

Article

Business classifications on the Inter-Departmental Business Register: 2022

Sources and stability of Standard Industrial Classifications on the Inter-Departmental Business Register

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Table of contents

1. [Main changes](#)
2. [Overview of classifications on the Inter-Departmental Business Register](#)
3. [Standard Industrial Classification changes](#)
4. [Source of changes](#)
5. [Changes in frozen Standard Industrial Classification](#)
6. [Future developments](#)
7. [Related links](#)

1 . Main changes

- The majority of the Standard Industrial Classification (SIC) changes were found in businesses with fewer than ten employees (91.1%), with fewer than 2.0% of all changes occurring in businesses with over 50 employees.
- Industrial classifications are relatively stable; 2.9% of businesses had their classification change in 2020.
- Most changes to classification (greater than 90%) are driven by the addition of more reliable data, such as a survey response or Companies House registration, to the business profile.
- Changes to the SIC section (one-digit SIC) were significantly less common; this suggests that when classifications are updated, businesses typically remain in the same sector.

2 . Overview of classifications on the Inter-Departmental Business Register

In October 2020, the Office for Statistics Regulation (OSR) assessed the Office for National Statistics' (ONS') business demography statistics and reviewed their compliance against each of the pillars in the Code of Practice for Statistics.

The OSR assessed the quality of the Inter-Departmental Business Register (IDBR) data and the accuracy of allocating industrial classification as one of their areas of concern. Quality concerns were raised around the accuracy of allocating a Standard Industrial Classification (SIC) code to businesses in the UK population and recommended that the ONS improve their knowledge of the sources that drive these changes.

The Standard Industrial Classification

The industrial classification (activity) of any business held on the IDBR is based upon the [UK Standard Industrial Classification 2007](#). The SIC for any business is assigned using information received from one of several administrative or ONS' survey data sources.

This classification is used to sample businesses for ONS' surveys, many of which focus on a particular sector of the economy. It is also used in the production of ONS business demography statistics.

Administrative data

The ONS receives information on industrial classification from three different administrative sources, supplied by either HM Revenue and Customs (HMRC) or Companies House.

Companies House

When setting up a limited company, businesses are required to register with Companies House, the UK's register of private limited companies. On registration, businesses indicate their SIC based on principal activity. The ONS receives a regular feed of new company registrations, which contains this self-reported SIC.

HMRC Value Added Tax (VAT)

Businesses must register for VAT if their taxable turnover is more than £85,000, and they can also voluntarily register if they are below this threshold. Businesses are asked to provide a basic description of their activities. HMRC then apply a SIC code through a business activity selector using SIC definitions held on the ONS' website. Information on VAT registrations is received daily by the ONS, though there is sometimes an administrative lag before this is added to the IDBR.

HMRC Pay As You Earn (PAYE)

Businesses must register for PAYE if they pay at least £1,048 to employees per month. Businesses must register if they have at least one employee, unless the employee earns below £120 per week. This is the HMRC system used to collect Income Tax and National Insurance contributions. On registration, businesses are asked to provide a brief description of their activities from which HMRC allocate a Trade Classification Number (TCN). PAYE registration data are received quarterly at the ONS. On receipt, the ONS uses a series of correlation tables to convert each TCN to a corresponding SIC. However, as there are fewer TCN codes, it is often the case that a single TCN can be mapped to several SIC codes. In these cases, a weight is applied to each SIC based on a periodic analysis of the distribution of SIC codes.

ONS survey data

Information to inform SIC is often collected when a business is selected for an ONS' survey. The ONS conducts around 80 business surveys per year. The largest surveys that provide information related to SIC are the:

- [Business Register and Employment Survey \(BRES\)](#), which is an annual survey sent to around 85,000 businesses used to collect data to update local unit information and business structures on the IDBR; it provides business descriptions of each local unit which are added to the IDBR
- [Annual Business Survey \(ABS\)](#), which is an annual survey that is sent to around 62,000 businesses and is the main structural business survey conducted by the ONS
- [UK Manufacturers' Sales by Product \(PRODCOM\)](#), which is an annual survey sent to around 21,500 businesses used to measure sales of products by UK manufacturers; it allows an update of SIC by measuring the value of a business's manufacturing so that the dominant industry of manufacturing is reflected on the IDBR as the allocated SIC
- [Business Register Survey \(BRS\)](#), which is a quarterly survey sent to around 2,300 businesses used to update information on the IDBR, including industrial classification; businesses are provided with a business description and asked whether it is correct, to confirm or to change to a more appropriate description
- [Financial Services Survey \(FSS\)](#), which is an annual survey sent to around 2,000 businesses used to collect information on the assets and liabilities, as well as the income and expenditure of businesses within the financial services sector

When a business provides information to suggest the SIC is incorrect, the ONS uses the reported business activity to assign a SIC code. This can be at a local unit level or business level, depending on the survey.

Industrial classification can also be changed for agricultural businesses using the Farm Survey System that the Department for Environment Food and Rural Affairs (DEFRA) coordinates. This information is provided to the ONS on a quarterly basis and is used to update Section A (Agriculture, Forestry and Fishing), predominantly.

For some business surveys distributed by the ONS (for example, BRES and BRS), businesses are asked to indicate their principal activity using a free-text box. Information from this field is fed into the application "G-Code" which takes the stated principal activity of a business and compares this written description with SIC. The application then provides a score on potential matches (1 to 10). When this written principal activity is fed into the application, a SIC is automatically allocated to those businesses which score over 7.5. For businesses that have not achieved a G-Code score of 7.5, often because of ambiguity in description, allocation of SIC is performed through manual, clerical input.

For example, a business reports their principal activity to be "freight rail transport". This would match perfectly with the SIC description for "freight rail transport" and would be given a score of 10 for SIC code 49200. However, if a business simply states "consultancy", this is more problematic as over 10 individual SICs have this word within their descriptions, leading to a matching score of below 7.5. This would lead to human investigation into the best fit for the SIC.

Data

Data for this analysis consisted of extracts from the IDBR monthly for the period of 2020. These data were prepared by removing surplus information, such as dummy enterprises. The SIC for each month was compared with the next month, with changes isolated. Characteristics of the businesses were then categorised to identify trends. A final piece of analysis into the annual change of business SIC also included an extract for February 2021. Using these data we focus on:

- month-on-month SIC changes
- the characteristics of the business, as well as the frequency of the changes
- change by SIC hierarchy
- changes between SIC sections (for example, Section A to Section B); this type of reclassification has the potential to affect survey selection and estimates, depending on the size of the business

3 . Standard Industrial Classification changes

Using data for 2020 we reviewed the number of instances and proportions of businesses on the Inter-Departmental Business Register (IDBR) that changed the Standard Industrial Classification (SIC) throughout 2020. In 2020 there were approximately 2.77 million businesses on the IDBR. Between January and December 2020, there were 93,013 changes made to SICs on the register, 3.4% of all businesses. Of these changes, 47,730 were between SIC sections. Throughout the year, 25.5% to 60.0% of the changes were between SIC section. All 93,013 changes occurred across 80,198 unique businesses.

Changes by characteristics of the business, employment size and turnover

The majority of the SIC changes were found in businesses with fewer than ten employees (91.1%), with fewer than 2.0% of all changes occurring in businesses with over 50 employees. This pattern is also reflected in turnover; the majority of SIC changes were found in businesses that had a turnover of less than £250,000. The full breakdown is seen in Table 1 and Table 2.

Table 1: Changes in SIC by size band (2020)

Size	Frequency	Percentage
Micro (0 to 9)	84,755	91.1
Small (10 to 49)	6,427	6.9
Medium (50 to 249)	1,425	1.5
Large (250 to 499)	216	0.2
Over 500 Employees (500 and over)	190	0.2

Source: ONS Data - Inter-Departmental Business Register

Notes

1. Standard bands used for business size

Table 2: Changes in SIC by turnover (2020)

Turnover (£000s)	Frequency	Percentage
0 to 49	18,310	20.0
50 to 99	22,857	24.6
100 to 249	30,430	32.7
250 to 499	8,656	9.3
500 to 999	5,180	5.6
1,000 to 1,999	2,999	3.2
2,000 to 4,999	2,334	2.5
5,000 to 9,999	966	1.0
10,000 to 49,999	949	1.0
50,000 and over	332	0.4

Source: ONS Data - Inter-Departmental Business Register

Notes

1. Percentages subject to rounding
2. Standard bands used for turnover

SIC section changes also follow this pattern. The majority of the SIC changes were found in businesses with fewer than ten employees (91.3%), with fewer than 1.5% of all changes found in businesses with over 50 employees. This pattern is also reflected in terms of turnover; the majority of SIC section changes were found in businesses that had a turnover of less than £250,000. The full breakdown is seen in Table 3 and Table 4.

Table 3: Changes in SIC Section by size (2020)

Size	Frequency	Percentage
Micro (0 to 9)	43,608	91.3
Small (10 to 49)	3,290	6.9
Medium (50 to 249)	661	1.3
Large (250 to 499)	94	0.2
Over 500 Employees (500 and over)	77	0.2

Source: ONS Data - Inter-Departmental Business Register

Notes

1. Standard bands used for business size
2. Percentages subject to rounding,

Table 4: Changes in SIC Section by turnover (2020)

Turnover (£000s)	Frequency	Percentage
0 to 49	9,145	19.2
50 to 99	12,456	26.1
100 to 249	15,673	32.8
250 to 499	4,276	9.0
500 to 999	2,436	5.1

Source: ONS Data - Inter-Departmental Business Register

Notes

1. Percentages subject to rounding
2. Standard bands used for turnover

Multiple changes

Most businesses (73.2%) that exhibited a change in SIC did so only once throughout the year, however the most a business changed SIC was six times. The minimal multiple changes (24,966) support that the IDBR is largely stable. The full breakdown for this can be found in Table 5, as well as the changes of SIC section within Table 6.

Table 5: Multiple changes of SIC

Number of changes	Businesses	Percentage
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1	68,047	73.2
2	11,529	24.8
3	586	1.9
4	31	0.1
5	4	0.0
6	1	0.0

Source: ONS Data - Inter-Departmental Business Register

Notes

1. Percentages subject to rounding

Table 6: Multiple changes of SIC Section

Number of changes	Businesses	Percentage
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1	36,357	73.2
2	6,056	25.2
3	270	1.5
4	9	0.1
5	2	0.0
6	1	0.0

Source: ONS Data - Inter-Departmental Business Register

Notes

1. Percentages subject to rounding

4 . Source of changes

Sources of information

Several sources of information can drive a change to the Standard Industrial Classification (SIC) on the Inter-Departmental Business Register (IDBR). In general, most changes were driven by data received from Companies House (48.5%). Data from Companies House will only update businesses which are Pay As You Earn (PAYE) only on the register. A further 42.0% are driven by the strict hierarchal rules, such as Value Added Tax (VAT) and Office for National Statistics' (ONS') surveys, within the IDBR and internal IDBR calculations. This ensures that the most trusted data sources are consistently used, allowing for further refinement over time of the SIC on the IDBR. The percentage of the changes driven by information from PAYE data from HM Revenue and Customs (HMRC) is 5.3%. These changes will be businesses who have no VAT to update the SIC, and are either not eligible for ONS' surveys or yet to be sampled.

In addition to these sources, clerical changes account for 2.1% of all changes. These clerical changes are protected changes by the IDBR Team, and can occur for multiple reasons. This can be seen if companies state they are a type of company that deviate from IDBR rules. For example, if a company reported it was a holding company, but had over three employees, it would conflict with certain standards and would be changed to a head office clerically. This "protection" can last for two years. If a notification is created to change a unit from this protection, these are manually checked by the IDBR team.

The "All other sources" row within Table 7 provides further detail on clerical changes, though the source of this information is from a specific ONS' survey. For example, during 2020 several businesses responded to the Financial Services Survey, providing the ONS with further information to refine their SIC. In these types of instances, the specific survey is cited as the source of the change. These account for 2.1% of all changes made in 2020. A full breakdown is given in Table 7. The sources for the changes by SIC section largely follow the same proportions and are given in Table 8.

Table 7: Sources of SIC changes

Source	Frequency	Percentage
Companies House	45,108	48.5
Hierarchal Rules	39,042	42.0
PAYE	4,907	5.3
Clerical Changes	1,946	2.1
All other sources	2,008	2.1

Source: ONS Data - Inter-Departmental Business Register

Notes

1. Percentages subject to rounding

Table 8: Sources of SIC Section changes

Source	Frequency	Percentage
Companies House	24,428	51.2
Hierarchical Rules	17,527	36.7
PAYE	3,528	7.4
Clerical Changes	1,358	2.8
All Other Sources	943	1.9

Source: ONS Data - Inter-Departmental Business Register

Notes

1. Percentages subject to rounding

Changes at the local unit level

Many of the changes discussed occur within businesses that have zero local units (84.7%). Of the businesses with local units, 90.7% were businesses with only a single site. Business SIC is often changed on the IDBR when the ONS make changes to business structure. For those businesses with one or more local units, the ONS explore the specific sources of information that drive the SIC change.

Most changes at the local unit level were found in the "Agricultural" section and were driven by quarterly changes informed by the Department for Environment, Food and Rural Affairs (DEFRA). Data from the Business Register and Employment Survey (BRES) led to a large proportion of the changes (23.3%), and Companies House data also contributed to 15% of these changes.

When considering changes between SIC section, BRES was the source driving the highest proportion of changes (38%), and Companies House contributed to 33% of the changes. The information from DEFRA led to only a single change, which is unsurprising as DEFRA predominantly inform Section A (Agriculture, Forestry and Fishing).

5 . Changes in frozen Standard Industrial Classification

The Inter-departmental Business Register (IDBR) holds two measures of the Standard Industrial Classification (SIC) – a current measure which can change month-on-month, and a frozen figure that remains static throughout the year. Frozen SIC is updated in January of each year. At this point, the current SIC is carried forward to become the frozen SIC for the following year. Frozen SICs are only changed in exceptional circumstances, which are:

- if a business with employment of over 1000 moved two-digit SIC
- when a structure changes and a business would be removed from the population of a survey because of this
- when a business has been identified as a holding company and/or head office
- when a unit moves out-of-scope for inquiries, to in-scope of inquiries by the business being proven

In general, the current SIC is used for annual surveys as any changes would not affect the sampling of these surveys. Frozen SIC is used to sample monthly or quarterly business surveys. Using frozen SIC provides stability on the IDBR, particularly important for survey sampling, to ensure businesses do not drop in and out of the survey population, as this would cause issues with consistency in statistics when reporting changes over time. Between February 2020 and February 2021, there were 56,394 businesses that changed their frozen SIC. The changes can be found broken down by SIC hierarchy in Table 9.

Table 9: Changes in Frozen SIC by SIC hierarchy (2020)

Hierarchy	Frequency	Percentage
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SIC	56,394	2.0
Class	53,191	1.9
Group	47,607	1.7
Division	37,383	1.3
Section	28,492	1.0

Source: ONS Data - Inter-Departmental Business Register

Notes

1. Percentages subject to rounding

6 . Future developments

There are approximately 2.77 million businesses on the Inter-Departmental Business Register (IDBR). Throughout 2020, there were 92,309 changes made to the Standard Industrial Classification (SIC) of a business, affecting 80,198 (2.9%) unique businesses. This small number of changes are a strong indication of the stability and quality of the register. The changes to SIC are overwhelmingly found within small companies. Large, complex businesses are consistently chosen for Office for National Statistics' (ONS') surveys, such as the Business Register and Employment Survey (BRES), so any changes to principal activity or structure of these businesses which would cause a SIC change would be captured. However, this is less likely for larger businesses as their activities are likely to be distinguished.

Where changes are made to the IDBR, these are often driven by strict hierarchal rules. It is recognised that some sources driving SIC changes are less trusted than others (Pay As You Earn for example), and these rules allow for sources which are more trusted to be used, which allows for the SIC of businesses to be refined over time.

7 . Related links

[UK business: activity, size and location: 2021](#)

Statistical bulletin | Released October 2021

This statistical bulletin is an example of how the ONS uses SIC data to track changes across industries in the UK.

[UK Standard Industrial Classification Explanatory Note](#)

PDF download | Released December 2009

This publication was released by the ONS to explain the changes made when the UK SIC system was last updated, and provides a detailed account of the SIC structure.