An Phríomh-Oifig Staidrimh
Central Statistics Office

Standard SIMS Report:

Census of Industrial Production

Single Integrated Metadata Structure (SIMS) Report

For

Census of Industrial Production

This documentation applies to the reporting period:
2020

Last edited: 19/09/2022

1. Table of Contents

2. Introduction

The Census of Industrial Production, which is an annual survey, comprises two separate but closely related annual inquiries, namely:

i. the Census of Industrial Enterprises required under Council Regulation (EC, Euratom) No 295/2008 which covers those enterprises which are wholly or primarily engaged in industrial production;
ii. the Census of Industrial Local Units which covers all industrial local units.

The primary focus of CIP is the collection of information on enterprises and local units that are wholly or primarily engaged in industrial production (manufacturing, mining, quarrying, sewerage, waste management and the supply of electricity, gas, steam and water).

The purpose of the CIP is to provide structural data about the industrial sector of the economy. Data is collected on variables such as turnover, purchases, stocks, capital assets, labour costs and nationality of ownership classified by industrial sector, by size category of persons engaged, by size category of turnover.

The first CIP survey took place in 1926.

3. Contact

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4. Metadata Update

4.1. Metadata last certified

15/09/2022

4.2. Metadata last posted

23/09/2022

4.3. Metadata last update

15/09/2022

5. Statistical Presentation

5.1. Data Description

The Census of Industrial Production describes the structure, conduct and performance of economic activities, down to the most detailed activity level
The main variables refer to:

- Business demographic variables (e.g. Number of enterprises)
- "Output related" variables (e.g. Turnover, Value added)
- "Input related" variables: labour input (e.g. Employment, Hours worked); goods and services input (e.g. Total of purchases); capital input (e.g. Material investments)

5.2. Classification System

The 2019 results are classified by NACE Revision 2, which was first introduced for reference year 2008. NACE Rev.1 was used until 2001, NACE Rev. 1.1 since 2002, and NACE Rev 2 is used from 2008 onwards. Key data were double reported in NACE Rev.1.1 and NACE Rev.2 for 2008. From 2009 onwards, only NACE Rev.2 data are available.
A correlation table showing the relationship between headings of the old and new classifications is available on request.

Each 4 digit class in NACE Revision 2 relates to a specific form of economic activity, e.g. manufacture of basic pharmaceuticals products (NACE 2110).

The statistical units in the Census (local unit and enterprise) are coded to the NACE class relating to their principal industrial activity during the Census year. In the case of local units, this is determined on the basis of detailed information provided on their production of individual products.

The activity classification of enterprises is based on the NACE codes of the constituent local units. An enterprise that operates several industrial local units coded to different NACE classes is classified to the activity which accounts for the highest proportion of the total value added of the enterprise.

Classification by Nationality of Ownership
The classification is determined by the nationality of the owners of 50 per cent or more of the share capital. The breakdown which can be provided at sectoral level is in many cases constrained by the need to preserve the confidentiality of data provided by individual units. For total manufacturing industry, however, a more detailed nationality classification is possible.

The regional classifications are based on the Nomenclature of Territorial Units (NUTS) Level 2 classification used
by Eurostat. The boundaries were amended on 21st of November 2016 under Regulation (EC) No. 2066/2016 and have come into force from 2018. The new breakdown has three regions the counties constituting each of the regions are listed below

- **Northern & Western Region:** Cavan, Donegal, Leitrim, Monaghan, Sligo, Galway City, Galway County, Mayo and Roscommon
- **Southern Region:** Clare, Limerick City & County, Tipperary, Carlow, Kilkenny, Waterford City & County, Wexford, Laois, Cork City, Cork County, Kerry
- **Eastern & Midland Region** Dublin City, Dun Laoghaire-Rathdown, Fingal, South Dublin, Kildare, Meath, Wicklow, Louth, Laois, Longford, Offaly, Westmeath

For information the previous regions were Southern and Eastern (SE) and Border, Midlands and West (BMW) regions.

The counties constituting each of the previous two regions are listed below:

- **BMW Region:** Cavan, Donegal, Galway, Laois, Leitrim, Longford, Louth, Mayo, Monaghan, Offaly, Roscommon, Sligo, Westmeath

- **SE Region**: Carlow, Clare, Cork, Dublin, Kerry, Kildare, Kilkenny, Limerick, Meath, Tipperary, Waterford, Wexford, Wicklow

5.3. Sector Coverage

The survey is made up of a census of industrial enterprises and local units drawn from the Business Register.

The scope of the Census extends to NACE sections B, C, D and E, namely:
Section B: Mining and quarrying
Section C: Manufacturing
Section D: Electricity, gas, steam and air conditioning supply
Section E: Water supply; sewerage, waste management and remediation activities

The traditional category Transportable Goods Industries used in industrial statistics is equivalent to NACE sections B and C. The Manufacturing Industries grouping includes only section C.

5.4. Statistical Concepts and definitions

The definition was variables turnover, purchases, employment, earnings following the regulation definitions.

The local unit Census focuses on the industrial process, namely the utilisation of materials, industrial services and labour, and the value of goods produced during the year. The most important variables distinguished are therefore *gross output, industrial input and net output.*

- **Gross output** represents the selling value of goods actually produced in the year, as reported by the businesses themselves, irrespective of whether sold or put into stock.
- **Industrial input** is defined as the cost of materials, industrial services and fuel and power used in the year.
- **Net output** is gross output less industrial input.

The enterprise Census, on the other hand, relates to the trading dimension, namely turnover, purchases of materials and services and labour costs during the year. One of the main variables in this Census is, therefore, **turnover**, which represents the revenue received during the year. This can be compared with **gross output** by means of the derived variable **production value**.

The **production value** is defined as turnover, plus or minus the changes in stocks of finished products, work in progress and goods and services purchased for resale, minus the purchases of goods and services for resale, plus capitalised production, plus other operating income (excluding subsidies).

This variable approximates closely to the value of gross output of the industrial local units operated by the enterprises.
The different treatment of **excise duties** and **operating subsidies** in the two Censuses makes comparison more difficult for the small number of industries affected by these factors.

The variable in the enterprise Census which approximates most closely to **industrial input** is **intermediate consumption**.

Intermediate consumption consists of the value of the goods and services consumed as inputs by a process of production, excluding fixed assets whose consumption is recorded as consumption of fixed capital; the goods or services may be either transformed or used up by the production process and is defined as the purchases of materials, industrial and non-industrial services and fuel and power, less the rise (or plus the fall) during the year of stocks of materials and fuels. The main difference, therefore, is the inclusion of non-industrial services in intermediate consumption.

In the enterprise Census **gross value added (excluding VAT)** is defined as **production value less intermediate consumption**; this is the closest approximation to **net output** as distinguished in the local unit Census.

5.5. Statistical Unit

An enterprise is defined as the smallest combination of legal units that is an organisational unit producing goods or services, which benefits from a certain degree of autonomy in decision making, especially for the allocation of its current resources (e.g. company, partnership, individual proprietorship, etc.). An enterprise may be a sole legal unit.
In practice, the enterprise is equivalent to a company or firm. Within a group of companies, each individual company is treated as a separate enterprise. The return for each enterprise relates to all of its activities and covers all local units operated by it, including those involved in non-industrial activity, e.g. wholesaling or retailing.

A local unit is an enterprise or part thereof (e.g. a workshop, factory, warehouse, office, mine or depot) situated in a geographically identified place.

5.6. Statistical Population

The enterprise Census covers all enterprises which are wholly or principally involved in industrial production (i.e. NACE Sections B to E).

The results for industrial enterprises must be distinguished from the results for industrial local units. Despite the fact that, in the majority of cases, the local unit is equivalent to the enterprise, the use of two different units in the two Censuses has a number of consequences which must be borne in mind when interpreting and comparing their results, namely:

- Only enterprises engaged wholly or mainly in industrial production are covered in the Census of Industrial Enterprises. Some industrial activity recorded in the local unit Census is not covered in the enterprise Census because it is undertaken by enterprises which are not classified as industrial. Such enterprises belong to non-industrial sectors such as Distribution, Building and Construction, Transport and Central or Local Government.
- Conversely, many industrial enterprises are also involved to some extent in non-industrial activity which is reflected in their employment, turnover and other figures. A rough measure of the amount of distribution activity covered in the enterprise results is that about 23.8% of turnover in 2019 for NACE Sections B, C, D and E relates to factored goods (i.e. goods resold without further processing).

Branches of foreign enterprises are included, if they represent separate entities in administrative sources.

Activities of branches of enterprises that are registered as separate companies abroad are excluded, however, activities of Irish-registered companies abroad are included.

5.7. Reference Area

Results are broken down by NUTS2 regions at local unit level for the Republic of Ireland. Results are not broken down by region for enterprises because enterprises are geographically coded to the same region as the largest local unit within an enterprise hence data that is provided at enterprise level would typically be coded to the major population centres thus distorting the results.

5.8. Time Coverage

1998-2020

5.9. Base period

Not applicable.

6. Unit of Measure

- Number of enterprises and number of local units are expressed in units.
- Monetary data are expressed in millions of €.
- Employment variables are expressed in units.
- Per head values are expressed in thousands of € per head.

Ratios are expressed in percentages.

7. Reference Period

2020

8. Institutional Mandate

8.1. Legal Acts and other agreements

Nationally, the survey is carried out under Statutory Instrument no 268/2022 available at https://www.irishstatutebook.ie/eli/2022/si/268/made/en/pdf

At EU level the survey is carried out under Council Regulation (EC EURATOM) NO 295/2008 of the European Parliament and of the Council of 11 March 2008 concerning structural business statistics (recast) Text with EEA relevance, published in the Official Journal of 9/4/2008.

Regulation (EC) No 1893/2006 of the European Parliament and of the Council of 20 December 2006 establishing the statistical classification of economic activities NACE Revision 2 and amending Council Regulation (EEC) No 3037/90 as well as certain EC Regulations on specific statistical domains Text with EEA relevance, published in the Official Journal of 30/12/2006.

8.2. Data Sharing

Not applicable.

9. Confidentiality

9.1. Confidentiality – policy

All information supplied to the CSO is treated as strictly confidential. The Statistics Act, 1993 sets stringent confidentiality standards: Information collected may be used only for statistical purposes, and no details that might be related to an identifiable person or business undertaking may be divulged to any other government department or body.
These national statistical confidentiality provisions are reinforced by the following EU legislation: Council Regulation (EC) No 223/2009 on European statistics for data collected for EU statistical purposes.
Further details are outlined in the CSO's Code of Practice on Statistical Confidentiality.

For more information on the CSO confidentiality policy please visit:
https://www.cso.ie/en/aboutus/lgdp/csodatapolicies/statisticalconfidentiality/

9.2. Confidentiality – Data Treatment

Individual companies' data are treated as strictly confidential under the Statistics Act, 1993. The level of breakdown is determined by making sure that the data in the resulting categories does not violate the confidentiality of the returns.

Eurostat k-rules are used, i.e. a cell is confidential, if 80+% of total comes from 1 company or 90+% comes from 2 companies. A cell is confidential if it contains less than 3 enterprises.

10. Release Policy

10.1. Release Calendar

The date of dissemination of all statistics released by CSO can be found in the Release Calendar published in CSO.ie. This calendar is regularly updated.

10.2. Release calendar access

The release calendar can be accessed via the CSO website, www.cso.ie, or directly from this link: https://www.cso.ie/en/csolatestnews/releasecalendar/

10.3. User access

In accordance with Principle 6 of the European Statistics Code of Practice all users of CSO statistics have equal access via the CSO website at the same time of 11 am. Any privileged pre-release access to any outside user is limited, controlled and publicised. In the event that leaks occur, pre-release arrangements are revised so as to ensure impartiality.

The CSO recognises that in very limited circumstances a business need for pre-release access may be substantiated. Any form of pre-release access is a privilege and a strict CSO pre-release access policy is adhered to for these special requests. The full pre-release access policy can be accessed at https://www.cso.ie/en/aboutus/lgdp/csodatapolicies/csopolicyonpre-releaseaccess/

The various results are published nationally in statistical release format as well as on the CSO website (www.cso.ie). Selected extracts from the results are posted on the CSO's data dissemination database, PxStat.

Access is available to a limited set of registered main users within the CSO. Researchers from outside the CSO can apply for access to micro data. We also publish our Business in Ireland publication in Q4 which gives a detailed review of our SBS data. Main variables and breakdowns are available on PxStat for all users. Any adhoc quests for data are released as long as confidentiality is maintained.

11. Frequency of Dissemination

Data is transmitted to Eurostat on an Annual basis.

Nationally we publish tables via our PxStat facility on the CSO website following our annual national publication in September each year.

12. Accessibility and clarity

12.1. News release

Not applicable.

12.2. Publications

The Census of Industrial Production is disseminated as an Electronic Release as part of the Structural Business Statistics and Business in Ireland publications on the CSO website.

The national publication (electronic) is scheduled each September and final data can be found at:

- Enterprises Industrial
- Enterprises Manufacturing
- Local unit data is published at a later date.

The publication can be accessed directly from this link:
https://www.cso.ie/en/statistics/multisectoral/structuralbusinessstatistics/

Historical Data on the CSO's database
Historical data is related to local units from 1991 – 2007, where the principal variables are number of local units, gross output, net output, industrial inputs, wages & salaries and persons engaged and breakdown is by NACE Rev 1/NACE Rev 1.1.

12.3. On-line database

Data is available on the CSO PxStat facility as the following URL:
Census of Industrial Production NACE 70: https://data.cso.ie/product/CIPN70
Enterprises – Industrial https://data.cso.ie/product/CIPEI
Enterprises – Manufacturing https://data.cso.ie/product/CIPEM
Local Units – Industrial https://data.cso.ie/product/CIPLUI
Local Units – Manufacturing https://data.cso.ie/product/CIPLUM
Structural business Statistics https://data.cso.ie/product/SBS

12.3.1. AC 1. Data tables - consultations

Not calculated at individual CIP level.

12.4. Micro-data Access

Microdata access is available after national publication to any approved users to apply via our RMF application process. See weblink below for details on our RMF application process.
https://www.cso.ie/en/aboutus/lgdp/csodatapolicies/dataforresearchers/applicationprocedure/

12.5. Other

Further background information is available from the CSO website
https://www.cso.ie/en/methods/surveybackgroundnotes/censusofindustrialproductionenterprises/

Specific user requests are acceded to where possible and where confidentiality issues do not arise. In most cases, users are provided with excel tables listing the required data. In a number of cases, access is granted to the micro data using the Officer of Statistics mechanism. As detailed in section 5.3.2, data for 2008 onwards is on CSO's website.

Data from the Census of Industrial production is also disseminated in the Statistical Yearbook of Ireland
https://www.cso.ie/en/statistics/statisticalyearbookofireland/

As part of the EU regulation underpinning the CIP, data is transmitted to Eurostat at T+10 and T+18, this data is published on Eurostat's website at:
https://ec.europa.eu/eurostat/databrowser/explore/all/icts?lang=en&subtheme=sbs&display=list&sort=category

12.5.1. AC2. Metadata consultations

Not calculated.

12.6. Documentation on Methodology

Survey documentation is available at the following URLs:

https://www.cso.ie/en/methods/industry/censusofindustrialproduction/
https://www.cso.ie/en/methods/surveybackgroundnotes/censusofindustrialproductionenterprises/
https://www.cso.ie/en/methods/industry/censusofindustrialproduction/methodologicaldocuments/

12.6.1. AC3 – Metadata completeness – rate

Not calculated.

12.7. Quality Documentation

Further information on the quality of the CIP compilation and outputs can be found on the CSO website at:
https://www.cso.ie/en/methods/industry/censusofindustrialproduction/

13. Quality Management

13.1. Quality Assurance

Quality Management Framework
The CSO avails of an office wide Quality Management Framework (QMF). This framework allows all CSO processes and outputs to meet the required standard as set out in the European Statistics Code of Practice (ESCOP). The QMF foundations are based on establishing the UNECE's Generic Statistical Business Process Model (GSBPM) as the operating statistical production model to achieve a standardised approach to Quality Management. All and any changes implemented to CSO processes and outputs require adherence to the QMF.

13.2. Quality Assessment

The quality of statistical information and its production process is ensured by the provisions of the European Statistics Code of Practice.

The CSO requires that all dissemination outputs undergo an annual self-assessment exercise to examine the quality of the processes used to generate statistics and the quality of the outputs themselves. The last iteration of this exercise identified that collected data is usually good for analysis and any inconsistencies are minimised by carrying out the data validations as described below.

The main quality assurance activity for SBS is the data validation.
A number of validation procedures, from data collection to data dissemination are performed:

- Automatic checks - performed in the process of data entry.
- Logical checks - data control of correctness of the suspicious size of the values or incompleteness of the data. Errors of this type are corrected through direct contacts with the enterprises.
- Micro checks - at the level of enterprise.
- Macro checks - at the level of NACE class (2/3/4-digit code).

In addition to this, we have been actively researching and implementing techniques and methodologies to keep improving the quality of our outputs and ensure user satisfaction.

14. Relevance

14.1. User Needs

The Census of Industrial Production is an annual survey that is used both nationally and by the EU. It provides data about the structure on the Industrial sector within Ireland and allows for time series to be generated.

National Accounts use the data that is not available from other sources. Government bodies and researchers use aggregates and microdata for compilation of reports and papers. We also meet with customers (government and research community once a year via an Economic Statistics Liaison Group (ESLG) to discuss our surveys and data.

14.1.1. Main National Users

- National Accounts for GDP calculation methods, Regional Accounts, Environmental Accounts and Input/output Supply and Use publications
- Other CSO (e.g. Monthly Industrial Production for weights, Quarterly Accounts Inquiry to Industry for grossing factors)
- Economists/statisticians for use in modelling particular sectors of economy (e.g. NACE Codes Regions)
- Micro data analysts such as Sustainable Energy Authority Ireland/Economic Social Research Institute for specific analysis and creation of models and reports
- General public.

14.1.2. Principal External Users

Eurostat for creation of EU aggregates

14.2. User Satisfaction

We conduct an ESLG meeting with users annually to gauge user satisfaction and feedback. A user canvass was carried out in 2019.

14.3. Data Completeness

Data on all variables are collected and submitted to Eurostat.

14.3.1. Data Completeness rate

100%.

15. Accuracy and reliability

15.1. Overall accuracy

The main sources or error that may affect the overall accuracy of the Census of Industrial Production are derived from non-sampling errors such as register coverage, non-response errors and model related effects. Explanations of these are given in the following sub-sections.

15.2. Sampling Error

The Census of Industrial Production is a Census based survey and therefore there are no sampling effects.

It is not clear how coefficients of variation can be generated in mixed mode survey using survey data and administration data.

15.2.1. A1. Sampling error indicator

Not applicable.

15.3. Non-sampling Error

Statistical inference is carried out using ratio estimators. Non-respondents are treated as not being selected; the final sample from which inference is made consists of respondents only. The sample is increased to the population size using Administrative data.

15.3.1. Coverage error

The survey consists of a census of all enterprises that are wholly or primarily engaged in industrial production, which is taken from the CSO Central Business Register. All enterprises in the relevant NACE groups are included in the survey. However there may be some multiple listings (duplicated) when the sample is first taken from Business
Register. They are removed from the sample when discovered.

Micro enterprises (employing less than 10) typically represent about 86% of all enterprises in the CIP however they account for 4% of turnover.

15.3.1.1. A2. Over coverage rate

Not calculated.

15.3.1.2. A3. Common units – proportion

Not calculated.

15.3.2. Measurement error

Measurement Error is not formally calculated for this survey however there are several processes that might introduce measurement errors, for example a respondent may give incorrect data; the form/questionnaire may lead to the recording of wrong values. Examples include – missing product details, product details are not clear enough, wrong contact details etc.

To counteract these a number of techniques are used in order to improve the quality of the data:

1. Amend the questionnaire – monitor the design of questionnaire – changes are made if necessary, for example a question has been added asking enterprises to provide details on the Cost of Sales and Operating Profit. This allows the section to quickly ascertain the completeness of the data.
2. Training of staff – staff are given training on a regular basis which ensures that they have good knowledge of the survey forms and the enterprises/ local units they are responsible for
3. When the CIP survey population is selected from the Business Register, a detailed analysis is carried out by Industry staff of the new births and if there are issues detected, they are fed back to Business Register.
4. Data comparison at local level where staff examine previous returns following build in edit checks.

15.3.3. Non-Response Error

When information for key non-respondents is available from an alternative source, for example, Monthly Production, Quarterly Statistics or PRODCOM or a return for the previous year, then the record is manually estimated; otherwise administrative data is used in conjunction with ratio extensions. Ratio extension involves the application of ratios between known variables to cases where only one subcomponent is

known. The ratios are typically calculated at NACE class level before being applied, although some merging of NACE classes may take place in order to ensure that the ratio estimates are not based on very small populations.
Full data for enterprises filling in the more restricted C forms is derived using the ratio extension method also. All non-key non-respondents are estimated for using administrative data and ratio extensions.

Item non-response: Where a part of the form is not completed, the enterprise will be contacted to complete the details on the survey form. However, data is not available on the number of item non-responses.

15.3.3.1. Unit non-response rate

The unweighted response rate for the 2020 survey was 40.3% which represented 41.5% of total employment.

15.3.3.2. Item non-response rate

Not calculated.

15.3.4. Processing error

Forms are sent by post to Industrial Enterprises. The returned forms are scanned and verified. There is also the option of manual data entry. Edits are run on each return. Types of processing errors include scanning in incorrect data, incorrect verification.

The system produces lists of errors for each type of error. These are then analysed – records are corrected as appropriate.

15.3.5. Model assumption error

Using ratio extensions from responding enterprises to estimate for non-respondents may have an effect on data quality but this is not quantifiable.

16. Timeliness and punctuality

16.1. Timeliness

Under EU regulation, early estimates data must be sent to Eurostat by 10 months after the end of reference period.

Under EU regulation, final data must be sent to Eurostat by T+18 months.

The tax deadline in Ireland is Mid November each year and is in relation to either the previous year or two years prior. The file we receive from Revenue is not available until April. National accounts data is not available for coherence checks until Mid June / early July therefore national publication is produced at T+21 Months to ensure the most comprehensive set of data possible.
Final data is transmitted to Eurostat by the agreed deadline of the 31st of July to avoid revisions when the National account data is finalised.

Due to Covid the survey data collection was and the chasing of companies via telephone was not as effective as previous years as the contact people were working from home.

16.1.1. TP1. Time lag – First results

9 months for Eurostat transmission.

16.1.2. TP2. Time lag – Final results

18 months for Eurostat transmission.
21 months for national dissemination.

16.2. Punctuality

Data for reference period 2019 was submitted to Eurostat prior by the 31st of July as per the extended deadline agreed with Eurostat.

The national results are always published on time in line with the indications given in the CSO's release calendar.

16.2.1. TP3. Punctuality – Punctuality - delivery and publication

0 days.

17. Comparability

17.1. Comparability – Geographical

Not applicable at individual national level.

Data from other EU member states is directly comparable with CIP data and is available on the Eurostat Website.

17.1.1. CC1. Asymmetry for mirror flow statistics

Not applicable.

17.2. Comparability over time

The Census of Industrial Production has been conducted since 1926 with data available from 1985 onwards.

In terms of those local units whose activity is collection, purification and distribution of water, there was a change in the survey form in 2004. As well as increasing the number of respondents in this sector the changes to the form will result in a break in the series in relation to some of the derived variables, in particular net output. This is caused by a change in the calculation of this variable.

In terms of historic data, CIP data relating to NACE Rev 1/1.1 is available from 1991 to 2007 while data relating to NACE 70 is available from 1979 – 1990. Due to the major change in the activity classification between NACE 70 and NACE Rev 1, comparisons are difficult over time but a concordance file between the two classifications is available which does allow for some comparison.
NACE classification was subsequently changed in 2008.

The target population also changed in 2008, due to changes in methodology in Business Register.

A major revision of the 2008-2014 series was carried out previously. This new methodology was applied from 2015 reference period data onwards. This mean SBS data was much closer aligned to Business Demography data.

17.2.1. Length of Comparable Time series

8 years.

17.3. Coherence – cross domain

Consistency checks are done with Monthly Industrial Production, PRODCOM, Quarterly Accounts Inquiry to Industry (QAII) and Balance of Payments and Corporation Tax data. These checks primarily apply to the larger enterprises. Where there are inconsistencies, these cases are investigated by all parties and a common treatment agreed.

CIP data is compared against PRODCOM, annualised monthly industrial production inquiry.
All SBS data is compared with National Income and Expenditure data.

17.3.1. Coherence – Sub annual and annual statistics

Comparisons are done with

- Quarterly Accounts Inquiry to Industry data,
- Monthly Industrial Production data (at local unit level)

17.3.2. Coherence with National Accounts

All CIP data is compared with National Income and Expenditure data.

17.4. Coherence – internal

Data for the largest 70 or so foreign-owned multinational enterprises in Ireland are collected by the Large Cases Unit (LCU and passed to each survey area as required, ensuring timely, consistent data in the associated NACE sectors throughout the CSO.

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18. Cost and Burden

Estimates of Cost and Burden can be obtained from the Response Burden Barometer
https://www.cso.ie/en/statistics/multisectoral/responseburdenbarometer/

Survey specific information is available via CSO's dissemination database PxStat.
https://data.cso.ie/product/RBB

19. Data Revision

19.1. Data Revision Policy

Published statistics are subject to correction and revision for a variety of reasons. The most common reasons include the receipt of additional information (for example, late survey responses) and updated seasonal factors. Occasional revisions also occur as a result of changes to definitions, methodology, classifications and general updating of statistical series.
It is recognised internationally that the existence of a sound revisions policy maintains credibility in official statistics. The CSO General Revisions Policy, which details how revisions should be managed and communicated to users, outlines the three main types of revisions:

- Planned Routine Revisions
- Planned Major Revisions
- Unplanned Revisions.

One reason for unplanned revisions occurring can be when errors are detected after publication. The 'CSO Error Correction Policy – How to deal with Publication Errors' outlines the steps taken when these errors are detected. As required under Principle 6.3 of the European Statistics Code of Practice, errors detected in published statistics are corrected at the earliest possible date and users are informed. An important step in the process is the documentation and analysis of errors that have occurred and their causes. This allows

the CSO to take measures preventing similar errors from occurring in the future and uniformity in dealing with them when they do.

The data revision policy that CSO statistics adheres to can be found via the following link: https://www.cso.ie/en/methods/quality/treatmentofrevisions/

19.2. Data Revision Practice

A major revision of the 2008-2014 series was carried out in 2015 and 2016. The new methodology was applied to the 2015 reference period thereafter. This means SBS data was much closer aligned to Business Demography data.

If an error or new data becomes available which will affect any major variable at division level by 5% a revision will be made and published. Users will be made aware of the revision by inserting a grey box outlying the revision and or a footnote in PxStat.

The revised data is sent to Eurostat.

19.2.1. Data Revision – Average size

Not calculated.

20. Statistical processing

20.1. Source Data

The CIP is generated based on a combination of survey responses and administrative data. The principal variables collected are: turnover, exports, purchases, fuel, additions to capital assets, sales of capital assets, indirect taxes, employment, earnings, other labour costs.

20.1.1. Population and sampling frame

The sampling frame/register is the CSO's Central Business Register. Every March a file is taken from the business register containing the relevant enterprise/local units and this file is uploaded into the processing system.

A permanent up-to-date register is kept of all local units and enterprises known to be involved in industrial production. The register is maintained from the CSO Central Business Register, administrative and public utility records, announcements in the press, business journals, field personnel contacts, etc.

The survey population is made up of all industrial enterprises/local units coded to NACE section B, (Mining and Quarrying) NACE Section C (Manufacturing), NACE Section D (Electricity, Gas, Steam and Air conditioning supply) and NACE Section E (Water supply, Sewerage, Waste management and Remediation activities).

Surveys are issued to all industrial enterprises employing 3+ persons.
Administrative data is used for industrial enterprises with less than 3 persons engaged and also used for enterprises who received a survey form but failed to respond.

20.1.2. Sampling design

Not applicable as survey is a census.

20.1.3. Survey size

The frame size for the 2021 CIP was 19,005 enterprises. The census size given criteria resulted in 5,843 of which 1,599 are to be estimated using administrative data.

20.1.4. Survey technique

The Census of Industrial Production is primarily collected via a web questionnaire, but it also has a postal survey option.
Web questionnaires account for approx. 80% of returns. The survey forms are printed in the Printing section of the CSO and posted out to respondents for self-completion. Forms are sent out in batches, typically from May onwards each year.

Respondents are sent a number of reminders throughout the year, encouraging them to complete the forms in a timely manner.

20.2. Frequency of data collection

This survey is carried out annually.

20.3. Data Collection

An 'enterprise' questionnaire is sent to all enterprises whose activity is primarily industrial. The type of 'enterprise' questionnaire depends on the size of the enterprise. See 'Questionnaire' below.

20.3.1. Type of Survey/Process

Primary statistical survey.

20.3.2. Questionnaire (including explanations)

An 'enterprise' electronic questionnaire (eQ) is sent to all enterprises whose activity is primarily industrial. The type of 'enterprise' questionnaire depends on the size of the enterprise. The most detailed form (form F) is generally sent to all enterprises with twenty or more persons engaged.

A less detailed form (Form C) is sent to enterprises with between three and twenty persons engaged.

Enterprises with less than 3 persons engaged are not sent a survey form but rather administrative data is used in conjunction with ratio extensions to estimate a return for such enterprises.

In the case of multi-location enterprises, a 'Local Unit' questionnaire is sent to each local unit with three or more persons engaged which was in production during the year. Census questionnaire links are issued in May of the year following the Census reference year.

All forms are available on the CSO website via the following link:
https://www.cso.ie/en/methods/surveyforms/censusofindustrialproductionenterprises/

20.3.3. Survey Participation

This is a statutory enquiry and therefore participation is compulsory.

20.3.4. Data Capture

Once data is returned it receives a receipt date and is scrutinised. The postal survey forms are scanned and verified using Teleforms software. This data and the web forms data is then transferred to the in-house IT system (DMS). A copy of the scanned image is stored on the network, for postal forms. Edits are run after the data is scanned/transferred and any issues or discrepancies that arise with the data are checked and corrected where necessary.

From 2003 onwards, C forms (2 page questionnaire – sent to enterprises employing less than 20) were

scanned, verified and data captured while from 2005 onwards F forms (eight page questionnaire – sent to enterprises employing 20 or more) were scanned, verified and data captured.

The CSO's Large Cases Unit liaises with approximately fifty large industrial enterprises to ensure that the information received from these companies is as accurate as possible.

20.4. Data Validation

All returns are scrutinised clerically for internal accuracy. They are compared with returns for previous years and in some instances with returns to other industrial inquiries. Local unit and enterprise returns relating to the same enterprise are examined together for consistency.

There are both macro and micro edits checks used to ensure the veracity of the data key variables include turnover by NACE, Purchases, Gross Value Added, Labour costs and Employment.

Some of these checks include:

- Year-on-year comparisons for key variables;
- Consistency checks, e.g. sum of parts against the total;
- Plausibility checks, e.g. profit to turnover ratio too high/low.
- Compared with other survey returns for coherence

We also use other CSO collected data from STS e.g. Industrial Production and Turnover, Retail Trade. Quarterly Construction and Services Turnover, National Accounts and PRODCOM to validate data returns. Tax returns are also used for plausibility checks.

Examples of these consistency checks are:

1. Compare results for Turnover (Enterprise) and Gross Output (Local unit) at 2-digit level
2. Compare results for Turnover with Monthly Industrial Production (MIP) and PRODCOM at 2-digit level i.e. examine for each NACE 2 digit level the aggregated returns from both Monthly Industrial Production and PRODCOM against CIP so as to ensure consistency between all Industrial Inquiries. (PRODCOM is a system for the collection and dissemination of statistics on the production of manufactured goods. The title comes from the French "PRODuction COMmunautaire" (Community Production) for mining, quarrying and manufacturing: sections C and D of the Statistical Classification of Economy Activity in the European Union (NACE Rev 2))
3. Compare Turnover with PRODCOM at company level
4. Compare results for Earnings and Employment with Quarterly Accounts Inquiry to Industry at 2-digit level
5. Compare results for Stocks and Capital Assets with Quarterly Accounts Inquiry to Industry at 2-digit level

Substantial queries arising from these scrutiny operations are referred to the respondent by telephone or in writing. For the larger enterprises, known as “key firms” which number approximately 120 enterprises, returns are compared with Balance of Payments data to ensure consistency. In addition, an amount of these key firms will be compared with data (where available) from the Revenue Commissioners Corporation Tax returns, again to ensure consistency.

Once satisfied with the quality of the data, imputation and ratio extension procedures can be run.

In the period prior to the Eurostat deadline, a number of SAS procedures are run to ensure that the data is clean and that no confidential data can be transmitted.

These SAS procedures include running similar validation checks to what Eurostat would run on the data transmitted so as to reduce the number of validations that might ensue post-transmission.

Once all data checks have been carried out, a file is handed over one month prior to the Eurostat deadline (October – T+10) for early estimates data while data will be handed over five months prior to the Eurostat deadline (June- T+18) for final data so that these deadlines can be met.

20.5. Data Compilation

The statistical units in the Census (local unit and enterprise) are coded to the NACE class relating to their principal industrial activity during the Census year. In the case of local units, this is determined on the basis of detailed information provided on their production of industrial products. The activity classification of enterprises is based on the NACE codes of the constituent local units.

An enterprise that operates several industrial local units coded to different NACE classes is classified to the activity which accounts for the highest proportion of the total value added to the enterprise. The CSO's Central Business Register is used to activity code the enterprises.

After estimation, imputation and ratio extension procedures have been run; results are aggregated for enterprises and local units. In the publication, there are a number of derived variables published.

Results are aggregated to 2, 3 and 4 digit NACE at national level depending on the confidentiality of the data; results are generated by way of SAS procedures.

In the case of the final publication, estimation is used for key enterprises who have not responded to the survey, estimation is based on returns to other surveys such as PRODCOM and Monthly Industrial Production etc. Administrative data sources and ratio extensions are used for other non-respondents.

20.5.1. Imputation (for Non-Response or Incomplete Data Sets)

For unit non-response, key firms are estimated based on returns from other Industrial surveys and administrative data sources.

For all other units who did not respond or those units where there is a partial response due to their size, administrative data sources and ratio extensions based on survey respondents are used.

20.5.1.1. A7. Imputation rate

Not calculated.

20.5.2. Grossing and Weighting

The CIP is a census so no grossing or weighting is applied to the data.

20.6. Adjustment

Not applicable.

20.6.1. Seasonal Adjustment

Not applicable.

21. Comment