



**An
Phríomh-Oifig
Staidrimh**

Central
Statistics
Office

Standard SIMS Report:

Monthly Index of Production & Turnover



Single Integrated Metadata Structure (SIMS) Report

For

Monthly Index of Production & Turnover

This documentation applies to the reporting period:

2022

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2. Introduction

Industrial Production and Turnover (IPT) monitors the volume of production and value of turnover of industrial local units. Two indices are compiled from the survey – the monthly index of production and the monthly index of turnover.

3. Contact

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4. Metadata Update

4.1. Metadata last certified

05/12/2022

4.2. Metadata last posted

07/12/2022

4.3. Metadata last update

05/12/2022



5. Statistical Presentation

5.1. Data Description

The monthly index of industrial production monitors current trends in the volume of production of industrial local units with three or more persons engaged. The primary purpose of the index is to measure changes in the value added at constant prices in the Mining, Manufacturing and Energy sectors. The production index is regarded as one of the most important measures of economic activity. The main advantages of the production index compared with other indicators are its combination of fast availability and at the same time its detailed breakdown.

The monthly index of turnover measures the change in the level of sales each month of industrial products, whether manufactured in the month in question or in previous periods (excluding non-industrial activity where practicable) in the Mining and Manufacturing sectors. The turnover indices are exclusive of VAT. The turnover index is an important indicator of activity in general, namely in terms of the demand for industrial output. It is the objective of the turnover index to show the development of the market for industrial goods and services, and it is an important short-term indicator.

The principal difference between the production and turnover indices is that the production index traces the quantitative volume of production (i.e., effect of price changes excluded) each month whether sold or not, whereas the turnover index reflects both the volume of sales and the price level.

5.2. Classification System

The business activity classifications are based on the Statistical Classification of Economic Activities in the European Community, Rev. 2 (2008) (i.e., NACE Rev. 2).

The following is link to the full list of NACE categories
<https://www.cso.ie/en/methods/classifications/industrialactivity/>

5.3. Sector Coverage

Activity Coverage:

- Mining and Quarrying - NACE 05 - 09
- Manufacturing - NACE 10 - 33
- Electricity, Gas, Steam and Air Conditioning Supply - NACE 35
- Water Supply; Sewerage, Waste Management and Remediation Activities - NACE 36 - 39

Indicators are published mainly at the 2-digit level of NACE Rev. 2 with, in certain cases, 3-digit breakdowns for major sectors.

Size Coverage:

The monthly survey which provides data for calculating the indices covers the larger local units which between them account for the bulk of industrial output – in general those which in the base year 2015 had twenty or more persons engaged. For certain sectors the threshold of 20 persons engaged is lowered where this is considered necessary to ensure representativeness or where data for a sector would have to be kept confidential if the 20 persons engaged threshold were applied.

5.4. Statistical Concepts and definitions

- Production - The monthly index of production measures the change in the volume of production (i.e., value added at constant prices) each month.
- Turnover index – The monthly index of turnover measures the change in the level of sales each month of industrial products, whether manufactured in the month in question or in previous periods (excluding non-industrial activity where practicable). The turnover indices are exclusive of VAT.



The variables measure production and turnover for the industrial sector in Ireland for a specific period. The indices provide information on year-on year, quarter-on-quarter and month-on-month changes in industrial production and turnover.

5.5. Statistical Unit

The statistical unit are KAU (Kind of Activity Unit) in the industry sector. For enterprises with few persons employed in secondary activities the local unit is used.

5.6. Statistical Population

The statistical population is made up of all industrial local units with 20+ persons engaged in NACE 05-39 in the base year (year 2015).

For certain sectors the threshold of 20 persons engaged is lowered.

While the ultimate source of the survey frame is the CSO's Central Business Register the survey frame is drawn from Census of Industrial Production (CIP) in the base year (which draws from the Central Business Register).

5.7. Reference Area

The Republic of Ireland. No regional breakdown exists.

5.8. Time Coverage

A quarterly survey of the level of industrial production was initiated in respect of the third quarter of 1942 covering Transportable Industries. This was changed to a monthly periodicity from the period July 1975 onwards.

5.9. Base period

Starting with January 2015 updated industrial production and turnover indices are being published to base year 2015=100.

Indices in short term statistics are expressed in reference to a base value and this base value is representative for a base year. By convention, the index value of 100 is assigned to the base value. Base years are updated every five years.

6. Unit of Measure

The following units are used:

- Index (unitless)
- Percentage change on the previous month (rates)
- Percentage change on the previous quarter (rates)
- Percentage change on the same period of the previous year (rates)

7. Reference Period

The monthly data covers the whole calendar month.



8. Institutional Mandate

8.1. Legal Acts and other agreements

8.1.1. National legal acts

The Monthly Industrial Production and Turnover Index is a statutory survey and is conducted under [Statutory Instrument \(S.I.\) No. 261 of 2019 - Statistics \(Industrial Production and Turnover\) Order 2019](#). All statistics are collected under the [Statistics Act, 1993](#).

8.1.2. European legal acts

This survey is carried out to satisfy EU requirements on Short-Term Statistics Regulation: [Council Regulation \(EC\) No. 1165/98 of 19 May 1998 \(as amended by Regulation \(EC\) No. 1158/2005 of the European Parliament and of the Council of 6 July 2005\)](#).

[Regulation \(EU\) 2019/2152 of the European Parliament and of the Council on European business statistics, repealing 10 legal acts in the field of business statistics \(EBS-Regulation\)](#)

[Commission Implementing Regulation 2020/1197 laying down technical specifications and arrangements pursuant to Regulation \(EU\) 2019/2152 of the European Parliament and of the Council on European business statistics repealing 10 legal acts in the field of business statistic \(General Implementing Act\)](#)

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

All data are treated as strictly confidential in accordance with Part V of the Statistics Act, 1993. In order to ensure confidentiality, NACE Groups are amalgamated where companies are identifiable due to their size. Data cannot be accessed under the terms of the Freedom of Information Act, 1997. Data are not disclosed by the CSO to any other Government department or outside body.

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.

No early data is provided to any users. No prior release is provided to any users. Data required under STS regulations are transmitted to Eurostat the same day following national release.

11. Frequency of Dissemination

Monthly

12. Accessibility and clarity

12.1. News release

Not applicable.

12.2. Publications

Aggregated indices are published in the IPT monthly publication and the yearly Statistical Yearbook of Ireland on the CSO website. Each aggregated index is published as a seasonally adjusted value index in the publication.

Publications are available on the CSO website at <https://www.cso.ie/en/statistics/industry/industrialproductionandturnover/>

12.3. On-line database

The data that is published in the IPT monthly publication is also made available on PxStat (CSO Main Data Dissemination Service) with each aggregated index also published as an unadjusted value index on PxStat. The IPT tables can be accessed directly from this link: <https://data.cso.ie/product/IPT>

12.3.1. AC 1. Data tables - consultations

Not calculated.



12.4. Microdata Access

Microdata are not publicly available.

12.5. Other

Data are sent to Eurostat to be used in European aggregates and/or to be released as national data. There are no planned future changes in national dissemination methods.

12.5.1. AC2. Metadata consultations

Not calculated.

12.6. Documentation on Methodology

Information on methodology is available on:

<https://www.cso.ie/en/methods/surveybackgroundnotes/industrialproductionturnover/>

12.6.1. AC3 – Metadata completeness – rate

94%.

12.7. Quality Documentation

Further documentation on the quality of the IPT process and outputs can be found in the CSO's methods page <https://www.cso.ie/en/methods/industry/industrialproductionturnover/>

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 (ESCP). 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

As part of the overall CSO Quality strategy an annual self-assessment exercise is completed to evaluate the quality of processes and outputs. The latest iteration of this exercise highlighted the need to meet further user demands and possibly carry out a methodological revision of our processes. Both these quality enhancements are currently under investigation.

14. Relevance

14.1. User Needs

The Industrial Production and Turnover Index is an important short- term indicator used both nationally and by the EU. It provides some of the information needed by National Accounts in the compilation of quarterly GDP.



14.1.1. Main National Users

Data users include National Accounts, CSO; Government Departments and Agencies; Economists; Brokers; Researchers and Academics; Professional Bodies; General Public.

14.1.2. Principal External Users

Eurostat

14.2. User Satisfaction

Not measured.

14.3. Data Completeness

The index is fully compliant with requirements of the [Council Regulation \(EC\) No 1165/98](#) concerning short-term statistics and the subsequent amendments.

14.3.1. Data Completeness rate

100%. All required data is made available to users.

15. Accuracy and reliability

15.1. Overall accuracy

The accuracy of source data is monitored by continuous assessment of response rates and sample selection, ensuring adherence to the methodological recommendations to the best extent possible.

Sampling Error

The IPT is subject to sampling errors because it is based on a stratified sample of enterprises, which does not represent the complete universe of all enterprises in NACE 05-39.

15.1.1. A1. Sampling error indicator

Not calculated.

15.2. Non-sampling Error

Quality of the Data Sources used (other than survey register)

Sources of data external to the survey- data from Trade Section (ultimate source of this data is Revenue Commissioners) and Balance of Payments (BOP) are used to provide estimates. Ongoing quality issues are addressed by the relevant survey managers in the CSO.

15.2.1. Coverage error

The ultimate source of the IPT survey frame is the CSO's Central Business Register. A census is taken of local units that had twenty or more persons engaged in base year (2015). New births are added to the survey frame. Local units are ceased as appropriate. No other data sources are used.

There may be some multiple listings (duplicates) when the census is first taken. These are removed from the census when discovered. Coverage is restricted to industrial local units operating in NACE sectors 05-39.

15.2.1.1. A2. Over coverage rate

Not calculated.



15.2.1.2. A3. Common units – proportion

Not applicable.

15.2.2. Measurement error

Measurement Error is not formally calculated for the survey. The following should be noted:

- The questionnaire is clear with definitions provided of 'persons engaged' and 'production'. The design of the questionnaire is monitored, and changes made if necessary.
- The data collection method uses electronic questionnaires. This method is unlikely of itself to be a source of measurement error.
- Respondent – survey data can contain sensitive and confidential information due to the fact that it is a short-term survey and may be requested prior to annual accounts being completed. The survey publishes aggregated indices at 2-digit NACE level. Indices for some 2-digit NACEs may be combined due to confidentiality issues.

15.2.3. Non-Response Error

Response rates are compiled and analysed each month.

High quality data is ensured due to high value response rate 65% (96% of production value and 96% of turnover value for final results). For non-responding large local units, data is estimated using a variety of methods such as seasonal factors, three-month average, previous month's data, and other CSO data.

The main reasons for unit non-response are as follows:

- Large burden on respondents - companies in industrial sector also need to complete other CSO surveys.
- Lack of resources in smaller companies.
- Frequency of survey may reduce response.
- Due to the short turn around the data may not be available.

15.2.3.1. Unit non-response rate

The unweighted response rates for the final results are typically 65% in terms of the local units surveyed.

The size-weighted response rate for the value of production variable is 96%.

The size-weighted response rate for the value of turnover is 96%.

These response rates are based on averages for a 12-month period.

15.2.3.2. Item non-response rate

Item Non-Response Item non-response is not measured in the survey. There is no imputation for item non-response.

Where a part of the form is not completed one of the following is done:

- The company is contacted by telephone to obtain the data
- Data is estimated for a variable if no other data are available.

15.2.4. Processing error

Some processing error is possible but careful checking of returned data is undertaken to ensure accurate recording of data. Where returned data appears to have been recorded in error, the company is contacted directly for verification if possible.



15.2.5. Model assumption error

Not applicable.

16. Timeliness and punctuality

16.1. Timeliness

The target date for detailed provisional data is one month and ten days after the end of the reference month. Final detailed results are published within two months and ten days of the reference period. Questionnaires are sent out immediately after the end of the reference month.

16.1.1. TP1. Time lag – First results

Provisional results are published within one month and ten days of the end of the reference period.

16.1.2. TP2. Time lag – Final results

Final results are published within two months and ten days of the end of the reference period.

16.2. Punctuality

The release is published on time in accordance with the date indicated in the release calendar. Transmissions to Eurostat are always completed within the timeframe stipulated by the relevant European legislation.

16.2.1. TP3. Punctuality – Punctuality - delivery and publication

All dissemination is completed as scheduled.

17. Comparability

17.1. Comparability – Geographical

As common EU methodology is applied to this survey, the Irish data is comparable internationally.

17.1.1. CC1. Asymmetry for mirror flow statistics

Not applicable.

17.2. Comparability over time

The monthly industrial production and turnover indices, base year 2015 = 100, are available from January 2015 onwards. The monthly industrial production and turnover indices, base year 2010 = 100, are available from January 2010 onwards.

The monthly industrial production indices, base year 2005 = 100, are available from January 1980. The monthly industrial turnover indices, base year 2005 = 100, are available from January 2000 onwards.

17.2.1. Length of Comparable Time series

From January 2015 onwards.



17.3. Coherence – cross domain

Structural Business Statistics, PRODCOM, Balance of payments and External trade data are used for cross-checks to ensure data is coherent for enterprises and same variables.

17.3.1. Coherence – Sub annual and annual statistics

Consistency checks are done on a regular basis with Balance of Payments (quarterly basis) and Trade exports data (monthly basis) for the larger local units. Differences are verified, and this leads to improved data quality.

In certain instances, comparison with other data sources such as Census of Industrial Production (CIP) are conducted.

These consistency checks are investigated where necessary and this has led to better quality data.

17.3.2. Coherence with National Accounts

Not applicable.

17.4. Coherence – internal

Not applicable.

18. Cost and Burden

Estimates of Cost and Burden can be obtained from the Response Burden Barometer:

<https://www.cso.ie/en/statistics/enterprisestatistics/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

Revisions refer to changes made to published statistical data when the information used in its production has been updated or corrected. This information includes all data used in compiling the statistic e.g. respondent data, administrative data, weights and factors, methodology, classifications, definitions, modifications to survey questionnaires, survey scope and data collection methods.

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

Each month the provisional data from the previous month is revised on the receipt of late returns or amendments of existing returns.

The current month's data is always provisional and only becomes final when the next month is published. The size of the revision varies from month to month.

As the production and turnover indices are seasonally adjusted, the series are revised monthly due to updated seasonal factors being applied each month.

Other revisions are flagged as such in the Release. Updating methodologies are not usually announced in advance but simultaneously with implementation. A significant change (e.g., rebasing of the indices) will be notified in advance.



19.2.1. Data Revision – Average size

Not calculated.

20. Statistical processing

20.1. Source Data

Statistical survey based on a census.

20.1.1. Population and sampling frame

The survey population is made up of all industrial local units in NACE 05-39 in the base year (year 2015). For certain sectors the threshold of 20 persons engaged is lowered.

While the ultimate source of the IPT survey frame is the CSO's Central Business Register, the survey frame is drawn from Census of Industrial Production (CIP) in the base year (which draws from the Central Business Register). There are approximately 1,400 local units in the reference population.

20.1.2. Sampling design

The monthly survey which provides data for calculating the indices covers the larger local units which between them account for the bulk of industrial output – in general those which in the base year 2015 had twenty or more persons engaged.

For certain sectors the threshold of 20 persons engaged is lowered where this is considered necessary to ensure representativeness or where data for a sector would have to be kept confidential if the 20 persons engaged threshold were applied.

The business activity classifications are based on the Statistical Classification of Economic Activities in the European Community (NACE Rev 2.1). Births of new companies are added to the survey provided they started business after the end of the base year. Companies that have ceased are taken off the survey frame as appropriate.

20.1.3. Survey size

The survey is a census of approximately 1400 local units

20.1.4. Survey technique

Emails are issued each month to contact respondents. An enterprise that has supplied a valid email address will be emailed a link to an electronic questionnaire.

Returned forms are transferred to the Data Management System (DMS) where the data is edited.

20.2. Frequency of data collection

Data are collected monthly.

20.3. Data Collection

Industrial Production Turnover - questionnaires are customised to suit each NACE Rev. 2 Class. Data are collected by means of electronic forms.

20.3.1. Type of Survey/Process

Survey of industrial local units consisting of a census of units with 20+ persons engaged.



20.3.2. Questionnaire (including explanations)

The Monthly Industrial Production and Turnover survey form gathers information on:

1. Currency used
2. Monthly period covered
3. Turnover for period
4. Persons engaged
5. Production value and quantity produced for period
6. Net Selling Value of Goods Produced in Ireland
7. Net Selling Value of Goods Produced Abroad

The survey form can be accessed on the CSO website at:

<https://www.cso.ie/en/methods/surveyforms/industrialproductionturnover/>

20.3.3. Survey Participation

Participation in the survey is compulsory under the [S.I. No. 261/2019 - Statistics \(Industrial Production and Turnover\) Order 2019](#).

20.3.4. Data Capture

Data is collected by means of e-forms. E-form (electronic) data is held on SYSBASE servers until ready for use.

All data received is then transferred to the CSO's Data Management System and a copy of the scanned image or E-form data is stored on the network.

20.4. Data Validation

Edit checks are run on the micro data which test the returns against a range of values. The main checks carried out on the data are:

1. Currency entered changed since previous period.
2. Turnover is equal to zero.
3. Turnover is unusually high.
4. Large change in turnover since previous month/year (range varies between +/- 20% and +/- 40% depending on size of company).
5. Large change in production since previous month/year (range varies between +/- 20% and +/- 40% depending on size of company).
6. Production is unusually high.
7. Total persons engaged are equal to zero.
8. Large change in number of persons engaged since previous month.

Where data failing those checks needs to be queried/questioned, we contact the respondent enterprises for clarification/confirmation/correction of the data. Such interactions with respondents are recorded for validation purposes. Data are manually changed if required.

20.5. Data Compilation

Non-responding large companies are estimated each month (rather than imputed). These estimates can be based on Trade exports data, Balance of Payments data, SBS (Structural Business Statistics) data (prior year(s)), previous month's data, average of past three months. Seasonal factors, generally, are taken into account.

The compilation process includes estimating values for non-response; the following methods are used for non-response:



- Imputation; the approach adopted is to use the non-respondent's last value carried forward and to adjust that by monthly trends of respondents in that stratum
- Non-responding large companies are estimated each month.

The production index is a Laspeyres index.

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

As a result of the high response rate (by value) and because the large non-responding local units are estimated it is only for the smaller local units that data are imputed. The imputed data does not have a significant effect on overall results. For imputation the characteristics of responding local units are taken and applied to non-responding local units.

The imputation methodology is as follows: the previous month's values of production and turnover for non-responding local units are multiplied by a factor to create imputed production and turnover values for current month. This factor is created at imputation cell level (one or more 4-digit NACEs). Data for responding companies for the current month and the previous month are compared to create factors, which are then applied to previous month's data for non-responding local units to create imputed current month's data.

20.5.1.1. A7. Imputation rate

Not calculated.

20.5.2. Grossing and Weighting

There is no grossing for either the production or turnover indices.

The method of weighting and chaining is such that the basic indices are weighted by the gross value added at factor cost for local units with 3 or more persons employed.

The weights for the production indices are gross value added at factor cost. Turnover from goods produced and industrial services provided to others are the weights used for the turnover indices. Weights data is from the Census of Industrial Production Local Unit Data in the base year (2015).

20.6. Adjustment

A national regressor is used to include our national bank holidays.

20.6.1. Seasonal Adjustment

Win X 13 is the software used. This is an adaptation of the US Bureau of the Census X-13 Seasonal Adjustment Program.

The models and the respective parameters are looked at on an annual basis and revised if appropriate.

The series are revised from January 2015 onwards (beginning of base year).

Each series is independently seasonally adjusted: some are additive, and some are multiplicative as appropriate.

The automatic outliers detected are included. Outliers that are known to us from the data are also included e.g., a large shutdown in a major enterprise in a particular sector.

The filter length is automatically chosen.

There are no seasonal breaks in the series - from new data collection method or methodology.



Residual seasonality is checked at index level once a year when the models are looked at.

The different levels of breakdown are treated individually.

21. Comment