compared to 2021. In particular:

(a) In 2025 the combined M, N, and L sectors ('Professional, scientific and technical activities', 'Administrative and support service activities' and 'Real estate activities') had the largest BI (£66.5 billion), and Sector Q ('Human health and social work activities') had the lowest BI (£4.4 billion).

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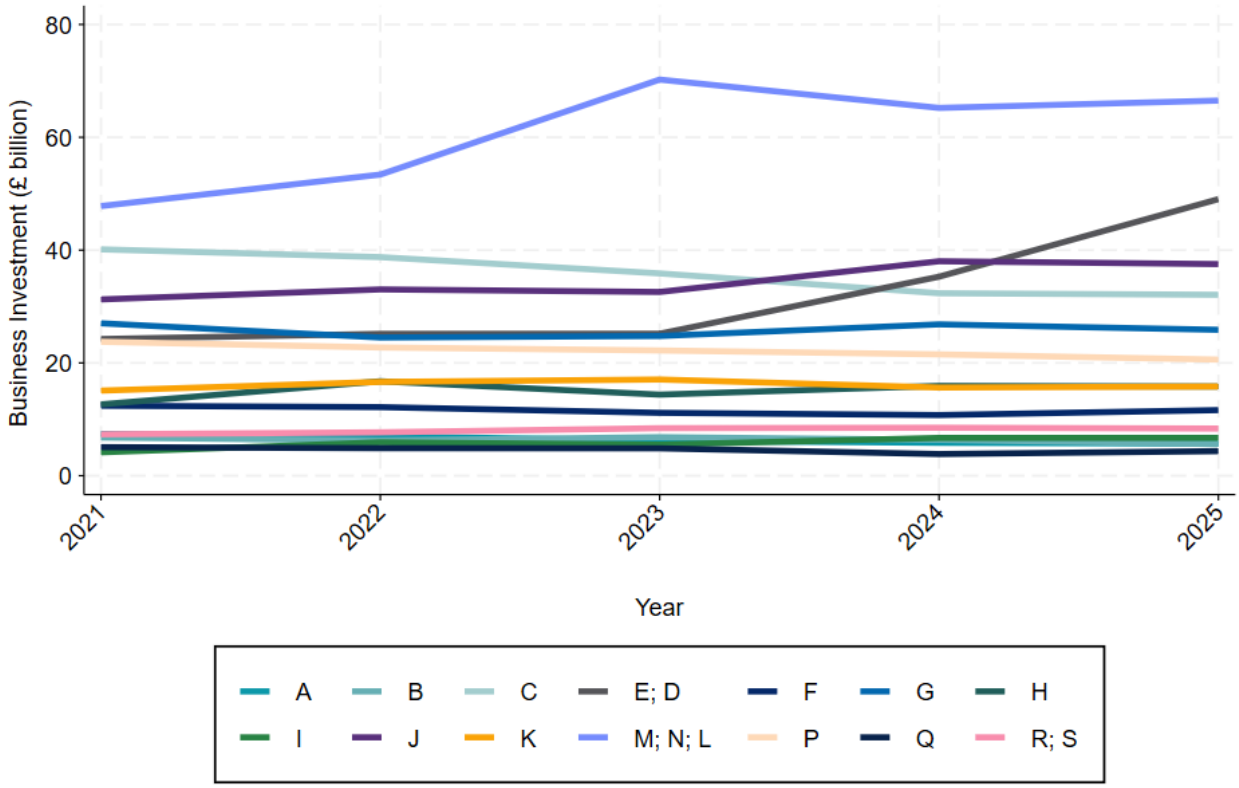
[39] Business investment by industry and asset - Office for National Statistics, Table 6 'Business investment by industry, chained volume measures, levels'. [Accessed 31/03/2026]
[40] Office for National Statistics (2017), A short guide to gross fixed capital formation and business investment - Office for National Statistics.
[41] This was conducted by manually mapping which SIC codes likely fall under the BI industry codes.
[42] The following sectors that appear in the database were aggregated to match the industries included in the BI data: D (Electricity, gas, steam and air conditioning supply) and E (Water supply; sewerage, waste management and remediation activities); L (Real estate activities), M (Professional, scientific and technical activities) and N (Administrative and support service activities); and R (Arts, entertainment and recreation) and S (Other service activities). BI data was not available for the following sectors which are therefore excluded: O (Public administration and defence; compulsory social security) and T (Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use).

(b) The combined D and E sectors ('Electricity, gas, steam and air conditioning supply' and 'Water supply; sewerage, waste management and remediation activities') had the largest increase in BI between 2021 and 2025 (£24.8 billion).

(c) Sector C ('Manufacturing') had the largest decrease in BI between 2021 and 2025 (£8 billion).

Figure H.3: Business Investment by Sector



Source: SAU analysis of ONS business investment data by industry and asset (chained volume measures) (2021 – 2025).
Note: See Table H.1 for the Section names associated with the SIC-1 codes included on the figure.

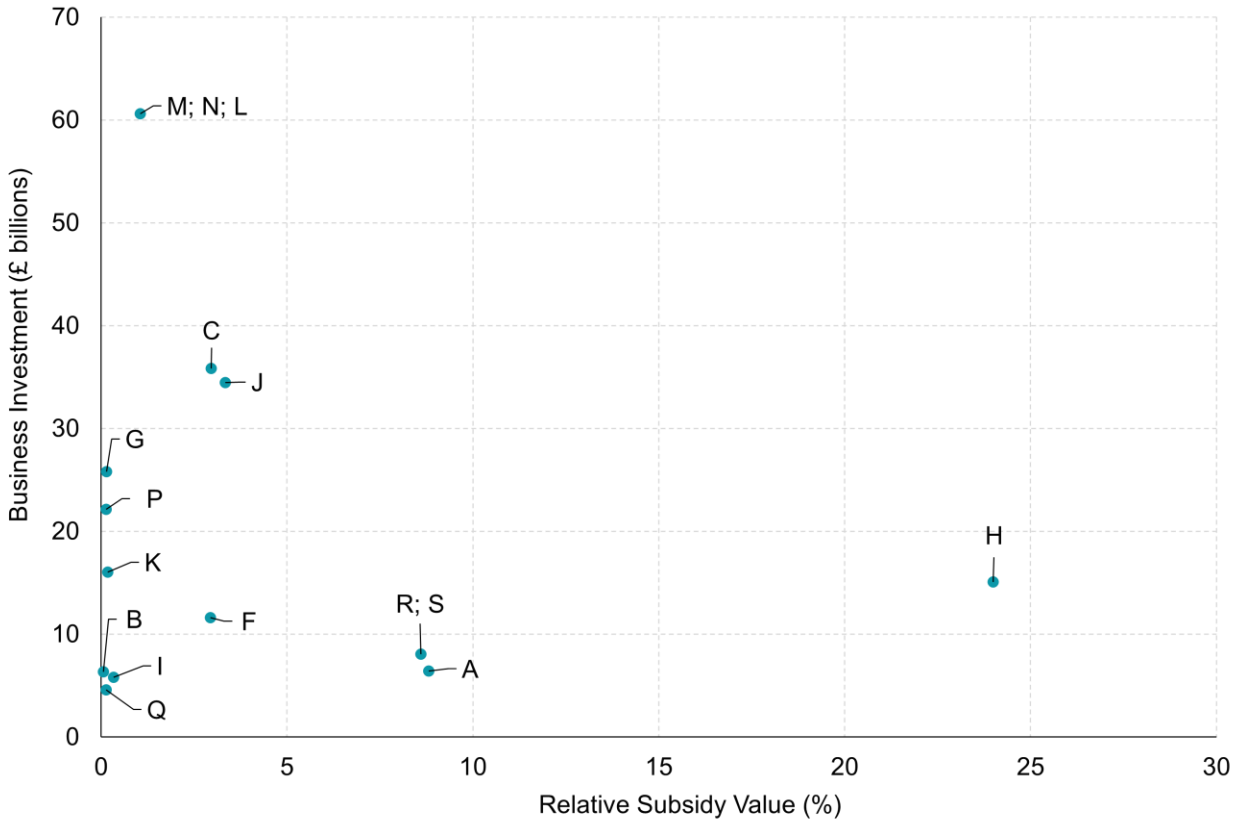
H.56 Our analysis of the available data found no evidence of a relationship between sector-level BI and subsidy value (in both absolute terms and relative to sector size). In particular, we found:

(a) Weak and statistically insignificant negative correlations when considering relative subsidy value against BI with the combined sectors D ('Electricity, gas, steam and air conditioning supply') and E ('Water supply; sewerage, waste management and remediation activities') excluded.

(b) Weak and statistically insignificant positive correlations for the remainder of the analysis.[43]

H.57 For example, Figure H.4 below shows relative subsidy value plotted against the average BI for each sector, excluding the combined sectors D ('Electricity, gas, steam and air conditioning supply') and E ('Water supply; sewerage, waste management and remediation activities'). This shows that there is a weak and statistically insignificant negative correlation, implying that there is no relationship between the two measures in the sectors included.

Figure H.4: Business Investment against Relative Subsidy Value by Sector



Sources: SAU analysis of data from the UK Subsidy Database (2023 – 2025), ONS balanced UK regional GVA data by industry (current price estimates) (2019-2023), and ONS business investment data by industry and asset (chained volume measures) (2021 – 2025).
Notes: See Table H.1 for the Section names associated with the SIC-1 codes included on the figure. Relative subsidy value is calculated as total subsidy value as a percentage of average Gross Value Added. Combined sectors D ('Electricity, gas, steam and air conditioning supply') and E ('Water supply; sewerage, waste management and remediation activities') are not included on the chart as sector D is an outlier with a relative subsidy value that significantly exceeds other sectors. Where subsidy values were reported as ranges the middle of the range has been used. Subsidy value has not been adjusted to account for inflation.

H.58 This suggests that subsidies granted under the Act are not being targeted at sectors which tend to have higher or lower levels of business investment relative to the wider economy.

[43] In particular, for the correlation analysis of (i) total subsidy value and business investment with the combined sectors D and E included, (ii) total subsidy value and business investment with the combined sectors D and E excluded, and (iii) relative subsidy value and business investment with the combined sectors D and E included.

Investment Rate

H.59 The Investment Rate reflects the proportion of produced output which is reinvested. It is a common measure which can be calculated at the sector-level to reflect the proportion of output that is reinvested into a sector relative to that sector's size.[44] Its use therefore reduces the risk that the results of this analysis reflect correlations between the variables of interest and sector size.

H.60 A lower investment rate indicates that a larger proportion of a sector's output is being consumed rather than reinvested into assets for use in the production of goods and services.

Methodology

H.61 The data underlying this section of analysis comes from the subsidy database and the ONS.

H.62 The data on subsidies is the same as that described in the price-cost markup ratio methodology section above (see paragraphs H.12 to H.16).

H.63 The investment rate can be defined as GFCF as a share of GDP, and GFCF as a share of GVA.[45] Here we calculate the investment rate as BI as a share of GVA. This is because:

(a) BI is a component of GFCF, and ONS BI data maps more easily onto the database sectors than GFCF data.

(b) GVA measures the contribution to GDP made by an individual producer, industry, sector, or region. It can therefore be used to calculate sector-level investment rates without the risk of double-counting intermediary goods.

H.64 The GVA data used is the same as that described previously in the price-cost markup ratio methodology section above (see paragraph H.15), and the BI data is the same as described in the business investment methodology action above (see paragraph H.53).

H.65 The investment rate per sector was calculated by dividing annual sector-level BI by annual sector-level GVA from concurrent years. The data used covers 2019 to 2023 as this was the most recent period available in both the BI and GVA data. This was then averaged to produce a five-year average investment rate per sector. As this has been calculated using the BI data described previously (albeit for a different time period), the same sectors have been aggregated or excluded for this analysis as for the BI analysis, including combining sectors D ('Electricity, gas,

[44] For example the CMA's MU used Investment Rates as evidence in their Industrial Policy report (see CMA (2025), Industrial policies: new evidence for the UK Figure 6.3.)
[45] See CMA (2025), Industrial policies: new evidence for the UK, paragraphs 7.11 and 7.16.

steam and air conditioning supply') and E ('Water supply; sewerage, waste management and remediation activities').[46]

H.66 Finally, we analysed the correlation between sector-level average investment rates, and sector-level total subsidy value and relative subsidy value.

Results

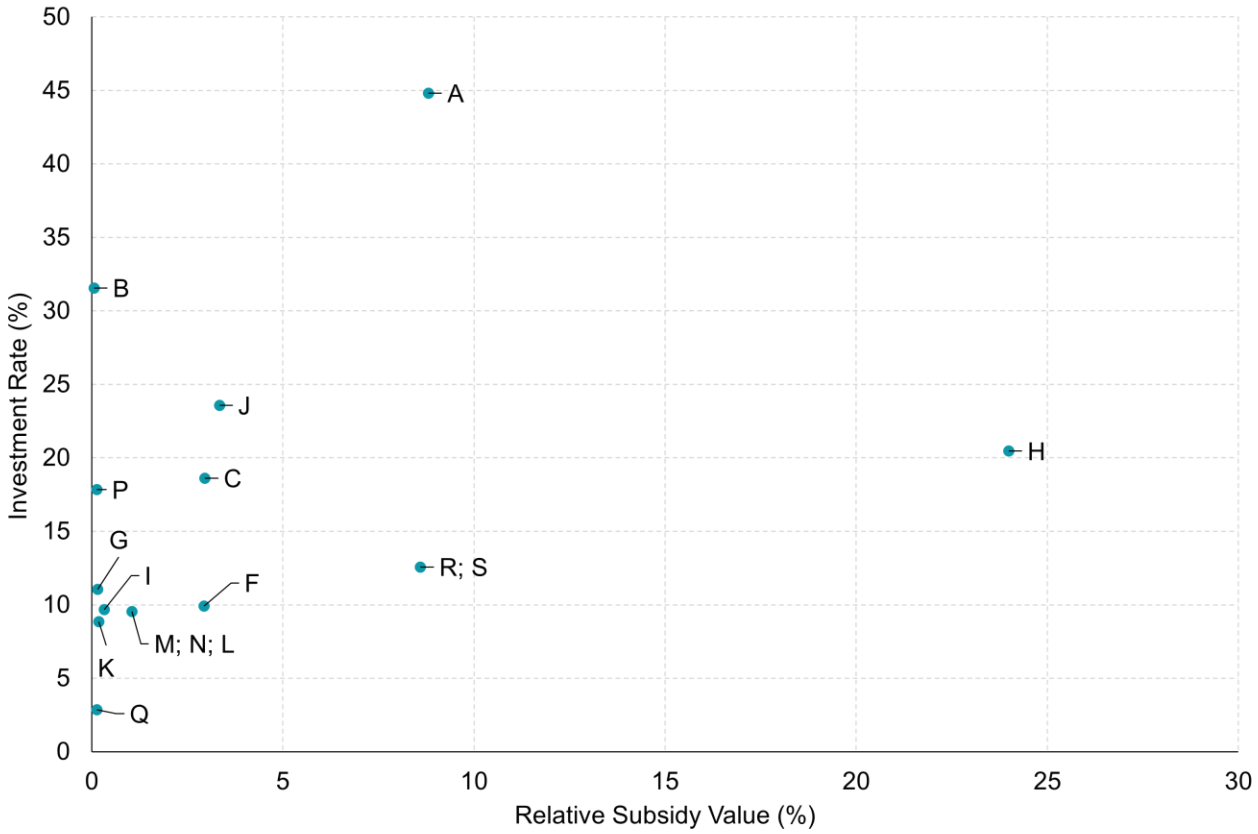
H.67 Our analysis of the available data found no evidence of a widespread relationship between sector-level investment rates and measures of subsidy value. Any relationships found were not robust to the exclusion of 'outlier' observations. In particular, we only found (positive) relationships between investment rates and measures of subsidy value when the combined sectors D ('Electricity, gas, steam and air conditioning supply') and E ('Water supply; sewerage, waste management and remediation activities') were included in the analysis.

H.68 For example, Figure H.5 below shows relative subsidy value plotted against the average business investment rate for each sector, excluding the combined sectors D ('Electricity, gas, steam and air conditioning supply') and E ('Water supply; sewerage, waste management and remediation activities').[47] This shows that there is a weak and statistically insignificant positive correlation, implying that there is no relationship between the two measures for the sectors included.

[46] As set out previously, the following sectors that appear in the database were aggregated to match the industries included in the BI data: D (Electricity, gas, steam and air conditioning supply) and E (Water supply; sewerage, waste management and remediation activities); L (Real estate activities), M (Professional, scientific and technical activities) and N (Administrative and support service activities); and R (Arts, entertainment and recreation) and S (Other service activities). BI data was not available for the following sectors which are therefore excluded: O (Public administration and defence; compulsory social security) and T (Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use).

[47] Sector D is an outlier given the large value of subsidies awarded to this sector (even when relative to its large size). When it is included on the figure the axes are stretched such that the relationship becomes unclear for all other sectors.

Figure H.5: Investment Rate against Relative Subsidy Value by Sector



Sources: SAU analysis of data from the UK Subsidy Database (2023 – 2025), ONS balanced UK regional GVA data by industry (current price estimates) (2019 – 2023), and ONS business investment data by industry and asset (chained volume measures) (2019 – 2023). Notes: See Table H.1 for the Section names associated with the SIC-1 codes included on the figure. Relative subsidy value is calculated as total subsidy value as a percentage of average Gross Value Added. The investment rate is calculated as business investment as a percentage of Gross Value Added in concurrent years. Combined sectors D ('Electricity, gas, steam and air conditioning supply') and E ('Water supply; sewerage, waste management and remediation activities') are not included on the chart as sector D is an outlier with a relative subsidy value that significantly exceeds other sectors. Where subsidy values were reported as ranges the middle of the range has been used. Subsidy value has not been adjusted to account for inflation.

H.69 This suggests that subsidies granted under the Act are not being targeted at sectors which tend to have a higher or lower rate of business investment relative to the wider economy. However, the combined sectors D ('Electricity, gas, steam and air conditioning supply') and E ('Water supply; sewerage, waste management and remediation activities') are an exception to this as together they receive a higher amount of subsidy value (in total and relative to sector size) and have a higher business investment rate on average.

Inward Foreign Direct Investment

H.70 Inward FDI refers to investments in the UK by foreign entities. It indicates how attractive the UK is to international investors. Comparing different sectors' inward FDI helps assess how attractive sectors are to international investors relative to each other.

Methodology

H.71 The data underlying this section of analysis comes from the subsidy database and the ONS.

H.72 The data on subsidies is the same as that described in the price-cost markup ratio methodology section above (see paragraphs H.12 to H.16).

H.73 Inward FDI data was obtained from the ONS. The ONS provides statistics on the inward investment of foreign companies into the UK, including for investment flows, positions, and earnings.[48] Inward FDI flows at the industry-level have been used, which measures the cross-border movement of funds into the UK within a period.[49]

H.74 The industries included in the inward FDI data did not fully match the sectors included in the database, and therefore a manual mapping exercise was conducted to obtain comparable data at the sector-level.[50] This involved aggregating the data for some industries and excluding those for which inward FDI data was unavailable, including combining sectors D ('Electricity, gas, steam and air conditioning supply') and E ('Water supply; sewerage, waste management and remediation activities').[51] The sector-level inward FDI flows were then averaged across the years available in the data at the time of analysis (2021 to 2024) to obtain average inward FDI over time.

H.75 Finally, we assessed the correlation between sector-level average inward FDI, and sector-level total subsidy value and relative subsidy value.

Results

H.76 Our analysis of the available data found no evidence of a relationship between sector-level measures of inward FDI and subsidy value (in both absolute terms

[48] As set out by the ONS, inward FDI positions are defined as the stock of FDI in the UK controlled by foreign companies in a period; inward FDI earnings are defined as the profits generated by foreign companies from their UK-based businesses in a period; and inward FDI flows are defined as the cross-border movement of funds into the UK in a period (see Office for National Statistics (2025), Foreign direct investment involving UK companies - Office for National Statistics) [Accessed 03/03/2026].
[49] Office for National Statistics (2026), Foreign direct investment involving UK companies (directional): inward - Office for National Statistics, Table 2.3 'Inward foreign direct investment flows by area, main country and industrial activity of UK affiliates (directional), 2021 to 2024'. [Accessed 12/01/2026]
[50] This was conducted by manually mapping which industries in the FDI data likely fall under the SIC codes in the Database.
[51] The following sectors that appear in the database were aggregated to match the industries included in the FDI data: D (Electricity, gas, steam and air conditioning supply) and E (Water supply; sewerage, waste management and remediation activities); and I (Accommodation and food service activities), L (Real estate activities), P (Education), Q (Human health and social work activities), R (Arts, entertainment and recreation) and S (Other service activities). FDI data was not available for the following sectors which are therefore excluded: O (Public administration and defence; compulsory social security) and T (Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use).

and relative to sector size). In particular, we found weak and statistically insignificant negative correlations between these measures.

H.77 This implies that there is no relationship between inward FDI and subsidy value (in total and relative to sector size) for the sectors included in the data. This suggests that subsidies granted under the Act are not being targeted at sectors which receive higher or lower levels of inward FDI relative to the wider economy.