Business Data for Research

Guidance Document

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# Introduction

This document provides guidance to researchers on the Business Data for Research (BDR) database. The BDR is a longitudinal de-identified themed dataset including NISRA business data from 2014-2021 in Northern Ireland.

The dataset has been created through the ADR NI using the Digital Economy Act 2017 as the legal gateway. The directive of the ADR NI has been to provide a secure and accredited research environment to enable agreed, ethically approved and cross-cutting research to be conducted using administrative data sets that are routinely collected and analysed by NICS departments and other bodies. The ultimate aims of the joined-up approach are to inform the development and monitoring of public policy and to help ensure that decision making is evidence-based and the research provides a benefit to society. The ADR NI makes it possible for trained researchers to use **pseudonymised** administrative data for social and economic research, while making sure the data remain safe and the **privacy of individuals and businesses are protected**.

Researchers should note that NISRA have strict disclosure rules in place when analysing our data as we are bound by the Code of Practice for Statistics, and the legislation under which we collect the data i.e. The Statistics of Trade and Employment (NI) Order 1988, to protect the identity of businesses who provide their information to us. Therefore, we must ensure that the identity of businesses that provide information to us is protected at all times. This means that it is not possible to make certain variables available to researchers such as business address or postcode. It also dictates the disclosure rules that determine what can and cannot be published from analysis of our data.

The Code of Practice for Statistics also places a duty on NISRA to minimise business burden when responding to statutory surveys. This requirement has implications for matters such as the sample size of a survey and the length of a survey.

Included in this document are background information on the data sources that constitute the BDR, a description of the BDR and how researchers can access the data.

Also included is a description of variables and caveats that are essential for the understanding of the BDR structure. When applying to use the BDR data this document should be used in conjunction with this BDR metadata and data dictionary.

The initial pilot of the development of the BDR database was funded by the ESRC and completed in 2022/23. Seven beta projects were undertaken to test the database and associated documentation available for researchers. Feedback from the researchers has been incorporated into the development of the database, this guidance documentation and the accompanying documentation available to researchers.

The database will be subject to various structure changes as time progresses which can mostly be attributed to the addition of various data over time. These changes will be reported in future versions of this guidance document.

The owner of this document is NISRA Economic and Labour Market Statistics Branch (ELMS) and any changes to the document should be suggested to NISRA-ELMS who will make amendments if required.

## Data Collection, Validation, Imputation Processes & Revisions

## Data collection

All of the NISRA business surveys featured in the BDR are administered by the Economic and Labour Market Statistics Branch (ELMS) within NISRA.

To administer and collect the data ELMS utilise an advanced data collection system which facilitates data collection via online and paper formats.

## Sampling Frame - Inter Departmental Business Register

The Inter Departmental Business Register (IDBR) is the sampling frame used for all NISRA business surveys. The register consists of companies, partnerships, sole proprietors, public authorities, central government departments, local authorities and non-profit making bodies in the UK.

The IDBR covers most of the economy including the Agriculture, Production, Construction and Service sectors in Northern Ireland. It does not, however, include very small businesses which are not VAT registered (the threshold for VAT in 2022/23 was £85,000) unless they operate a PAYE scheme. This means that many self-employed workers will not be included on the IDBR.

In 2023, the IDBR estimates that number of VAT and/or PAYE registered businesses operating in Northern Ireland is 79,235.

However, the [Department for Business and Trade (DBT)](https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fmedia%2F65169e937c2c4a000d95e23b%2Fbpe_2023_detailed_tables.xlsx&wdOrigin=BROWSELINK) estimates (Table 23) that in 2023 there were approximately 47,295 unregistered businesses in Northern Ireland, which is in addition to the figures reported by the IDBR.

*(Please note the definitional difference:  DBT and ONS use count of enterprises from the IDBR whereas NISRA use count of businesses operating in NI.)*

The business activity, or industry, is recorded using Standard Industrial Classification (UK SIC 2007) codes.

Statistical units are classified using a hierarchy which is described below.

* **Enterprise Group:** is a group of legal units under common ownership. Enterprise is the smallest combination of legal units (generally based on VAT and/or PAYE records) which has a certain degree of autonomy within an Enterprise Group. The geographical location of an Enterprise is based on its registered (or main) UK address. Note that no datasets in the BDR have any variables relating to Enterprises.
* **Reporting Unit:** includes all or part of an Enterprise. There will be at least one Northern Ireland Reporting Unit for any business operating in Northern Ireland.
* **Local Unit:** is an individual site (for example a factory or shop). Usually all sites in Northern Ireland are included in a single Reporting Unit. A Northern Ireland Reporting Unit will not include any sites outside Northern Ireland.

The ONS defines a business as an enterprise and assigns each business to a geographical location based on its registered or main address, within the UK. This is the standard EU definition but has the disadvantage that the Northern Ireland figures will not include any businesses operating in Northern Ireland, which have their main or registered address elsewhere in the UK. An alternative approach is to define each Northern Ireland Reporting Unit as a business. This ensures that all businesses operating in Northern Ireland are included but has the drawback that any Enterprise with more than one Reporting Unit in Northern Ireland will be counted as multiple businesses.

To address these issues an Enterprise operating within Northern Ireland definition has been introduced. Under this definition each Enterprise operating in Northern Ireland is included in the Northern Ireland figures but only once and the industrial classification, employment/employees and turnover information only relate to the part of the business located in Northern Ireland. Where the Enterprise has more than one Northern Ireland Reporting Unit the data for the individual Reporting Units are aggregated to form a composite unit. The industrial classification for the composite unit is determined based on the industrial classifications of the local units contained within the unit, using the same method as is used for a standard Reporting Unit. Where a business operates across multiple SICs at different local units, the dominant SIC across LUs as determined by employment is applied to the RU. This also applies when combining RUs to create a composite unit. The location of the composite unit is determined based on the address of the site with overall responsibility for Northern Ireland activity or the primary operating site within Northern Ireland.

The relationship between enterprises, reporting unit and local unit is depicted below.

Local Unit (NI)

Location 1

SIC 1

Local Unit (NI)

Location 2

SIC 1

Local Unit (NI)

Location 3

SIC 1

Local Unit (NI)

Location 1

SIC 2

A single location can have more than one activity.

## Data validation

When data is submitted by businesses there are a range of comprehensive validation rules in place to ensure that data provided is sound and within expected ranges. Where a data point falls outside of an expected range or fails a validation rule, a task is created whereby a member of staff will check the data and where appropriate contact the business to confirm the value and receive an explanation from the business to support the reason for the larger than expected change in the value.

These processes ensure that the data we analyse for our results production are robust, sound and fit for their originally intended purpose.

## Imputation

NISRA utilises established and robust imputation processes to estimate values for variables where possible, for businesses who have not made a return in the current year. This includes in the census component of survey samples. The processes are aligned with best practice and are equivalent to the processes adopted by ONS for similar business surveys.

The imputation process draws upon a range of data including previous returned values by a business, values for respective variables submitted by other similar businesses in the same detailed industry classification and size band, the Inter Departmental Business Register (IDBR) (further information on the IDBR is detailed below) and other internal data sources held by ELMSB.

As such, the imputation processes are considered robust. There are no imputation markers available on the datasets.

## Revisions

In most business surveys, the most recent data published is provisional and are subject to revision in the next reporting period.

In an attempt to limit the costs to those who complete statistical returns, the majority of economic and labour market statistics are estimates of what they are measuring, rather than being complete counts. Reliance on surveys to collect information with which to produce statistics means that events and socio-economic trends cannot be measured in their entirety, but are instead based on incomplete information which is adjusted to take account of biases which arise in survey taking, and other available information, such as the emergence of new seasonal patterns.

Over time, as more information becomes available, estimates can be revised to improve quality and accuracy, which will provide a better picture of what is being measured. Users require good quality data that are timely and can be accessed as close to the event which the data measures as possible. A policy of accepting revisions enables statisticians to provide users with data close to the event, but also improve the accuracy of that data as other information becomes available. Revisions are therefore a standard practice when producing official statistics.

## Quality Assurance

Quality assurance practices were applied by ELMS to the BDR datasets to ensure the data was accurate, reliable, and representative. Research Support Unit (RSU) completed a statistical disclosure control assessment of the data.

## Consistency within the data

ELMS checked the data for anomalies, unexpected values, and issues with aggregations. Where issues were identified these were relayed to the survey teams, and amended based on the advice received.

For example, some of the SIC variables didn’t have a leading zero, which had to be added. Some variables were blank or had negative values. These were investigated and most were deemed to be correct and not changed.

Some internal inconsistencies were highlighted, where sums would not add to totals. Again, these were accepted as differences were very small and shouldn’t have an impact.

Details of the minor internal inconsistencies in the Northern Ireland Annual Business Inquiry (NIABI) data were:

WQ400: Formula of [WQ412]+[WQ413]+[WQ415]+[WQ431] does not always sum to WQ400

WQ499: Formula of [WQ710]+[WQ720]+[WQ730] does not always sum to WQ499

WQ550: Formula of [WQ399]+[WQ346]-([WQ321]+[WQ312]+[WQ313]+[WQ314]) does not always sum to WQ550

WQ600: Formula of [WQ610]+[WQ611]+[WQ622]+[WQ612]+[WQ614]+[WQ615]+[WQ626]+[WQ627]+[WQ629]+

[WQ643]+[WQ644] does not always sum to WQ600

WQ690: Formula of [WQ600]-[WQ699] does not always sum to WQ690

WQ699: Formula of [WQ630]+[WQ631]+[WQ636]+[WQ637]+[WQ638]+[WQ639]+[WQ641]+[WQ642]+[WQ645]

does not always sum to WQ699

WQ720: Formula of [WQ732]+[WQ729] does not always sum to WQ720

WQ729: Formula of [WQ721]+[WQ722]+[WQ723]+[WQ724]+[WQ725]+[WQ726]+[WQ727] does not always sum to WQ729

WQ730: Formula of [WQ780]+[WQ770]+[WQ771]+[WQ772]+[WQ1830]+[WQ734]+[WQ775] does not always sum to WQ730

WQ2010: Formula of [WQ550]+[WQ317]+[WQ599]+[WQ502]-[WQ500]-[WQ501]+[WQ602]-[WQ499] does not always sum to WQ2010

WQ2020: Formula of [WQ2010]+[WQ414]-[WQ400]+[WQ416] does not always sum to WQ2020

WQ2030: Formula of [WQ2020]+[WQ412]+[WQ431] does not always sum to WQ2030

One of the beta testing research teams also highlighted that the Total exports of goods & services outside UK does not always sum to export goods outside UK + export services outside UK.

Investigation showed they sum the individual parts instead, i.e. exports ROI goods + exports ROI services + exports REU goods + exports REU services + exports ROW goods + exports ROW services = Total exports goods & services outside UK.

The same methodology applies to Imports, i.e. imports ROI goods + imports ROI services + imports REU goods + imports REU services + imports ROW goods + imports ROW services = Total imports goods & services outside UK.

For Exports, in variable terms, Total exports goods & services outside UK = [WQ114]+[WQ111]+[WQ113]+[WQ116]+[WQ115]+[WQ117]

For Imports, in variable terms, Total imports goods & services outside UK = [WQ124]+[WQ121]+[WQ123]+[WQ126]+[WQ125]+[WQ127]

## Consistency with published reports

ELMS sought to replicate the headline statistics for each of the subject datasets. This was to ensure that the datasets provided are an accurate reflection of the data used internally by ELMS to produce the respective publications. Where discrepancies were identified these were investigated by the ELMS teams and remedial action taken to ensure the final BDR datasets are consistent with published reports.

## Statistical Disclosure Control (SDC)

RSU worked with ELMS to ensure that the data provided was safe and that it could not be used to disclose small numbers. For instance, feedback from researchers in the pilot phase included the desire to incorporate geographical markers such as post codes or Super Output Area markers.

RSU and ELMS undertook disclosure testing to determine whether or not this would be viable. Given the small size of the NI economy and business population, it was determined that providing SOA markers, would likely cause disclosure issues.

ELMS have strict disclosure rules in place as we are bound by the Code of Practice for Statistics, and the legislation, to protect the identity of businesses who provide their information to us. These same rules are applied to all of our business statistics and associated outputs. As such these geographical variables cannot be made available.

However, we have agreed to include Local Government District markers on the datasets as this is considered to be the safest geographical identifier available.

# BDR datasets

The BDR is comprised of three large scale annual datasets which are highlighted below and with further information available in subsequent sections.

1. Northern Ireland Annual Business Inquiry (NIABI);
2. Northern Ireland Economic Trade Statistics (NIETS); and
3. Northern Ireland Business Register and Employment Surveys (BRES).

## Northern Ireland Annual Business Inquiry (NIABI)

The Northern Ireland Annual Business Inquiry (NIABI) is conducted on a statutory basis under the Statistics of Trade and Employment (Northern Ireland) Order 1988 (Article 8). It collects both financial and employment information from businesses and other establishments and covers about two thirds of the economy. This includes the production, construction, distribution and service industries in Northern Ireland but excludes the financial sector and public sector activity for the most part.

The NIABI is a National Statistic[[1]](#footnote-1) dataset and surveys all businesses with 50 or more employees; all multi-site businesses with 20-49 employees; all manufacturing businesses with more than 5 employees; and a representative sample of other smaller businesses. In all, the ABI samples about 20% of the eligible business population each year.

The NIABI provides a number of high-level indicators of economic activity such as the total value of sales and work completed by businesses (Turnover), the value of the purchase of goods, materials and services and total employment costs. The contribution of different industries to the overall value of economic activity can be assessed and because estimates of employment are collected at the same time it is also possible to get a measure of value added and costs per head to allow better comparison between different sized industrial sectors. In addition, data used to produce a number of trade related measures within the Northern Ireland Economic Trade Statistics (NIETS) are derived from the NIABI survey (see below for further information).

The NIABI is designed to provide the best estimates for Northern Ireland as well as providing information that is used at a later stage to inform UK National and Regional Accounts estimates.

The business unit to which NIABI questionnaires are sent is called the reporting unit. The response from the reporting unit can cover the enterprise as a whole, or parts of the enterprise identified by lists of local units. Other than for a minority of larger businesses which have a more complex structure, the reporting unit is the same as the enterprise. An enterprise may consist of one or more sub-units (called local units), for example, the head office for a group of shops. An enterprise may therefore have local units at different locations, and may carry out more than one type of economic activity. ELMSB publish findings from the NIABI at both reporting (enterprise) and local unit levels. However, data is only available at reporting level.

Please note that the data within the NIABI and NIETS datasets are based on Reporting Unit (i.e. head office) information which means that all activity is coded based on the classification and location of the reporting unit. However, in reality, a business may have multiple sites or indeed a dedicated transport/logistics site from which goods are transported.

Researchers should, therefore, be aware that any analysis at Local Government District (LGD) level may be impacted by a “Head Office” effect. Researchers should also note that in some instances it is not possible to assign a business to a postcode. This is usually because the head office is outside NI. In such cases LGDs are labelled as ‘Unknown’ and hence summing the values for each LGD may not equal published NI totals. NIABI data is available on the BDR from the 2014 reference year up to 2021.

Salient points to note around the dataset include:

* **Sampling Frame**

The Inter Departmental Business Register (IDBR) is the sampling frame used for all NISRA business surveys, including the NIABI. The register consists of companies, partnerships, sole proprietors, public authorities, central government departments, local authorities and non-profit making bodies in the UK.

To maximise survey precision, the Neyman allocation approach to sampling is utilised. The survey universe is stratified by 2 digit SIC code and employee size band, and all businesses with 50+ employees, or 20+ employees and more than one local unit, are fully enumerated. Businesses falling below the threshold of complete enumeration are selected on a random stratified basis.

NIABI and NIETS sample size and returns from 2014 to 2021 are as follows:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| **NIABI (including NIETS)** | | | | | | | | |
| **Record numbers**  **(sample size/returns)** | 10,000 approx./7,445 | 9,703/  6,999 | 8,913/  6,044 | 9,310/  5,713 | 9,233/  6,409 | 9,687/  5,770 | 9,968/  6,664 | 10,893/  5,872 |

* **Stratification of the ABI sample**

The sample design for NIABI selects businesses based on selected employees within industry section at a **Reporting Unit level**.

A desired level of **estimate precision is set by industry section** and then the survey universe is stratified by the SIC2007 classification (see below) and then a Neyman Allocation apportionment at the **2 digit sic/size-band** level of the section totals is applied. This is a statistical process to determine the optimal number of businesses that should be sampled in each strata to produce accurate and precise population level estimates.

Sample size bands are zero, 1-5, 6-9, 10-19 and 20-49 (part sample, part census - see below).

* **Sample size**

The NIABI sample ranges between 9,000-11,000 businesses per year out of approximately 55k survey-eligible businesses. This is a huge sample for a complex business survey of this nature. By way of example, NIABI covers approximately 18% of the eligible business population whereas the equivalent ONS ABS covers approximately 3% of the UK eligible business population.

* **Classifications**

The UK Standard Industrial Classification of Economic Activities 2007 (SIC 2007) is the classification framework used to define the industry in which a business operates. This is used by all business surveys within the UK.

* **Inclusions and exclusions**

NIABI covers the production, construction, distribution and service industries in Northern Ireland but excludes public sector activity for the most part. Coverage also includes agriculture (support activities), hunting, forestry and fishing.

Along with those exclusions stated above in section 2.1, the other main areas that are excluded are public administration and defence (section 0) and Financial Industries (SIC 64-66) while agriculture, forestry and fishing (section A) excludes farming (groups 01.1 - Growing of non-perennial crops, 01.2 - Growing of perennial crops, 01.3 - Plant propagation, 01.4 - Animal production and 01.5 - Mixed farming). Local authority and central government bodies in education (section P) and human health and social work activities (section Q) have also been excluded from this publication, as has 86.2 (medical and dental practice activities) within section Q.

* **Blanks And Missing data**

The ABI weighting process is extremely complex and requires specialist software to undertake this. This software will not allow non-zero values or blank/missing variables to exist or else the algorithms will not work. Therefore, all cells in the database are numerated **which means that it is not possible to leave a cell blank** if a business did not provide data for a particular variable. Therefore, care is required when using the data for unit/firm level analysis as some zeros could actually be blanks.

* **Weights**

The use of weights within survey data is important to help ensure that the data is representative of the overall population. Users should note that the NIABI dataset includes weight variables, which have been calculated specifically for the sample drawn for each survey cycle, and used in the production of the NIABI published results. When replicating the published NIABI figures it is important that the correct weight is used, i.e. the “calweight”.

Valid sample returns are weighted to ensure they reflect the business population that are reported on.

The final weight, calweight (w), that is applied to each return is produced based on a design ‘a’ weight, and a calibration ‘g’ weight.

Let       yi = the value of the characteristic (e.g.: turnover) for the ith sampled business

            wi = the weight for the ith sampled business

            = the desired population total

            = the estimate of

Then:

The weight wi is commonly split into three parts:

where  ai = the a-weight for business i

            gi = the g-weight for business i

oi = the outlier weight for business i (For NIABI, this can be ignored and considered to have value = 1)

The design or ‘a’ weight is a simple expansion estimator (i.e: ) for similar groups in the population. So, for example, each SIC or size band could have the same a weight.

The calibration ‘g’ weight is based on auxiliary data and acts as a control on the ‘a’ weight to ensure that the final weight w is not skewed, based on over- or under-sampling businesses of a certain characteristic.

For example, suppose the ‘a’ strata are created based on 2 digit SIC groups. If one third of businesses respond, it follows that the responders have weights of 3 (ie: N/n = 3/1 = 3).

Furthermore, if the businesses that responded accounted for, say, 80% of the IDBR selected employment for that a group, weighting results by 3 is likely to produce employment and related variables of 3 Χ 80% = 240% of the true value.

Therefore, the final weight (w) for each business in NIABI is:

Also, the sum of (the control variable Χ weight) equals the sum of that calibration groups control variable.  In the NIABI, the control variable is IDBR selected employment.

In the NIABI data files, the design weight (‘a’ weight) variable is called *aweight* (in the NIETS dataset this is called *dweight*); the ‘g’ weight variable is called *gweight* and the overall weight variable is called *calwght*.

* **Reporting Unit vs Local Unit**

An enterprise **reporting unit** **reports for all the local units within the enterprise** (for example, the reporting unit for a large supermarket chain will respond with aggregate figures incorporating all its Northern Ireland shops).

**A local unit is an individual site** (factory, shop, office, etc.) at which an enterprise conducts its business. For example, a supermarket chain may have shops in Newtownards, Bangor, Limavady, etc, these are local units

The **Annual Business Inquiry (including NIETS) dataset is at Reporting Unit level**.

A list of variables is included in [Annex A](#_Annex_A_School).

## Northern Ireland Economic Trade Statistics (NIETS)

The Northern Ireland Economic Trade Statistics (NIETS), formerly known as the Broad Economy Sales and Exports Statistics (BESES), is a National Statistic dataset and provides an annual measure of local businesses’ purchases and sales, to and from markets outside Northern Ireland (NI).

NIETS data is gathered through the Northern Ireland Annual Business Inquiry. In survey year 2011, questions relating to the value of trade were added to the NIABI questionnaire. This trade data (NIETS) is treated as a stand-alone dataset.

As the NIETS is a subset of the ABI, the salient points listed for the ABI also apply to the NIETS.

Like NIABI, the NIETS results are classified according to the Standard Industrial Classification of Economic Activities (SIC) system. Due to ongoing volatility of the estimates, both the NIABI and NIETS publications exclude estimates for Sector K (Insurance & Re-insurance industries. The other main areas that are excluded are: Public Administration and Defence (section O) while Agriculture, Forestry and Fishing (section A) excludes farming (groups 01.1, 01.2, 01.3, 01.4 and 01.5). Local authority and central Government bodies in Education (section P) and Human Health and Social Work Activities (section Q) have also been excluded from this publication, as has 86.2 (Medical and Dental Practice Activities) within section Q.

Other salient points include:

* The survey simply captures the value of a transaction and the destination of the sale.
* No information is collected on:
  + the business making the purchase;
  + the products sold;
  + whether the goods are final products or are intermediate goods to be used in a further production process;
  + the ultimate destination of any goods sold on; and
  + transport/shipping routes.

For further background information and details of the strengths and limitations of the NIETS data please see NIETS Quick Reference Guide, a link to which is available at the end of this document.

A list of variables is included in [Annex A](#_Annex_A_School).

## Business Register and Employment Survey (BRES)

The Business Register and Employment Survey (BRES) is a survey of businesses in Northern Ireland. BRES is a compulsory government inquiry under Article 5 of the Statistics of Trade and Employment (Northern Ireland) Order 1988, which creates a legal obligation on businesses to make a return. The purpose of the BRES survey is two-fold:

1. Provide employee job figures for Northern Ireland; and
2. Update the NI element of the UK business register, known as the Inter-Departmental Business Register (IDBR).

The BRES collects employee job figures by gender and working pattern from public and private sector businesses in NI. The data allows for a disaggregation of the employee job counts by NI geographies as well as by industry. Information collected by the BRES (contact details including email address and business address, business operational status and business activity) is used to update the NI element of the IDBR which is used as a sampling frame for business surveys.

Salient points to note include:

* **Sampling Frame**

The Inter Departmental Business Register (IDBR) is the sampling frame used for all NISRA business surveys, including BRES. The register consists of companies, partnerships, sole proprietors, public authorities, central government departments, local authorities and non-profit making bodies in the UK.

BRES sample size and returns from 2014 to 2021 are as follows:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
| **BRES** | | | | | | | | |
| **Record numbers**  **(Approximate sample size/returns)** | 12,000/  10,672 | 55,000/49,970 | 12,000/11,106 | 30,000/28,058 | 12,000/10,449 | 33,500/25,924 | 16,000/  12,136 | 33,500/  27,429 |

* **Stratification of the BRES sample**

The BRES sample consists of a fully enumerated census element and a stratified random sample of the remaining businesses. All public sector businesses are surveyed every year as are all businesses that have two or more local units and those with a reporting unit registered outside NI. The census element also includes all businesses with 6 or more employees for a larger sample and 20 or more employees for a smaller sample. The non-census element businesses are stratified by industry and geography levels and Neyman is applied to select the number of businesses within the strata required to provide a specified precision.

The sample design for BRES selects businesses based on employees within District Council area level and by Section and/or 2-digit SIC depending on the size of the sample required. BRES sampling is conducted at **Local Unit level**.

* **Sample size**

The BRES sample size changes year-on-year from ‘big’ to ‘small’ where a big BRES has a sample size in the order of 34,000 businesses in recent years and a small BRES has in the order of 12,000 businesses.

* **Imputation and Grossing**

BRES census element non-response is imputed. Imputation uses the most recent survey data available and a growth factor within strata at local unit level. BRES non-census element data are grossed using a statistical process called Generalised Estimation System (GES).

Please note that no imputation markers are available in the dataset.

* **Classifications**

The UK Standard Industrial Classification of Economic Activities 2007 (SIC 2007) is the classification framework used to define the industry in which a business operates. This is used by all business surveys within the UK.

A business may operate from one or more locations. The main business site or headquarters is referred to as a Reporting Unit. Individual sites (for example a factory or a shop) are called Local Units. BRES data is collected at local unit level.

* **Exclusions - BRES excludes the following:**
* All employees based outside NI;
* Agency workers paid directly from the agency payroll (n/a to recruitment agencies);
* Voluntary workers;
* Former employees only receiving a pension;
* Self-employed workers
* Working owners who are not paid via PAYE.
* Agriculture (but includes animal husbandry service activities and hunting, trapping and game propagation);
* HM armed forces;
* Private domestic servants; and
* Jobskills trainees without a contract of employment (non-employed status).
* **Blanks And Missing data**

The BRES weighting process is extremely complex and requires specialist software to undertake this. This software will not allow non-zero values or blank/missing variables to exist or else the algorithms will not work. Therefore, all cells in the database are numerated which means that it is not possible to leave a cell blank if a business did not provide data for a particular variable. Therefore, care is required when using the data for unit/firm level analysis as some zeros could actually be blanks.

* **Weights**

The use of weights within survey data is important to help ensure that the data is representative of the overall population. Users should note that the BRES dataset includes weight variables, which have been calculated specifically for the sample drawn for each survey cycle, and used in the production of the BRES published results. When replicating the published BRES figures it is important that the correct weight is used, i.e. the “calweight”.

* **Reporting Unit vs Local Unit**

An enterprise **reporting unit** **reports for all the local units within the enterprise** (for example, the reporting unit for a large supermarket chain will respond with figures incorporating all its Northern Ireland shops).

**A local unit is an individual site** (factory, shop, office, etc.) at which an enterprise conducts its business. For example, a supermarket chain may have shops in Newtownards, Bangor, Limavady, etc, these are local units

The **Business Register and Employment dataset is at Local Unit level**.

* **BRES Reporting Unit (RU) Variables**

NI BRES data is sampled, cleaned, imputed, grossed and published at Local Unit (LU) Level.

The weighted LU employee job data are aggregated to LU industry and geography levels and used to produce the NI BRES annual employee job national statistics, published by NISRA.

The RU industry and geography variables on the BRES datasets are only used by NISRA in the data collection process.

Researchers are advised to note the following:

* **RU District Council Area**: The RU District Council Area has been determined by matching the RU postcode with the NI Central Postcode Directory (CPD).  The RU postcode is the postcode of the address provided by the business for data collection purposes.  In many cases, this will be the head office but may also be a PO Box, home address, or the address of a solicitor or accountant.  The RU District Council Area will be blank where a match with the CPD was not possible, such as for non-NI addresses.
* Published data at geographical breakdowns may not match perfectly due to variations in postcode allocations on the NI Central Postcode Directory (CPD) and continual validation work on the BRES annual survey data files.
* **RU SIC Codes:** The RU industry variables relate to the SIC code attributed to an RU when the business was selected for survey.  An RU SIC is the dominant SIC when LU employee jobs are summed at 5-digit SIC level.

A list of variables is included in [Annex A](#_Annex_A_School).

## Linkage Assessment

An assessment of the linkage of NIABI and BRES was conducted to check the viability of linking the datasets over the years 2014 to 2020 and to highlight any potential issues that researchers should be aware of.

The work showed that it is indeed feasible to link NIABI and BRES datasets as each holds a unique reference number to identify the business. This number is the Reporting Unit Reference (RURef) and it allows an unambiguous match between businesses on the NIABI and BRES surveys across the years. That is to say, the businesses either match exactly by RURef or they don’t. Therefore, the idea of false positives or false negatives for the NIABI/BRES matching does not apply and match accuracy will always be 100%.

Please note that whilst both the NIABI and BRES datasets are linkable by Reporting Unit reference, issues can arise given the caveats stated below. Any linkage between the BRES and NIABI datasets should be undertaken with caution as the datasets are designed at different levels for different purposes.

Essentially the NIABI/NIETS survey is designed at the RU level, so its survey forms are sent to the business headquarters and collect information at the business headquarters level.

The BRES survey forms are also sent to the business headquarters but collect information at the local unit level, i.e. information for the individual sites under the business headquarters.

This difference means the survey sample design is not the same for NIABI/NIETS compared to BRES. So NIABI/NIETS offers robust statistical results at the RU level and BRES offers robust statistical results at the LU level.

NIABI to BRES match rates (RU matches as a proportion of all NIABI RUs) were shown to be 45.2% in 2014, 96.9% in 2015, 54.6% in 2016, 80.2% in 2017, 57.8% in 2018, 82.8% in 2019 and 57.7% in 2020.

NIABI to BRES RU match rates are higher in years 2015, 2017 and 2019 because NIABI was matched against a much larger BRES sample in these years, therefore increasing the chance of a match. Otherwise, the average match rate was around 53.7%.

BRES to NIABI match rates (RU matches as a proportion of all BRES RUs) were shown to be 31.6% in 2014, 13.6% in 2015, 29.7% in 2016, 16.3% in 2017, 35.4% in 2018, 18.3% in 2019 and 31.7% in 2020.

BRES to NIABI RU match rates were lower in years 2015, 2017 and 2019 as these years had a much larger BRES sample, so the match rate denominator was much larger. Otherwise, the average match rate was around 31.6%.

The NIABI BRES linkages are subject to the following considerations for researchers:

* Linkage rates across the years, i.e. the proportion of matches achieved longitudinally for each of the surveys. These can be affected by a number of factors including:
* the use of sample data within the BDR surveys such that not all businesses will appear in every year;
* the loss of businesses over time due to, for example, the closure or splitting up of businesses;
* the addition of new businesses over time and the changes to businesses due to mergers etc.; and
* the level of consistency of data across the years – any known changes over time.

The match rate proportions were also broken down by SIC2, Industry Section, Legal Status and LGD and compared with the original ABI and BRES proportions for each year. They were all found to be consistent.

Having conducted these detailed checks both RSU and ELMS are content that the NIABI and BRES data pass the quality assessment for linkage and they are fit to be linked in future projects.

# Data access

The BDR data may be accessed by accredited researchers who have successfully submitted a project proposal to RSU. RSU will assist researchers from the beginning of their application proposal to the close of the project. Included in the proposal will be a variable list and researchers are required to justify the inclusion of each variable within the scope of their projects aims and objectives. Researchers are also required to detail any public engagement activities planned as part of their project. In addition, all projects must be accredited by the UK Statistics Authority Research Accreditation Panel (RAP) and have ethical approval. ELMS will give final approval to all projects.

Upon approval by RAP and ELMS, researchers will be provided with a suite of linkable tables supplied as flat files. The data will be made available to researchers in NISRA’s secure environment or via the Office for National Statistics (ONS) Secure Research Service (SRS).

# Acknowledgements

When publishing or presenting findings from the BDR the following acknowledgement should be used:

*Administrative Data Research - Northern Ireland (ADR-NI) takes privacy protection very seriously. All information that directly identifies individuals/organisations will be removed from the datasets by trusted third parties before researchers access them.*

*All researchers using ADR-NI are trained and accredited to use sensitive data safely and ethically, they will only access the data via a secure environment and all their findings will be vetted to ensure they comply with strict confidentiality requirements.*

*The help provided by the staff of the Administrative Data Research Centre - Northern Ireland (ADRC-NI) and the ADR-NI support officers within NISRA Research Support Unit (RSU) is acknowledged. ADR-NI is funded by the Economic and Social Research Council (ESRC). The authors alone are responsible for the interpretation of the data and any views or opinions presented are solely those of the author and do not necessarily represent those of ADR-NI. The NISRA ELMS data has been supplied for the sole purpose of this project.*

# Annex A: Variable catalogue

**NIABI Variable Catalogue**

Note that financial values are in £’000 whilst employment figures are actuals.

| Variable Name | Variable Name in NIABI Table | Variable / Question Description | Variable Value | Variable Labels | Comments |
| --- | --- | --- | --- | --- | --- |
| Anonymised\_Reporting\_Unit\_Ref | Anonymised\_RURef |  | Non categorical variable (Unique identifier) |  | Anonymised business reference number for linking |
| Year | Year |  | 2014 |  |  |
| 2015 |
| 2016 |
| 2017 |
| 2018 |
| 2019 |
| 2020 |
| 2021 |
| Legal\_Status | legalst |  | 0 | Unknown | Origins in IDBR survey, for more information see Annex B for more information on the IDBR sources. |
| 1 | Company, LLP, joint venture |
| 2 | Sole proprietor |
| 3 | Partnership, Limited partnership |
| 4 | Public corporation |
| 5 | Central government |
| 6 | Local authority |
| 7 | Non profit |
| Reporting\_Unit\_Employees | ruempe |  | Non categorical variable |  |
| Reporting\_Unit\_Employment | ruempmt |  | Non categorical variable |  |
| Selected\_Turnover | seltover |  | Non categorical variable |  |
| Population\_SIC | psic |  | Non categorical variable - 5 digit code group |  | For origins of SIC codes see Annex B. |
| Num\_Live\_LU | live\_LU |  | Non categorical variable |  | Origins in IDBR survey, for more information see Annex B for more information on the IDBR sources. |
| WQ050 | WQ050 | Total Employees | Non categorical variable |  |  |
| WQ051 | WQ051 | Total number of part-time employees | Non categorical variable |  |  |
| WQ052 | WQ052 | Total number of full-time employees | Non categorical variable |  |  |
| WQ055 | WQ055 | No. Working props, partners, exec directors | Non categorical variable |  |  |
| WQ058 | WQ058 | Unpaid workers, excluding voluntary workers | Non categorical variable |  |  |
| WQ059 | WQ059 | Total of 50, 55 and 58 | Non categorical variable |  |  |
| WQ317 | WQ317 | Value of insurance claims received | Non categorical variable |  |  |
| WQ318 | WQ318 | Value of grants, donations, legacies, etc. | Non categorical variable |  |  |
| WQ321 | WQ321 | Value Added Tax (VAT) included in total turnover | Non categorical variable |  |  |
| WQ346 | WQ346 | Total Turnover (including VAT) | Non categorical variable |  |  |
| WQ360 | WQ360 | Construction activity sub-contracted from another firm | Non categorical variable |  |  |
| WQ362 | WQ362 | Construction activity carried out outside Northern Ireland | Non categorical variable |  |  |
| WQ399 | WQ399 | Total turnover | Non categorical variable |  |  |
| WQ400 | WQ400 | Total taxes and levies paid | Non categorical variable |  | Note: WQ412+WQ413+  WQ15+WQ431 does not always sum to WQ400 |
| WQ412 | WQ412 | Amount business rates (national non-domestic) | Non categorical variable |  |  |
| WQ413 | WQ413 | Other taxes, duties & levies (eg excise duties ) | Non categorical variable |  |  |
| WQ414 | WQ414 | Total subsidies from government sources & EU | Non categorical variable |  |  |
| WQ415 | WQ415 | Amount paid for climate change levy | Non categorical variable |  |  |
| WQ416 | WQ416 | Total excise drawback & allowances from HMRC | Non categorical variable |  |  |
| WQ431 | WQ431 | Vehicle excise duty (road, car or vehicle tax) | Non categorical variable |  |  |
| WQ450 | WQ450 | Total employment costs | Non categorical variable |  |  |
| WQ499 | WQ499 | Total purchases of goods, material & services | Non categorical variable |  | Note: WQ710+WQ720+  WQ730 does not always sum to WQ499 |
| WQ500 | WQ500 | Total value of all stocks at beginning of period | Non categorical variable |  |  |
| WQ501 | WQ501 | Total value of work in progress - start of period | Non categorical variable |  |  |
| WQ502 | WQ502 | Total value of work in progress - end of period | Non categorical variable |  |  |
| WQ505 | WQ505 | Stocks at start of period-purchased for resale | Non categorical variable |  |  |
| WQ506 | WQ506 | Stocks at end of period-purchased for resale | Non categorical variable |  |  |
| WQ550 | WQ550 | Turnover excluding VAT | Non categorical variable |  | Note: WQ399+WQ346-(WQ321+WQ312+  WQ31]+WQ314) does not always sum to WQ550 |
| WQ599 | WQ599 | Total value of all stocks at end of the period | Non categorical variable |  |  |
| WQ600 | WQ600 | Cost of acquisitions | Non categorical variable |  | Note: WQ610+WQ611+  WQ622+WQ612+  WQ614+WQ615+  WQ626+WQ627+  WQ629+  WQ643+WQ644 does not always sum to WQ600 |
| WQ602 | WQ602 | Capital nature work carried out by own staff | Non categorical variable |  |  |
| WQ610 | WQ610 | Acquisitions of land | Non categorical variable |  |  |
| WQ611 | WQ611 | Acquisitions of existing buildings | Non categorical variable |  |  |
| WQ612 | WQ612 | Acquisitions: Computer software developed by your own staff | Non categorical variable |  |  |
| WQ613 | WQ613 | Value of work carried out by own staff for business use | Non categorical variable |  |  |
| WQ614 | WQ614 | Acquisitions: Computer software purchased or developed externally | Non categorical variable |  |  |
| WQ615 | WQ615 | Acquisitions: Machinery and equipment (previously plant) | Non categorical variable |  |  |
| WQ616 | WQ616 | Acquisitions of vehicles | Non categorical variable |  |  |
| WQ617 | WQ617 | Acquisitions of new buildings | Non categorical variable |  |  |
| WQ618 | WQ618 | Other construction | Non categorical variable |  |  |
| WQ619 | WQ619 | Computer hardware | Non categorical variable |  |  |
| WQ620 | WQ620 | Any other acquisitions | Non categorical variable |  |  |
| WQ621 | WQ621 | Assets acquired under finance leasing arrangements | Non categorical variable |  |  |
| WQ622 | WQ622 | Acquisitions: New construction work, new build | Non categorical variable |  |  |
| WQ625 | WQ625 | Acquisitions: Transfer costs and professional charges | Non categorical variable |  |  |
| WQ626 | WQ626 | Acquisitions: Natural resources | Non categorical variable |  |  |
| WQ627 | WQ627 | Acquisitions: Other non-produced assets | Non categorical variable |  |  |
| WQ628 | WQ628 | Acquisitions: Of which: Goodwill | Non categorical variable |  |  |
| WQ629 | WQ629 | Acquisitions: Intellectual property assets | Non categorical variable |  |  |
| WQ630 | WQ630 | Proceeds from the disposal of land | Non categorical variable |  |  |
| WQ631 | WQ631 | Proceeds from the disposal of existing buildings | Non categorical variable |  |  |
| WQ632 | WQ632 | Proceeds from any other disposals including: machinery, equipment and vehicles | Non categorical variable |  |  |
| WQ634 | WQ634 | Proceeds from the disposal of plant, machinery and other capital equipment | Non categorical variable |  |  |
| WQ635 | WQ635 | Disposals: Transfer costs and professional charges | Non categorical variable |  |  |
| WQ636 | WQ636 | Disposals: Computer software developed by your own staff | Non categorical variable |  |  |
| WQ637 | WQ637 | Disposals: Computer software purchased or developed externally | Non categorical variable |  |  |
| WQ638 | WQ638 | Disposals: Machinery and equipment | Non categorical variable |  |  |
| WQ639 | WQ639 | Disposals: Natural resources | Non categorical variable |  |  |
| WQ640 | WQ640 | Investments in concessions, patents, licences and trademarks | Non categorical variable |  |  |
| WQ641 | WQ641 | Disposals: Other non-produced assets | Non categorical variable |  |  |
| WQ642 | WQ642 | Disposals: Intellectual property assets | Non categorical variable |  |  |
| WQ643 | WQ643 | Mineral exploration and evaluation | Non categorical variable |  |  |
| WQ644 | WQ644 | Acquisitions: Contracts and fees for player transfers | Non categorical variable |  |  |
| WQ645 | WQ645 | Disposals: Contracts and fees for player transfers | Non categorical variable |  |  |
| WQ690 | WQ690 | Net capex (acquisitions - disposals) | Non categorical variable |  | Note: WQ600-WQ699 does not always sum to WQ690 |
| WQ699 | WQ699 | Proceeds from disposals | Non categorical variable |  | Note: WQ630+WQ631+  WQ636+  WQ637+WQ638+  WQ639+WQ641+  WQ642+WQ645  does not always sum to WQ699 |
| WQ710 | WQ710 | Total purchases of goods and materials | Non categorical variable |  |  |
| WQ711 | WQ711 | Of which for resale - NO further processing | Non categorical variable |  |  |
| WQ712 | WQ712 | Of which: were bought for further processing | Non categorical variable |  |  |
| WQ713 | WQ713 | Further processing purchases attributed to NI | Non categorical variable |  |  |
| WQ714 | WQ714 | Of which: semi-processed food/drink materials | Non categorical variable |  |  |
| WQ716 | WQ716 | Semi-Processed Purchases attributed to NI | Non categorical variable |  |  |
| WQ717 | WQ717 | Bought for resale purchases attributed to NI | Non categorical variable |  |  |
| WQ720 | WQ720 | Total purchases of energy and water | Non categorical variable |  | Note: WQ732+WQ729 does not always sum to WQ720 |
| WQ721 | WQ721 | Electricity | Non categorical variable |  |  |
| WQ722 | WQ722 | Natural Gas | Non categorical variable |  |  |
| WQ723 | WQ723 | LPG (liquid petroleum gas) | Non categorical variable |  |  |
| WQ724 | WQ724 | Heating Oil | Non categorical variable |  |  |
| WQ725 | WQ725 | Solid Fuels | Non categorical variable |  |  |
| WQ726 | WQ726 | Motor Fuels | Non categorical variable |  |  |
| WQ727 | WQ727 | Other Fuel Energy Products | Non categorical variable |  |  |
| WQ729 | WQ729 | Energy Costs Total | Non categorical variable |  | Note: WQ721+WQ722+  WQ723+WQ724+  WQ725+WQ726+  WQ727 does not always sum to WQ729 |
| WQ730 | WQ730 | Total purchases of services | Non categorical variable |  | Note: WQ780+WQ770+  WQ771+WQ772+  WQ1830+WQ734+  WQ775 does not always sum to WQ730 |
| WQ732 | WQ732 | Of value at 7.2(b) [i.e. WQ720] how much was water charges | Non categorical variable |  |  |
| WQ734 | WQ734 | How much was sewerage & other disposal costs | Non categorical variable |  |  |
| WQ770 | WQ770 | Amounts payable for road transport services | Non categorical variable |  |  |
| WQ771 | WQ771 | Amounts payable for hiring, leasing or renting plant | Non categorical variable |  |  |
| WQ772 | WQ772 | Amounts payable for telecommunication services | Non categorical variable |  |  |
| WQ775 | WQ775 | All other amounts payable for services | Non categorical variable |  |  |
| WQ780 | WQ780 | Amounts payable to consultants or architects | Non categorical variable |  |  |
| WQ810 | WQ810 | Value of goods of own production | Non categorical variable |  |  |
| WQ816 | WQ816 | Construction & sales: own staff/sub-contractors | Non categorical variable |  |  |
| WQ820 | WQ820 | Work on customers materials/services rendered | Non categorical variable |  |  |
| WQ830 | WQ830 | Val goods purchased/resold NO more reprocessing | Non categorical variable |  |  |
| WQ910 | WQ910 | Turnover from sale of motor vehicles | Non categorical variable |  |  |
| WQ911 | WQ911 | Turnover goods repurchase/resold NO more processing | Non categorical variable |  |  |
| WQ920 | WQ920 | Turnover from other motor trade activity | Non categorical variable |  |  |
| WQ930 | WQ930 | Turnover from non-motor trade activity | Non categorical variable |  |  |
| WQ1830 | WQ1830 | Agency Pay (Excluding VAT) | Non categorical variable |  |  |
| WQ2010 | WQ2010 | gvamp = GVA at market prices | Non categorical variable |  | Note: WQ550+WQ317+  WQ599+WQ502-WQ500-WQ501+WQ602-WQ499 does not always sum to WQ2010 |
| WQ2020 | WQ2020 | gvafc = GVA at factor cost | Non categorical variable |  | Note: WQ2010+WQ414-WQ400+WQ416 does not always sum to WQ2020 |
| WQ2030 | WQ2030 | gvabp = GVA at basic prices | Non categorical variable |  | Note: WQ2020+WQ412+  WQ431 does not always sum to WQ2030 |
| Reporting\_Unit\_Section | rusection |  | 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 motor cycles |
| H | Transport and storage |
| I | Accommodation and food service activities |
| J | Information and communication |
| L | Real estate activities |
| M | Professional, scientific and technical activities |
| N | Administrative and support service activities |
| P | Education |
| Q | Human health and social work activities |
| R | Arts, entertainment and recreation |
| S | Other service activities |
| Survey\_Design\_Weight | AWEIGHT |  | Non categorical variable |  |  |
| Survey\_G\_Weight | GWEIGHT |  | Non categorical variable |  |  |
| Survey\_Calibration\_Weight | CALWGHT |  | Non categorical variable |  |  |
| LGD2014 | LGD\_2014 |  | N09000001 |  | Based on BDR\_GEOG CPD file joined by Year and Postcode. |
| N09000002 |
| N09000003 |
| N09000004 |
| N09000005 |
| N09000006 |
| N09000007 |
| N09000008 |
| N09000009 |
| N09000010 |
| N09000011 |
| Unknown |
| LGD2014NAME | LGD\_2014\_NAME |  | Antrim and Newtownabbey |  | Based on BDR\_GEOG CPD file joined by Year and Postcode. |
| Armagh City, Banbridge and Craigavon |
| Belfast |
| Causeway Coast and Glens |
| Derry City and Strabane |
| Fermanagh and Omagh |
| Lisburn and Castlereagh |
| Mid and East Antrim |
| Mid Ulster |
| Newry, Mourne and Down |
| Ards and North Down |
| Unknown |

**NIETS Variable Catalogue**

| **Variable Name** | **Variable Name in NIETS Table** | **Variable / Question Description** | **Variable Value** | **Comments** | **Formula** |
| --- | --- | --- | --- | --- | --- |
| Anonymised\_Reporting\_Unit\_Ref | Anonymised\_RURef |  |  | Anonymised business reference number for linking |  |
| Export | export | Total\_Exports\_Value | Non categorical variable |  | [MF5008]+[MF5009]+[MF5010] |
| WQ111 | WQ111 | Of which Export of Goods to the Rest of EU | Non categorical variable |  |  |
| WQ112 | WQ112 | Export of Goods outside the UK | Non categorical variable |  | [WQ114]+[WQ111]+[WQ113]+[WQ116]+[WQ115]+[WQ117] |
| WQ113 | WQ113 | Of which export of goods to ROW | Non categorical variable |  |  |
| WQ114 | WQ114 | Of which export of goods to ROI | Non categorical variable |  |  |
| WQ115 | WQ115 | Of which Export of Services to the Rest of EU | Non categorical variable |  |  |
| WQ116 | WQ116 | Of which export of services to ROI | Non categorical variable |  |  |
| WQ117 | WQ117 | Of which export of services to ROW | Non categorical variable |  |  |
| WQ118 | WQ118 | Freight & Insurance Costs assoc. with Exports | Non categorical variable |  |  |
| WQ120 | WQ120 | Total imports goods & services from outside UK | Non categorical variable |  | [WQ124]+[WQ126+  [WQ121]+[WQ125]+  [WQ123]+[WQ127] **or**  MF5013+MF5014+  MF5015 |
| WQ121 | WQ121 | Of which Import of Goods from the Rest of EU | Non categorical variable |  |  |
| WQ122 | WQ122 | Import of Goods from outside the UK | Non categorical variable |  |  |
| WQ123 | WQ123 | Of which Import of Goods from ROW | Non categorical variable |  |  |
| WQ124 | WQ124 | Of which Import of Goods from ROI | Non categorical variable |  |  |
| WQ125 | WQ125 | Of which Import of Services from Rest of EU | Non categorical variable |  |  |
| WQ126 | WQ126 | Of which Import of Services from ROI | Non categorical variable |  |  |
| WQ127 | WQ127 | Of which Import of Services from ROW | Non categorical variable |  |  |
| WQ128 | WQ128 | Freight & Insurance Costs assoc. with Imports | Non categorical variable |  |  |
| WQ163 | WQ163 | Export of Services outside the UK | Non categorical variable |  |  |
| WQ164 | WQ164 | Import of Services from outside the UK | Non categorical variable |  |  |
| WQ1600 | WQ1600 | Total goods and services purchased from Northern Ireland | Non categorical variable |  | [WQ1601]+[WQ1602] |
| WQ1601 | WQ1601 | Goods purchased from Northern Ireland | Non categorical variable |  |  |
| WQ1602 | WQ1602 | Services purchased from Northern Ireland | Non categorical variable |  |  |
| WQ1603 | WQ1603 | Total goods and services purchased from Great Britain | Non categorical variable |  | [WQ1604]+[WQ1605] |
| WQ1604 | WQ1604 | Goods purchased from Great Britain | Non categorical variable |  |  |
| WQ1605 | WQ1605 | Services purchased from Great Britain | Non categorical variable |  |  |
| MF5000 | MF5000 | Goods and Services sold to NI | Non categorical variable |  |  |
| MF5001 | MF5001 | Goods and Services sold to NI, Of which were : Goods | Non categorical variable |  |  |
| MF5002 | MF5002 | Goods and Services sold to NI, Of which were : Services | Non categorical variable |  |  |
| MF5003 | MF5003 | Goods and Services sold to GB | Non categorical variable |  |  |
| MF5004 | MF5004 | Goods and Services sold to GB, Of which were : Goods | Non categorical variable |  |  |
| MF5005 | MF5005 | Goods and Services sold to GB, Of which were : Services | Non categorical variable |  |  |
| MF5008 | MF5008 | The value of exports of goods and services to Republic of Ireland | Non categorical variable |  |  |
| MF5009 | MF5009 | The value of exports of goods and services to Rest of European Union (EU) | Non categorical variable |  |  |
| MF5010 | MF5010 | The value of exports of goods and services to Rest of World | Non categorical variable |  |  |
| MF5013 | MF5013 | The value of imports of goods and services from Republic of Ireland | Non categorical variable |  |  |
| MF5014 | MF5014 | The value of imports of goods and services from Rest of European Union (EU) | Non categorical variable |  |  |
| MF5015 | MF5015 | The value of imports of goods and services from Rest of World | Non categorical variable |  |  |
| mic\_s\_m\_lrg | mic\_s\_m\_lrg | Business Size (Employees) | 0-9, 10-49, 50-249 and 250+ |  |  |

**BRES Variable Catalogue**

| **Variable Name** | **Variable Name in BRES Table** | **Variable Value** | **Variable Labels** | **Comments** | **Further Information** |
| --- | --- | --- | --- | --- | --- |
| Year | Year | 2014 |  |  | Year of survey |
| 2015 |
| 2016 |
| 2017 |
| 2018 |
| 2019 |
| 2020 |
| 2021 |
| Anonymised\_Reporting\_Unit\_Ref | Anonymised\_RURef | Non categorical variable (Unique identifier) |  | Anonymised version for linking | Unique code identifies each business on the register. Each RURef can have one or more LURef. Rurefs are used by all business surveys in ELMSB so would allow linkage. |
| Anonymised\_Local\_Unit\_Ref | Anonymised\_LURef | Non categorical variable (Unique identifier) |  | Anonymised version for linking | Unique code identifies each location within a business - so an RURef can have more than 1 LURef |
| Local\_Unit\_Employees | LUEmpe | Non categorical variable |  | This is selected at employee count for the LU. LU\_TOTAL\_EMPS is the returned employee job count for that year | Local Unit employee jobs selected at value - i.e. at time selected for survey |
| Local\_Unit\_Full\_Time\_Male | LU\_MALE\_FT | Non categorical variable |  |  | Local Unit returned employee jobs Male FT |
| Local\_Unit\_Part\_Time\_Male | LU\_MALE\_PT | Non categorical variable |  |  | Local Unit returned employee jobs Male PT |
| Local\_Unit\_Full\_Time\_Female | LU\_FEMALE\_FT | Non categorical variable |  |  | Local Unit returned employee jobs Female FT |
| Local\_Unit\_Part\_Time\_Female | LU\_FEMALE\_PT | Non categorical variable |  |  | Local Unit returned employee jobs Female PT |
| Local\_Unit\_Total\_Employees | LU\_TOTAL\_EMPS | Non categorical variable |  |  | Local Unit returned employee jobs Total |
| Legal\_Status | LegalStatus | 1 | Ltd Company, Limited Liability Partnership & Plc | For more information see: Annex B |  |
| 2 | Sole Proprietor |
| 3 | Partnership | Note: Legal Status 4, 5 and 6 are public sector and the others private sector. |
| 4 | Public Corporation/Nationalised Body |
| 5 | Central Government |
| 6 | Local Authority |
| 7 | Non-profit body or mutual association |
| Unknown | Not allocated |
| Full\_Time\_Male | MALE\_FT | Non categorical variable |  | These are the returned employee jobs at RU level. | RU MFT returned employee jobs |
| Part\_Time\_Male | MALE\_PT | Non categorical variable |  | These are the returned employee jobs at RU level. | RU MPT returned employee jobs |
| Full\_Time\_Female | FEMALE\_FT | Non categorical variable |  | These are the returned employee jobs at RU level. | RU FFT returned employee jobs |
| Part\_Time\_Female | FEMALE\_PT | Non categorical variable |  | These are the returned employee jobs at RU level. | RU FPT returned employee jobs |
| Total\_Employees | TOTAL\_EMPS | Non categorical variable |  | These are the returned employee jobs at RU level. | RU total returned employee jobs |
| Reporting\_Unit\_SIC\_2007 | RUSic07 | Non categorical variable - 5 digit code group |  | See Annex B | RU 5-digit SIC code – as reported on the BRES survey form. Researchers are asked to note that LU SICs may differ to RU SIC. |
| Reporting\_Unit\_SIC\_2007\_Description | RUSic07Desc | Description of code. |  | See Annex B | RU 5-digit SIC code description for the SIC\_2007 variable (based on descriptions published by Companies House in Standard industrial classification of economic activities (SIC) - GOV.UK (www.gov.uk)) |
| Form\_Completion\_Time | TIME\_TAKEN | Non categorical variable |  |  | Time taken to complete the survey - refers to survey burden. |
| Location\_Count | LOCATION\_COUNT | Non categorical variable |  |  | Count of local units per reporting unit |
| Full\_Time\_Male\_Weighted | w\_mft | Non categorical variable |  |  | LU MFT employee jobs weighted |
| Part\_Time\_Male\_Weighted | w\_mpt | Non categorical variable |  |  | LU MPT employee jobs weighted |
| Full\_Time\_Female\_Weighted | w\_fft | Non categorical variable |  |  | LU FFT employee jobs weighted |
| Part\_Time\_Female\_Weighted | w\_fpt | Non categorical variable |  |  | LU FPT employee jobs weighted |
| Total\_Employees\_Weighted | w\_total | Non categorical variable |  |  | LU TOTAL employee jobs weighted |
| Male\_Employees\_Weighted | w\_male | Non categorical variable |  |  | LU Male employee jobs weighted |
| Female\_Employees\_Weighted | w\_female | Non categorical variable |  |  | LU Female employee jobs weighted |
| Full\_Time\_Employees\_Weighted | w\_ft | Non categorical variable |  |  | LU Full-time employee jobs weighted |
| Public\_Private\_Data\_Source | Public\_Private | Public |  |  | Public Sector/Private Sector |
| Private |
| Part\_Time\_Employees\_Weighted | w\_pt | Weights |  |  | LU Part-time employee jobs weighted |
| Industry\_Headline | Headline | Services; Other; Manufacturing; Construction |  |  | LU level |
| Other |
| Manufacturing |
| Construction |
| Industry\_Section | Section | A | Agriculture, Forestry and Fishing |  | LU level |
| 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 | Transportation 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 |
| SIC\_2\_Digit | SIC2 | Non categorical variable - 2 digit code group |  | SIC2 - A sub-division of Industry\_Section level. A 2-digit code (01 to 96). | LU level |
| SIC\_3\_Digit | SIC3 | Non categorical variable - 3 digit code group |  | SIC3 - A sub-division of SIC2.  A 3-digit code (011 to 960) | LU level |
| SIC\_4\_Digit | SIC4 | Non categorical variable - 4 digit code group |  | SIC4 - A sub-division of SIC3. A 4-digit code (0111 to 9609) | LU level |
| SIC\_5\_Digit | SIC5 | Non categorical variable - 5 digit code group |  | SIC5 - A sub-division of SIC4. A 5-digit code (01110 to 96090) | LU level |
| LGD2014\_LU | LGD\_2014\_LU | N09000001 |  | Based on CPD file available for each year of data. | LU Level |
| N09000002 |
| N09000003 |
| N09000004 |
| N09000005 |
| N09000006 |
| N09000007 |
| N09000008 |
| N09000009 |
| N09000010 |
| N09000011 |
| Unknown |
| LGD2014NAME\_LU | LGD\_2014\_NAME\_LU | Antrim and Newtownabbey |  | Based on CPD file available for each year of data. | LU Level |
| Armagh City, Banbridge and Craigavon |
| Belfast |
| Causeway Coast and Glens |
| Derry City and Strabane |
| Fermanagh and Omagh |
| Lisburn and Castlereagh |
| Mid and East Antrim |
| Mid Ulster |
| Newry, Mourne and Down |
| Ards and North Down |
| Unknown |
| LGD2014\_RU | LGD\_2014\_RU | N09000001 |  | Based on CPD file available for each year of data.  Researchers are asked to note that LGD is based solely on the RU postcode on the form. Many of these will be non-NI, e.g. GB, ROI, overseas and will therefore have no RU LGD assigned to them and will be categorised as Unknown. | RU Level |
| N09000002 |
| N09000003 |
| N09000004 |
| N09000005 |
| N09000006 |
| N09000007 |
| N09000008 |
| N09000009 |
| N09000010 |
| N09000011 |
| Unknown |
| LGD2014NAME\_RU | LGD\_2014\_NAME\_RU | Antrim and Newtownabbey |  | Based on CPD file available for each year of data.  Researchers are asked to note that LGD Name is based solely on the RU postcode on the form. Many of these will be non-NI, e.g. GB, ROI, overseas and will therefore have no RU LGD assigned to them and will be categorised as Unknown. | RU Level |
| Armagh City, Banbridge and Craigavon |
| Belfast |
| Causeway Coast and Glens |
| Derry City and Strabane |
| Fermanagh and Omagh |
| Lisburn and Castlereagh |
| Mid and East Antrim |
| Mid Ulster |
| Newry, Mourne and Down |
| Ards and North Down |
| Unknown |

# Annex B: Useful online links

[Code of Practice for Statistics](https://code.statisticsauthority.gov.uk/the-code/)

**Code of Practice for Statistics**



[The Statistics of Trade and Employment (NI) Order 1988](https://www.legislation.gov.uk/nisi/1988/595/contents)

**The Statistics of Trade and Employment (NI) Order 1988**



[ELMS guide to survey](https://www.nisra.gov.uk/publications/elms-guide-surveys)

**ELMS guide to survey**



[ABI background information](https://www.nisra.gov.uk/statistics/annual-business-inquiry/abi-background-information)

**ABI Background Information**



[Inter Departmental Business Register (IDBR)](https://www.nisra.gov.uk/statistics/business-statistics/inter-departmental-business-register)

**Inter Departmental Business Register (IDBR)**



[ABI sample coverage](https://www.nisra.gov.uk/statistics/annual-business-inquiry/abi-sample-coverage)

**ABI Sample Coverage**



[Usage, methods and quality and revisions policy - ABI](https://www.nisra.gov.uk/publications/usage-methods-and-quality-and-revisions-policy-abi)

**Usage, Methods and Quality Revisions Policy – ABI**



[ABI survey form](https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/ABI-long-form.pdf)

**ABI survey form**



[ABI questionnaire guidance notes](https://www.nisra.gov.uk/publications/ni-annual-business-inquiry-questionnaire-guidance-notes)

**ABI questionnaire guidance notes**



[NIETS background information](https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/BESES%20Background%20Information%20-%20May%202018_0.pdf)

**NIETS background information**



[NIETS Quick Reference Guide](https://www.nisra.gov.uk/system/files/statistics/BESES-Quick-Reference-Guide.PDF)

**NIETS Quick Reference Guide**



[Further information about IDBR sources, structure and updating for publication](https://www.ons.gov.uk/file?uri=/businessindustryandtrade/business/activitysizeandlocation/methodologies/businesspopulation/furtherinformationaboutidbrsourcestcm77325481.pdf)

**Further Information About IDBR Sources, Structure and updating for Publication**



[UK SIC 2007](https://www.ons.gov.uk/methodology/classificationsandstandards/ukstandardindustrialclassificationofeconomicactivities/uksic2007)

**UK SIC 2007**



[Info on Use of Weights in ABS Technical Report](https://webarchive.nationalarchives.gov.uk/ukgwa/20160105160709/http:/www.ons.gov.uk/ons/guide-method/method-quality/specific/business-and-energy/annual-business-survey/quality-and-methods/abs-technical-report.pdf)

**Information on Use of Weights in ABS Technical Report**



[A Guide to Business Legal Status](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/31676/11-1399-guide-legal-forms-for-business.pdf)

**A Guide to Business Legal Status**



[BRES guidance](https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/BRES_2023_GUIDANCE_NOTES.pdf)

**BRES guidance**

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[BRES quality and methodology](https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/BRES_Quality_and_Methodology_Information_0.pdf)

**BRES quality and methodology**

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[BRES questionnaire – sample copy](https://www.nisra.gov.uk/sites/nisra.gov.uk/files/publications/BRES%202020%20Questionnaire%20-%20Sample%20Copy.pdf)

**BRES questionnaire – sample copy**



1. National Statistics status means that our statistics meet the highest standards of trustworthiness, quality, and public value, and it is our responsibility to maintain compliance with these standards. National Statistics accreditation is granted by the UK statistics Authority following comprehensive and independent assessment of the statistics. [↑](#footnote-ref-1)