Standard SIMS Report:

Global Value Chains Survey

Single Integrated Metadata Structure (SIMS) Report

For

Global Value Chains Survey

This documentation applies to the reporting period:
2018-2020

Last edited: 11/04/2022

1. Table of Contents

2. Introduction

The Global Value Chains Survey's overall objective is to monitor enterprises' economic globalisation by developing and providing indicators and new statistical evidence. Policymakers at the national and EU-level and other stakeholders need information about the increasingly globalised enterprises and economic globalisation impacts.

The survey starts with questions on business functions distribution in the enterprise. Further, as a vital part of the survey, it includes questions on global value chains activities and international sourcing of business functions, including questions about the motivations for and barriers against international sourcing. Finally, there is a set of questions to help measure the impact of "external" factors, such as COVID-19 and Brexit, on international sourcing and global value chains activities.

3. Contact

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4. Metadata Update

4.1. Metadata last certified

11/04/2022

4.2. Metadata last posted

11/04/2022

4.3. Metadata last update

11/04/2022

5. Statistical Presentation

5.1. Data Description

The data is collected through an online questionnaire sent to all enterprises in the Irish business economy with 50 or more persons engaged. The survey has questions on business functions distribution in the enterprise, global value chain activities, international sourcing of business functions as well as motivations for and barriers against international sourcing. The survey also has questions on the impact of COVID-19 and Brexit on international sourcing and global value chains.

The data is used to disseminate statistics on the persons engaged in each business function, the number of enterprises participating in global value chain activities, the number of firms that have moved a business function abroad, what business functions they have moved and the destination. The disseminated data also includes the motivation for and barriers to international sourcing as well as the impact of COVID-19 and Brexit. The data also give information on the characteristic of the enterprises such as the sector.

5.2. Classification System

Geographical areas

The following geographical breakdown will be used in the survey:
United Kingdom
Great Britain
Northern Ireland
EU-27 (not including Ireland)
Other European countries (includes Turkey and Russia)
China
India
USA and Canada
Central and South America
Other Asian and Oceanian countries (not including Turkey and Russia)
Africa

Sector

The NACE Rev 2 sections (NACE is the EU classification of Economic Activity):
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
Section F: Construction
Section G: Wholesale and retail trade; Repair of motor vehicles and motorcycles
Section H: Transportation and storage
Section I: Accommodation and food service activities
Section J: Information and communication
Section K: Financial and insurance activities
Section L: Real estate activities
Section M: Professional, scientific and technical activities
Section N: Administrative and support service activities

NACE sections O (Public administration and Defence), P (Education), Q (Human Health and social work activities), R (Arts, entertainment and recreation), S (Other service activities) were not included in the survey.

The results in the publication are grouped as follows:

NACE Rev. 2 groupings	NACE Rev. 2 Codes
Industry	B - E
Other Industrial	B, D, E
Business Services	G - N
Services	H - N
Other services	I, L, M
High-tech manufacturing	C21, C26, C303
Medium-high tech manufacturing	C20, C254, C27, C28, C29, C30 (excl. C301 & C303), C325
Medium-low tech manufacturing	C182, C19, C22, C23, C24, C25 (excl. C254), C301, C33
Low tech manufacturing	C10-C17, C181, C31, C32 (excl. C325)

5.3. Sector Coverage

NACE Rev. 2 sectors B-N.

5.4. Statistical Concepts and definitions

Persons employed by business function - contains only questions on the distribution of persons engaged per business functions in the enterprise's structure. Business functions are common tasks carried out by an enterprise in order to bring goods and services to market, examples of business functions include Production of goods, Information Technology, Management and administration, Marketing, sales and after-sales etc.

GVC arrangements - focuses on the purchasing and supplying aspects of international trade in goods and services and tries to measure the GVC trade and some of its characteristics.

International sourcing - contains statistics on international sourcing within and outside of the enterprise group, business functions being internationally sourced, locations of international sourcing and the jobs lost or created as a result of international sourcing activity, per business function.

Motivation and barriers for international sourcing - focuses on two key aspects: 1) why are enterprises motivated to internationally source and 2) what are the barriers encountered that stop them from sourcing or make it more difficult.

Covid-19 impact on economic globalisation - likely temporary module that tests the GVC resilience to Covid-19 related events.

Impact of Brexit on economic globalisation - measures the impact of Brexit on GVC arrangements of enterprises in Ireland.

5.5. Statistical Unit

Information is collected from enterprises.

5.6. Statistical Population

The survey population is made up of all large and medium sized enterprises with 50 or more persons engaged in the Irish business economy (NACE Rev. 2 sectors B-N). This population is identified on the CSO's Central Business Register.

5.7. Reference Area

Irish State.

5.8. Time Coverage

The International Sourcing Survey was conducted on a voluntary basis in 2007 and 2012 covering the reference period 2001-2006 and 2009-2011 respectively. The Global Value Chains Survey is a continuation of this survey but now also includes information on global value chain activities. This survey was conducted in 2021 and covers the reference period 2018-2020.

5.9. Base period

Not applicable.

6. Unit of Measure

The final results are expressed in terms of number of persons engaged in business functions, number and percentage of enterprises engaged in Global Value arrangements.

7. Reference Period

2018-2020.

8. Institutional Mandate

8.1. Legal Acts and other agreements

Statistics (Global Value Chains Survey) Order 2021 (S.I. No. 166/2021).

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 individuals and/or companies are identifiable.

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.

11.   Frequency of Dissemination

Triennial.

12.   Accessibility and clarity

12.1.   News release

https://www.cso.ie/en/csolatestnews/pressreleases/2021pressreleases/pressstatementInternationalSourcingSurvey20182020/

12.2.   Publications

The published release can be found in the CSO website or directly from this link https://www.cso.ie/en/releasesandpublications/ep/internationalsorcingsurvey20182020/

12.3.   On-line database

The data tables associated to this release can be found in the CSO's dissemination database PxStat. They are available directly from this link. https://data.cso.ie/product/iss

12.3.1. AC 1. Data tables -consultations

As this is a new release there are currently no data on consultations.

12.4.   Micro-data Access

Anonymised survey information may be provided to other government departments, approved organisations and approved researchers for statistical purposes only subject to confidentiality requirements expressed in section 9.

12.5.   Other

No special analyses.

12.5.1. AC2. Metadata consultations

Not calculated.

12.6.   Documentation on Methodology

Documentation on methodology can be found on the methods page of the latest International Sourcing Survey documentation
https://www.cso.ie/en/methods/multisectoral/internationalsourcingsurvey/

Eurostat has published guidelines (https://ec.europa.eu/eurostat/web/economic-globalisation/globalisation-in-business-statistics/global-value-chains) to assist countries and to ensure that there is a consistent methodology followed in all member states.

12.6.1. AC3 – Metadata completeness – rate

Not calculated.

12.7.   Quality Documentation

Further information on the documentation associated with this output can be found in the Methods page in cso.ie
https://www.cso.ie/en/methods/multisectoral/internationalsourcingsurvey/

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

As this is a new release quality has not been assessed.

14. Relevance

14.1. User Needs

Measuring global value chains (GVC) and international sourcing as an element of these chains has been a longstanding priority for policymakers, international organisations and researchers. Consequently, the European Business Statistics (EBS) regulation (Regulation (EU) 2019/2152) now includes GVCs as dynamic statistics.

The 2021 survey was conducted on a voluntary basis. The first reference period for the mandatory survey under the European Business Statistics Regulation (EBS) will be 2021 to 2023 and will take place in 2024. Therefore, one of the objectives of the 2021 survey was to identify user needs and develop methodology required in order to carry out the mandatory GVC surveys going forward.

14.1.1. Main National Users

Government, Economic analysts, Professional bodies, General public

14.1.2. Principal External Users

Eurostat

14.2. User Satisfaction

Not measured.

14.3. Data Completeness

Not measured.

14.3.1. Data Completeness rate

Not calculated.

15. Accuracy and reliability

15.1. Overall accuracy

When a survey e-questionnaire is returned to the CSO, the e-questionnaire is scrutinised to catch any errors. If there are errors, the enterprise is contacted to confirm and/or correct the data.

There may be some multiple listings (duplicates) when the census is first taken. These are removed from the census when discovered.

15.2. Sampling Error

A census of enterprises with 50 or more employees was taken therefore there are no specific sampling errors in the survey.

15.2.1. A1. Sampling error indicator

Not applicable

15.3. Non-sampling Error

The main sources of non-sampling errors analysed are detailed further in the sub-concepts listed below.

15.3.1. Coverage error

The survey was a census of all enterprises in Ireland with 50 or more employees in the Irish business economy (NACE Rev. 2 sectors B to N). there may be some multiple listings (duplicates) when the census is first taken. These are removed from the census when discovered.

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 the survey. The following should be noted:

1. Questionnaire – the questionnaire is clear with definitions provided where necessary. The design of the questionnaire is monitored, and changes made if necessary.

2. Data collection method – the collection method is by eQuestionnaire. This method is unlikely of itself to be a source of measurement error.

3. Respondent - survey data can contain sensitive and confidential information. The survey publishes aggregated results at NACE sector level; no information on individual people or companies is disclosed in the results.

15.3.3. Non-Response Error

All enterprises with 50 or more persons engaged operating in NACE Rev. 2 sectors B-N were included in the survey. More than 4,000 enterprises were surveyed and the response rate to the survey was 47.5%. Returned survey forms were verified and edited before the data was weighted up to the frame population.

To counteract potential bias and make the final distribution representative of the population the following process was developed. First, stepwise logistic regression was conducted to generate a response propensity score. This was based on the following characteristics:

NACE sector, Persons engaged, Turnover, Foreign ownership, Foreign affiliates, Exports, Imports

From this, non-response adjustments were calculated and applied to each respondent. These non-response adjustments where then calibrated using CALMAR to ensure the totals matched to the key characteristics of NACE and size class of the survey population on the Business Register.

15.3.3.1. Unit non response rate

NACE Rev. 2 Sector	Response Rate
Mining and Quarrying	40.0
Manufacturing	47.1
Electricity, Gas, Steam and Air Conditioning Supply	50.0
Water Supply; Sewerage, Waste Management and Remediation Activities	39.0
Construction	48.4
Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	48.5
Transportation and Storage	44.8
Accommodation and Food Service Activities	33.4
Information and Communication	54.1
Financial and Insurance Activities	60.0
Real Estate Activities	40.0
Professional, Scientific and Technical Activities	56.0
Administrative and Support Service Activities	51.9
All NACE Sectors	47.5

15.3.3.2. Item non-response rate

Item non-response is treated by contacting the respondent and trying to obtain the missing data. In the few cases where the data was not obtained, hot-deck donor imputation was used to address item non-response.

15.3.4. Processing error

All possible measures are taken to avoid processing errors. The use of the CSO eForm reduces processing errors as the data is transferred electronically and there is no scanning of postal forms etc.
Where mistakes relating to programming or publishing have occurred, corrective measures taken as well as actions for avoiding them in the future should be reported.

15.3.5. Model assumption error

Stepwise logistic regression was conducted to generate a response propensity score. This was based on the following characteristics:

NACE sector, Persons engaged, Turnover, Foreign ownership, Foreign affiliates, Exports, Imports

From this, non-response adjustments were calculated and applied to each respondent. These non-response adjustments where then calibrated using CALMAR to ensure the totals matched to the key characteristics of NACE and size class of the survey population on the Business Register.

16.   Timeliness and punctuality

16.1. Timeliness

Final results were produced 15 months from the end of the reference period.

16.1.1. TP1. Time lag – First results

There are no provisional results for the survey.

16.1.2. TP2. Time lag – Final results

15 months from the final day of the reference period.

16.2.   Punctuality.

16.2.1. TP3. Punctuality – Punctuality - delivery and publication

The statistics were released in accordance with the dates set out on the CSO Release Calendar. The national release was published on 11 April 2022 – about four months after the conclusion of the survey.

17.   Comparability

17.1.Comparability – Geographical

The GVC survey is conducted by Eurostat members.

17.2.   Comparability over time

The International Sourcing Survey that was carried out in 2011 covered 2009-2011 while 2007 covered the reference period 2001 to 2006. These surveys are not directly comparable with the 2020 survey as:
- Shorter reference period: 2011 and 2020 both covered 3 years compared to a 6 year period for the 2007 survey it covered a shorter reference period i.e. 6 years versus 3 years. As international sourcing is an activity or flow variable (rather than a stock variable), one might expect a shorter period to produce a lower international sourcing rate.
- The 2020 survey includes enterprises with 50 employees compared to previous surveys which included enterprises with 100 employees
- 2020 survey includes NACE K

17.2.1. Length of Comparable Time series

The Global Value Chains Survey is a continuation of the International Sourcing Survey. The CSO has previously published International Sourcing in 2007 and 2011. This is the first iteration of the Global Values Chains Survey and will be published every three years.

The International Sourcing component of the survey was compared with previous iterations within similar parameters (NACE sectors and size class) and the results were sufficiently comparable.

17.3.   Coherence – cross domain

Not applicable.

17.3.1. Coherence – Sub annual and annual statistics

Not applicable.

17.3.2. Coherence with National Accounts

Not applicable.

17.4.   Coherence – internal

The International Sourcing component of the survey was compared with previous iterations within similar parameters (NACE sectors and size class) and the results were sufficiently comparable.

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

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

No revisions to the data are carried out.

19.2.1. Data Revision – Average size

Not applicable.

20.   Statistical processing

20.1.   Source Data

The data was collected via electronic questionnaire between August and December 2021.

20.1.1. Population and sampling frame

Population is all enterprises with 50 or more employees in NACE Rev. 2 sectors B-N active on the business
register in 2020

20.1.2. Sampling design

The census of large and medium sized enterprises is taken from the central Business Register in the CSO.
It includes all enterprises with 50 or more persons employed and active in the Republic of Ireland engaged
in NACE sectors B-N. The business activity classifications are based on the Statistical Classification of
Economic Activities in the European Community (NACE Rev 2.1).

20.1.3. Survey size

Approximately 4,200 enterprises.

20.1.4. Survey technique

The survey is issued electronically to large and medium sized enterprises active in the Republic of Ireland. An enterprise that has supplied a valid email address will be emailed or if not, the CSO will contact the enterprise to obtain an appropriate email address to which the survey will be sent. When a survey e-questionnaire is returned to the CSO, the e-questionnaire is scrutinised to catch any errors. If there are errors, the enterprise is contacted to confirm and/or correct the data.

20.2.   Frequency of data collection

Triennial.

20.3.   Data Collection

The collection method is by eQuestionnaire.

20.3.1. Type of Survey/Process

The collection is classified is a census survey of large and medium enterprises.

20.3.2. Questionnaire (including explanations)

The questionnaire is available at: https://www.cso.ie/en/methods/surveyforms/globalvaluechainssurvey/

- **Module 1: Persons employed by business function -** contains only questions on the distribution of employees and self-employed persons per business functions in the enterprise's structure.

- **Module 2: GVC arrangements -** focuses on the purchasing and supplying aspects of international trade in goods and services and tries to measure the GVC trade and some of its characteristics. Optional questions relate to identifying the lead firm in the GVC, the ownership of the GVC and the means of supply of services.

- **Module 3: International sourcing -** contains questions that help measure international sourcing within and outside of the enterprise group, business functions being internationally sourced, locations of international sourcing and the jobs lost or created as a result of international sourcing activity, per business function. Some optional questions may include collecting data on domestic sourcing or the total stock of international sourcing.

- **Module 4: Motivation and barriers for international sourcing -** focuses on two key aspects: 1) why are enterprises motivated to internationally source and 2) what are the barriers encountered that stop them from sourcing or make it more difficult.

- **Module 5: Covid-19 impact on economic globalisation -** adds a novel and likely temporary module that tests the GVC resilience to Covid-19 related events.

- **Module 6: Impact of Brexit on economic globalisation –** like the previous module, measures the impact of Brexit on GVC arrangements of enterprises in Ireland.

20.3.3. Survey Participation

Participation in the survey is compulsory under the Statistics (Global Value Chains Survey) Order 2021 (S.I.No. 166/2021) made under the Statistics Act 1993.

20.3.4. Data Capture

Primary data is collected by means of an eQuestionnaire.

20.4. Data Validation

Returned forms are scrutinised to catch any errors and/or missing data. If there are errors and/or missing data, the enterprise is contacted to confirm and/or correct the data. The business register data on persons engaged is used to validate the data on business functions.

20.5. Data Compilation

Data on persons engaged in business functions was used to derive variables on core and support functions. The core business function represents the revenue-producing activity of the enterprise. In most cases, it will be consistent with the enterprise's main activity as classified by the main activity code entered in the business register. A core business function denotes a set of tasks that produce goods or services intended for the market. A core function may span several activities and include related vertical activities (e.g. production of inputs). While enterprises incur costs from carrying out core business functions, these functions' outputs can also be directly associated with turnover. An enterprise may have one or more core functions. Typically, the core business function relates to the main and the enterprise's secondary activity.

Support business functions are carried out to permit or facilitate the production of goods or services. They do not directly generate turnover, only costs. However, the cost, efficiency, and quality of support functions, especially management, marketing, logistics, R&D and other innovation-related activities, can make essential contributions to enterprises' competitiveness. Support business functions do not correspond to the main or secondary activities of an enterprise (secondary activities correspond to core business functions) but generally, they correspond to ancillary activities.

The following approach was used to identify the core function of the enterprise:
   a) The production of goods and materials is considered a core function
   b) If the business function with the highest share of persons engaged corresponds to the main (principal) NACE code of the enterprise, that is the core function.
   c) If the business function with the highest share of persons engaged does correspond to the NACE code, then the enterprises should be contacted or will be manually corrected based on knowledge of the enterprises or previous survey experience

Data collected on destinations of global purchasing/supplying and sourcing are used to derive new variables on other destinations. For example, if the respondent indicated that they purchased from Northern Ireland or Great Britain then they would have also purchased from the UK.

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

For non-response in the business function modules, total persons engaged was obtained from the business register. Hot-deck donor imputation was then used to derive the percentage of persons engaged for each business function and applied to the total persons engaged.

20.5.1.1. A7. Imputation rate

Persons engaged per business function was imputed for 2.3% of respondents.

20.5.2. Grossing and Weighting

All enterprises with 50 or more persons engaged operating in NACE Rev. 2 sectors B-N were included in the survey. More than 4,000 enterprises were surveyed and the response rate to the survey was 47.5%. Returned survey forms were verified and edited before the data was weighted up to the frame population.

To counteract potential bias and make the final distribution representative of the population the following process was developed. First, stepwise logistic regression was conducted to generate a response propensity score. This was based on the following characteristics:

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20.6. Adjustment

Not applicable.

20.6.1. Seasonal Adjustment

Not applicable.

21. Comment