

ICT USAGE AND E-COMMERCE IN ENTERPRISES - 2020

NATIONAL REFERENCE METADATA IN SINGLE INTEGRATED METADATA STRUCTURE (SIMS)

CONCEPT 1 - CONTACT

Sub-Concept 1.1: Contact organisation

National Statistics Office (NSO)

Sub-Concept 1.2: Contact organisation unit

Labour Market Statistics Unit

Sub-Concept 1.3: Contact name

Joslyn Magro Cuschieri

Sub-Concept 1.4: Contact person function

Head of Unit

Sub-Concept 1.5: Contact mail address

National Statistics Office (NSO)
Valletta VLT 2000
Malta.

Sub-Concept 1.6: Contact e-mail address

joslyn.magro@gov.mt

Sub-Concept 1.7: Contact phone number

+356 2599 7662

CONCEPT 2 – METADATA UPDATE

Sub-Concept 2.1: Metadata last certified

1st March 2021.

Sub-Concept 2.2: Metadata last posted

3rd March 2021.

Sub-Concept 2.3: Metadata last update

3rd March 2021.

CONCEPT 3 – STATISTICAL PRESENTATION

Sub-Concept 3.1: Data description

The data on the usage of Information and Communication Technologies (ICT) in enterprises is collected via a survey by the National Statistics Office (NSO) and is based on Eurostat's annual model questionnaire on the ICT usage and e-commerce in enterprises.

The aim of the survey on ICT usage and e-commerce in enterprises is to collect and disseminate harmonised and comparable information at a European level. This allows the comparability of results among all EU Member States.

The survey on ICT usage and e-commerce in enterprises has been carried out annually since 2005 and is designed to satisfy the concepts and definitions of [EC Regulation No. 808/2004](#) and subsequent implementing regulations. Large part of the data collected are used to measure the progress towards the objectives set in the [Digital Single Market Strategy](#). Statistical data support the development of the Digital Scoreboard established in the context of the [Monitoring the Digital Economy and Society 2016-2021](#).

For the purpose of this survey, a census of enterprises employing 10 or more persons and operating within [NACE Rev. 2](#) Sections C – J, Section L, Divisions 69-74, Section N and Group 95.1 are considered. Apart from the annual benchmarking indicators, the ICT survey incorporates annual ad-Hoc modules, with the aim of measuring the introduction and progress of new technologies.

A News release is published locally in Q1 following the end of the reference year.

Sub-Concept 3.2: Classification system

NACE Revision 2.

Sub-Concept 3.3: Sector coverage

- 1) NACE Rev. 2 sections C, D, E, F, G, H, I, J, L and N, divisions 69-74 and 95.1.
- 2) Size class: 10-49, 50-249 and 250+ employees

Sub-Concept 3.4: Statistical concepts and definitions

The model questionnaire on ICT usage and e-commerce in enterprises provides a large variety of variables covering among others the following areas:

- General information about ICT systems
- Access to and use of the Internet
- E-commerce and e-business
- Other topics foreseen in the benchmarking frameworks: the mobile use of the Internet, cloud computing, big data analysis, internet of thing, etc.

The annual model questionnaires and the methodological manual comprise definitions and explanations.

Sub-Concept 3.5: Statistical unit

The enterprise concept is used in this survey. This 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. An enterprise carries out one or more activities at one or more locations. An enterprise may be a sole legal unit.

Sub-Concept 3.6: Statistical population

As required by Annex I of the Commission Regulation, enterprises with 10 or more persons employed are intended to be covered by the survey. Moreover, these enterprises operate within NACE Rev. 2 sections C, D, E, F, G, H, I, J, L and N, divisions 69-74 and 95.1.

Sub-Concept 3.7: Reference area

The survey has a total geographical coverage of the Maltese Islands (NUTS 2 level).

Sub-Concept 3.8: Time coverage

2020.

Sub-Concept 3.9: Base period

Not applicable.

CONCEPT 4 – UNIT OF MEASURE

The unit of measure is the % of enterprises.

CONCEPT 5 – REFERENCE PERIOD

The reference period for the ICT Usage in Enterprises survey refers to the current year of the survey, unless specified differently in any question.

CONCEPT 6 – INSTITUTIONAL MANDATE

Sub-Concept 6.1: Legal acts and other agreements

[The Malta Statistics Authority Act, 2000](#). The Act empowers the NSO to collect, compile, extract and release official statistics related to demographic, social, environment, economic and general activities and conditions in Malta.

This data collection is being carried out under [European Regulation \(EC\) No 808/2004](#) of the European Parliament and of the Council concerning Community statistics on information society.

Sub-Concept 6.2: Data sharing

Data are only disseminated to Eurostat. Other arrangements are in place in order to share anonymized data with third parties accredited as researchers.

CONCEPT 7 – CONFIDENTIALITY

Sub-Concept 7.1: Confidentiality – Policy

At National level:

The NSO requests information for the compilation of official statistics according to the articles of the MSA Act – Cap. 422 and the Data Protection Act – Cap. 586 of the Laws of Malta implementing the General Data Protection Regulations (GDPR).

Article 40 of the MSA Act stipulates the restrictions on the use of information while Article 41 stipulates the prohibition of disclosure of information. Furthermore, Section IX of the Act (Offences and Penalties) lays down the measures to be taken in case of unlawful exercise of any officer of statistics regarding confidentiality of data.

Since its inception, the NSO has always assured that all data collected remains confidential and that it is used for statistical purposes only according to the articles and derogations stipulated in the laws quoted above. The Office is obliged to protect the identify of data providers and refrain from divulging any data to third parties that might lead to the identification of persons or entities.

During 2009, the NSO has set up a Statistical Disclosure Committee to ensure that statistical confidentiality is observed, especially when requests for microdata are received.

Upon employment, all NSO employees are informed of the rules and duties pertaining to confidential information and its treatment. In line with stipulations of the MSA Act, before commencing work, every employee is required to take an oath of secrecy whose text is included in the same Act.

An internal policy on anonymisation and pseudo-anonymisation is in place to ascertain that adequate methods are used for the protection of data which the office collects and shares with the public in its capacity as the National Statistics Office. The policy is meant to safeguard confidentiality of both personal and business data entrusted to the NSO. The document provides guidance for all NSO employees who process data daily as to how anonymisation and pseudo-anonymisation methods should be applied. The policy applies to all confidential, restricted, and internal information, regardless of form (paper or electronic documents, applications and databases) that is received, processed, stored and disseminated by the NSO.

At European level:

[Regulation \(EC\) No 223/2009](#) on European statistics (recital 24 and Article 20(4) of 11 March 2009 (OJ L 87, p. 164), stipulates the need to establish common principles and guidelines ensuring the confidentiality of data used for the production of European statistics and the access to those confidential data with due account for technical developments and the requirements of users in a democratic society.

Sub-Concept 7.2: Confidentiality – Data Treatment

Data are mainly disseminated in aggregate form and cells with less than 3 counts are flagged as 'confidential'.

Microdata in anonymised form are shared with third parties accredited as researchers.

CONCEPT 8 – RELEASE POLICY

Sub-Concept 8.1: Release Calendar

A release calendar is maintained by the NSO and published on the NSO website. The calendar projects three months of news releases (including the current and two subsequent months).

Sub-Concept 8.2: Release Calendar access

https://nso.gov.mt/en/News_Releases/Release_Calendar/Pages/News-Release-Calendar.aspx

Sub-Concept 8.3: User access

An internal policy on dissemination is in place to govern the dissemination of official statistics in an impartial, independent, and timely manner, making them available simultaneously to all users.

The NSO's primary channel for the dissemination of official statistics is the NSO website. Tailored requests for statistical information may also be submitted through the NSO website.

Moreover, dedicated news releases are available in electronic format on the NSO website.

CONCEPT 9 – FREQUENCY OF DISSEMINATION

Yearly.

CONCEPT 10 – ACCESSIBILITY AND CLARITY

Sub-Concept 10.1: News release

A yearly News Release is published on the NSO website and may be accessed through the following link:

https://nso.gov.mt/en/News_Releases/View_by_Unit/Unit_C2/Labour_Market_Statistics/Pages/ICT-Usage-and-eCommerce-in-Enterprises.aspx

Sub-Concept 10.2: Publications

Not applicable.

Sub-Concept 10.3: Online Database

No information on ICT is included in the StatDB.

Sub-Concept 10.4: Micro-data access

Microdata in anonymised form may be provided under strict conditions to a selected number of institutions or persons accredited as research entities or researchers respectively. Further information on access to anonymised microdata is available on the NSO website through: <http://nso.gov.mt/en/Services/Microdata/Pages/Access-to-Microdata.aspx>.

Researchers who require such access need to submit an application form clearly explaining the purpose of their statistical research and justifying their need for access to microdata. The application form will be evaluated internally and if considered favourably a formal contractual agreement will be drafted to explain the responsibilities of the researcher for the security of the information. Once the agreement is agreed upon and signed by both parties, access to anonymised microdata will be granted subject to the terms of reference included in the contractual agreement. Access is normally granted for a definite period.

Sub-Concept 10.5: Other

Not applicable.

Sub-Concept 10.6: Documentation on methodology

The ICT in enterprises survey is carried out as per [EC Regulation 808/2004](#) and Implementing [Regulation EC 2019/1901](#).

Sub-Concept 10.6.1: Metadata completeness rate

Information about all required metadata concepts (and sub-concepts thereof) are provided.

Sub-Concept 10.7: Quality Documentation

Dedicated SIMS reports are available to the public on the [NSO's metadata website including concepts related to metadata and quality](#).

The NSO has developed an internal Quality Management Framework (QMF) which is built on common requirements of the ESS Code of Practice (ESS CoP). A document was prepared to include a set of general quality guidelines spanning over all statistical domains. Assuring methodological soundness is an integral part of the QMF, nonetheless, the document spans also on other areas related to institutional aspects.

CONCEPT 11 – QUALITY MANAGEMENT

Sub-Concept 11.1: Quality Assurance

The Methodological Manual provides guidelines and standards for the implementation of the surveys in the Member States. It is updated every year according to the changed contents of the model questionnaires.

This population is extracted from the Business Register which is held and maintained by NSO. Several sources are used to back the Business Register, including the Job Vacancies survey and Short-Term Business Statistics.

The NSO ensures the accuracy of data released to the public and prepares clear methodological notes which explain the processes involved in the collection and production of official statistics.

The NSO has developed an internal Quality Management Framework (QMF) which is built on common requirements of the ESS Code of Practice (ESS CoP). A document was prepared to include a set of general quality guidelines spanning over all statistical domains. Assuring methodological soundness is an integral part of the QMF, nonetheless, the document spans also on other areas related to institutional aspects.

Every five to seven years, the NSO participates in a Peer Review exercise through which the compliance of its operations with principles of the ESS CoP is assessed by an expert team. Peer Reviews are indeed part of the European Statistical System (ESS) strategy to implement the ESS CoP. Each NSI is expected to provide information as requested by a standard self-assessment questionnaire. Following this an expert team visits the office to meet NSI representatives and main stakeholders. Peer Reviews result in a compliance report and the listing of a set of Improvement Actions which need to be followed up by the NSI. The next round of Peer Reviews is planned to be carried out in 2022.

Sub-Concept 11.2: Quality Assessment

The methodological manual supplied by Eurostat is constantly being consulted to ensure the full conformity to Eurostat definitions.

All methods are documented in a quality report which is updated annually and sent to Eurostat.

During fieldwork, response is monitored by NACE and Size class of enterprises, to ensure an adequate representation across all strata. Special attention is also given to enterprises operating within the ICT sector.

CONCEPT 12 - RELEVANCE

Sub-Concept 12.1: User needs

The main users of ICT statistics are the following:

1. International organisations (such as UNESCO, OECD, EU, ITU);
2. Public Entities (such as ministries, authorities);
3. Private entities (research organisations, unions, businesses);
4. Individuals.

ICT Enterprises statistics are mainly used for policy making, market research, dissertations as well as business making.

Sub-Concept 12.2: User satisfaction

The last User Satisfaction Survey was held in 2014 with the aim to collect information about key users' satisfaction with statistical output.

The NSO keeps record of the number of News Releases and publications disseminated on its website; the users to whom statistical products are provided; as well as the number of requests that are processed every year.

News Releases and tailor-made statistical outputs were assessed on account of their quality, timeliness, and on their ability to meet users' needs.

Sub-Concept 12.3: Data Completeness

Data completeness rate stands at 100%.

CONCEPT 13 – ACCURACY AND RELIABILITY

Sub-Concept 13.1: Overall accuracy

Data can be said to be of good quality in view of the checks that are conducted by the Labour Market Statistics Unit. These include:

- A cross checking exercise against different variables within the survey;
- Year to year consistency checks even at micro-level;
- Cross checking with other NSO surveys. E.g. Total Turnover and number of Persons Employed are compared against data from the Job Vacancy Survey (JVS) and the Short-Term Business Statistics;
- Validations built into the questionnaire data entry program;
- Use of the validation programmes supplied by Eurostat.

Sub-Concept 13.2: Sampling errors

Not applicable.

Sub-Concept 13.3: Non-sampling error

Main sources of non-sampling error may be referred to in the below sub-concepts.

Sub-Concept 13.3.1: Coverage error

Births and deaths of Enterprises are updated in the Business Register using data obtained from administrative registers, including the VAT office, the Malta Financial Services Authority (MFSA), and the Structural Business Survey. This process is ongoing and occurs at different time intervals throughout the year.

The snapshot extracted for the ICT survey in January 2019 represented the latest available data at that point in time.

That said, updates concerning changes in NACE or size class in the business register might not be updated in time for the actual sample selection, thus under and over coverage due to delayed updates is always a possibility.

Sub-Concept 13.3.1.1: Over Coverage

Over coverage may result from availability of updated information in terms of NACE and employment at sampling stage.

Sub-Concept 13.3.1.2: Common Units Proportion

Not applicable.

Sub-Concept 13.3.2: Measurement error

Biases associated with measurement errors are deemed as minimal. The ICT questionnaire is constructed in such a way that it contains inbuilt validation rules aimed to mitigate such errors.

Sub-Concept 13.3.3: Non-response error

Not available.

Sub-Concept 13.3.3.1: Unit non-response

The unit non-response rate for the ICT Enterprises survey stood at 32.6%.

Sub-Concept 13.3.3.2: Item non-response

The use of survey interviewers allows a higher level of completeness than would otherwise be expected in such surveys. Although an exact figure for item non-response is not available, this amounts to approximately 1% for each variable.

Sub-Concept 13.3.4: Processing error

Although an exact figure is not available, data entry errors are the most likely cause of processing errors in this survey. Coding errors are not a major issue given that the provided answers are normally selected from a limited range of possible values.

Sub-Concept 13.3.5: Model assumption error

Not applicable.

CONCEPT 14 – TIMELINESS AND PUNCTUALITY

Sub-Concept 14.1: Timeliness

Data collection occurs during the first quarter of the reference year and asks about the enterprise's current status, while some particular questions may also ask for events that have occurred throughout the previous year.

Sub-Concept 14.2: Punctuality

News releases are published on the NSO website at 11.00am. Although news releases have, in the past, been frequently published after 11.10am, these were always disseminated on the pre-established date.

CONCEPT 15 – COHERENCE AND COMPARABILITY

Sub-Concept 15.1: Comparability – Geographical

The model questionnaire used locally is the same one used in all EU Member States. Minor differences may result from discrepancies in the survey-vehicle, in the treatment of non-response, and in the interviewing period. Hence in the view of a common methodology, differences are minimal.

Sub-Concept 15.2: Comparability- Over Time

The main benchmarking indicators for the digital agenda have been collected since 2005 and are consistently comparable over time.

Sub-Concept 15.3: Coherence – Cross Domain

Not applicable.

Sub-Concept 15.3.1: Coherence – Sub-Annual and Annual statistics

Not applicable.

Sub-Concept 15.3.2: Coherence – National Accounts

Not applicable.

Sub-Concept 15.4: Coherence – Internal

Enterprises' background information is compared to other internal data mainly; Job Vacancies Statistics (JVS), Short term Business statistics (STSB) and the Business Register (BR).

CONCEPT 16 – COST AND BURDEN

High human and financial resources are invested to ensure that data of the highest quality standards are collected for this survey. Enterprises are firstly contacted via email, and at a later stage, non-respondents are contacted by a team of trained interviewers. This survey is partly financed by a Eurostat Grant which normally covers about 70% of the total costs incurred.

As a rule, ICT questionnaires cannot exceed a total of 65 questions. This threshold is set to limit the burden on respondents as much as possible.

CONCEPT 17 – DATA REVISION

Sub-Concept 17.1: Data revision – Policy

At the NSO, there is currently no internal policy governing revisions that occur for all statistics produced. Nonetheless, a revisions policy is being drafted to safeguard a coordinated revisions system across statistical domains.

This policy will take account of the need and causes for revisions; time and frequency of revisions; data and other statistical products affected by such revisions; and length of periods revised.

Sub-Concept 17.2: Data revision – Practice and Data Revision

Not applicable.

CONCEPT 18 – STATISTICAL PROCESSING

Sub-Concept 18.1: Source data

Data are collected through the means of a survey. [Regulation EC No. 808/2004](#) provides for the annual implementation of the ICT surveys. Furthermore, annual implementation regulations define the survey content year on year. The calculation of sample sizes is based on precision requirements needed to receive estimates of sufficient quality and within reasonable budgetary constraints.

Sub-Concept 18.2: Frequency of data collection

Annual.

Sub-Concept 18.3: Data Collection

The questionnaires are sent by post and are later solicited by interviewers. Non-response within strata is monitored internally to ensure that all strata are adequately represented.

Sub-Concept 18.4: Data Validation

Data are checked for consistency through a cross-checking exercise against different variables within the survey. In some cases, for example, the unit checks that the absolute number of internet users should be less than or equal to the number of employees, since once is a subset of the other.

Year-to-year consistency checks are conducted even at a micro-level. Additionally, some variables are cross-checked against information collected from other units within the NSO (E.g. Total Turnover and number of Persons Employed are compared against data from the JVS, STBS and BR).

A third kind of validation intrinsic to the data are carried out using a validation program provided by Eurostat. This software application checks one variable with another to make sure that all variable filters are being applied correctly.

Sub-Concept 18.5: Data Compilation

Not applicable.

Sub-Concept 18.5.1: Imputation

The rate of imputation amounts to less than 1% for main variables and up to 2% for other variables within the questionnaire.

'Main variables' refers to those variables which guide a respondent throughout the questionnaire and on which the main ICT aggregates are computed. These variables include:

- Enterprise's use of internet
- Enterprise's use of website
- Enterprise's use of e-commerce

Sub-Concept 18.6: Adjustment

Not applicable.

Sub-Concept 18.6.1: Seasonal Adjustment

Not applicable.

CONCEPT 19 - COMMENTS

No further comments.