

SHORT-TERM STATISTICS 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

Short-term Statistics Unit

Sub-Concept 1.3: Contact name

Sam Sacco

Sub-Concept 1.4: Contact person function

Head of Unit

Sub-Concept 1.5: Contact mail address

National Statistics Office (NSO),
Lascaris, Valletta VLT 2000, Malta.

Sub-Concept 1.6: Contact e-mail address

sam.sacco@gov.mt

Sub-Concept 1.7: Contact phone number

+356 2599 7321

CONCEPT 2 – METADATA UPDATE

Sub-Concept 2.1: Metadata last certified

4th March 2021.

Sub-Concept 2.2: Metadata last posted

17th March 2021.

Sub-Concept 2.3: Metadata last update

17th March 2021.

CONCEPT 3 – STATISTICAL PRESENTATION

Sub-Concept 3.1: Data description

- **Index of Industrial Production (IIP)**: The index is the reference indicator for economic development in the domain of industry and is particularly used to identify changes in trends at an early stage. The IIP is a volume indicator and measures the changes in the volumes of industrial output on a monthly basis.
- **Industrial turnover, employment, hours worked and wages**: The turnover index describe the development of sales in the industry domain. It is a monthly value indicator which is influenced by changes in prices and volumes of the traded industrial goods. The employment, hours worked and wages indicators track the performance of the labour developments in this domain.
- **Industrial Producer Price Index (IPPI)**: This index is an output price index and measures the change in the prices of goods sold by producers in the industry domain on a monthly basis. The index is split into domestic producer prices and non-domestic producer prices.
- **Index of Production in Construction (IPC)**: The index measures the changes in the volume of output in the construction sector. The relevant construction activities are included in Section F of the statistical classification of economic activities in the European Community (NACE Rev. 2). These activities include the complete construction of buildings, the complete construction of civil engineering works, as well as specialised construction activities, if carried out as a part of the construction process only.
- **Retail Trade turnover and deflated turnover**: These indices measure the development of sales and volume of sales in the retail trade domain on a monthly basis.
- **Services indicators**: These indices measure the development of turnover, employment, hours worked and wages in the domain of Services on a quarterly basis.
- **Building permits**: These indicators cover the number and square metres of building permits.

Sub-Concept 3.2: Classification system

- **NACE Rev. 2 classification** (Statistical Classification of Economic Activities in the European Community) is used for all the STS indicators, except for the Industrial Import Prices.
- The **CPA classification** (Statistical Classification of Products by Activity in the European Economic Community).
- The split of the construction indicators into Building and Civil engineering is based on the **CC classification** (Classification of Types of Construction).

Sub-Concept 3.3: Sector coverage

- **Industry**:

The indicators in this domain cover economic activities listed in sections B to E of NACE, which refer to:

B-Mining and quarrying;
C-Manufacturing;
D-Electricity, gas, steam and air conditioning supply;
E-Water supply; sewerage, waste management and remediation activities;
The import prices indicator covers products listed in Sections B, C and D of the CPA.

- Construction:

The indicators in this domain cover economic activities listed in section F of NACE (Construction). The breakdown into Building and Civil engineering required for certain indicators is based on CC classification.

- Wholesale and retail trade:

The indicators in this domain cover economic activities listed in section G of NACE (Wholesale and retail trade; repair of motor vehicles and motorcycles).

- Services:

The indicators in this domain cover economic activities listed in NACE sections H, I, J, L, M and N, which refer to:

H-Transportation and Storage;
I-Accommodation and food service activities;
J-Information and communication;
L-Real estate activities;
M-Professional, scientific and technical activities;
N-Administrative and support service activities;

Sub-Concept 3.4: Statistical concepts and definitions

Detailed definitions of each indicator are described in the [Commission Regulation 2020/1197](#)

Production:

The objective of the production index is to measure changes in the volume of output at close and regular intervals, normally monthly. It provides a measure of the volume trend in value added over a given reference period. The production index is a theoretical measure that must be approximated by practical measures.

Turnover:

The objective of the turnover index is to show the development of the market for goods and services. Turnover comprises the totals invoiced by the observation unit during the reference period, and this corresponds to market sales of goods or services supplied to third parties. Turnover also includes all other charges (transport, packaging, etc.) passed on to the customer, even if these charges are listed separately in the invoice. Turnover excludes VAT and other similar deductible taxes directly linked to turnover as well as all duties and taxes on the goods or services invoiced by the unit.

Volume of sales:

The volume of sales represents the value of turnover in constant prices and as such is a quantity index. It is normally calculated as turnover at current prices, deflated by the deflator of sales.

Producer prices (output prices):

The producer prices are also known as output prices, however, in practice the most commonly used term is producer prices.

The objective of the output price index is to measure the monthly development of transaction prices of economic activities.

The domestic output price index for an economic activity measures the average price development of all goods and related services resulting from that activity and sold on the domestic market. The non-domestic price index shows the average price development (expressed in the national currency) of all goods and related services resulting from that activity and sold outside of the domestic market. When combined, these two indices show the average price development of all goods and related services resulting from an activity.

Import prices:

The indices of the import prices require a separate calculation according to the country of consignment of the product. The country of consignment is determined in a consistent way with customs procedures. Import prices are sub-divided into imports from euro-zone countries and imports from other countries.

Number of persons employed:

The objective of the index of number of persons employed is to show the development of employment. The number of persons employed is defined as the total number of persons who work in the observation unit (inclusive of working proprietors, partners working regularly in the unit and unpaid family workers), as well as persons who work outside the unit who belong to it and are paid by it (e.g. sales representatives, delivery personnel, repair and maintenance teams).

Hours worked:

The objective of the hours worked index is to show the development in the volume of work done. The total number of hours worked represents the aggregate number of hours worked for the output of the observation unit during the reference period.

Wages and salaries:

The objective of the wages and salaries index is to approximate the development of the wage and salaries bill. Wages and salaries are defined as the total remuneration, in cash or in kind, payable to all persons counted on the payroll (including home workers), in return for work done during the accounting period, regardless of whether it is paid on the basis of working time, output or piecework and whether it is paid regularly.

Construction costs:

The objective of the construction cost index is to show the development of costs incurred by the contractor to carry out the construction process. The cost indices are mandatory for new residential buildings (excluding residencies for communities). The component costs index (material costs and labour costs) shows the price developments of production factors used in the construction industry. Output price indices for construction can be used as an approximation for the construction cost variables.

Material costs:

The material costs index is generally calculated using material prices. Prices of materials should be based on actual prices rather than list prices. Prices should be based on a sample of products and suppliers. Prices are valued excluding VAT.

Labour costs:

The labour costs index covers wages and salaries and social security charges for all persons employed.

Building permits number of dwellings, square metres of useful floor area:

The objective of the number of dwelling building permit index is to show the future development of construction activity in terms of unit numbers, while the objective of the useful floor area building permit index is to show the future development of construction activity in terms of useful floor area or an alternative size measure.

A building permit is an authorisation to start work on a building project. As such, a permit is the final stage of planning and building authorisations from public authorities, prior to the start of work.

Sub-Concept 3.5: Statistical unit

The STS-Regulations require the use of the following observation units:

- [KAU \(Kind of activity unit\)](#) for the indicators in industry and construction.
- [ENT \(Enterprise\)](#) for the indicators in wholesale and retail trade and services.

With the introduction of the EBS (European Business Statistics), all domains will require the use of KAU.

Sub-Concept 3.6: Statistical population

The statistical population comprises the observation units (KAUs or enterprises) operating in the NACE/CPA classes mentioned below:

Industry:

- Production and Producer Prices: sections B, C, and D of NACE (D353 excluded).
- Turnover: Sections B and C of NACE.
- Import prices: Sections C of CPA (C12).

- Labour input indicators (Number of persons employed, hours worked, gross wages and salaries): Sections B to E of NACE.

Construction:

- Production: Section F of NACE broken down to building construction and civil engineering according to Classification of Types of Construction (CC).
- Building permits indicators:
 - Number of dwellings: CC11 excluding CC113 (New residential buildings excluding residencies for communities);
 - Square metres of useful floor: CC1 (Buildings).
- Construction costs (Construction costs, Material costs and Labour costs): CC11 excluding CC 113 (New residential buildings excluding residencies for communities).
- Labour input indicators (Number of persons employed, Hours worked, Gross wages and salaries): Section F.

Wholesale and retail trade:

- Volume of sales (deflated turnover): Section G of NACE (G45, G46, G47).
- Turnover (in value): Section G of NACE (G45, G46, G47).
- Labour input indicators (Number of persons employed, Hours worked, Gross wages and salaries): Section G (G45, G46, G47 excluding G47.3).

Services:

- Turnover (value): Sections H, I, J, L, M, N of NACE.
- Labour input indicators (Number of persons employed, Hours worked, Gross wages and salaries): Sections H, I, J, L, M, and N of NACE.
- Producer Prices: Sections H, J, M and N of NACE.

Sub-Concept 3.7: Reference area

The Maltese Islands (NUTS 1 and 2).

Sub-Concept 3.8: Time coverage

Most of the data provided dates to 2000, however, data which are directly related to the Euro area and Non-Euro area are from 2005.

Sub-Concept 3.9: Base period

2015.

CONCEPT 4 – UNIT OF MEASURE

Indices and percentage changes (%).

CONCEPT 5 – REFERENCE PERIOD

Industry:

- Production: Month;
- Turnover: Month;
- Producer prices (Output prices): Month;
- Import prices: Month;
- Labour input indicators: Month.

Construction:

- Production: Quarter;
- Building permits indicators: Month;
- Construction costs (Construction input prices; can be approximated by output prices): Quarter;
- Labour input indicators: Quarter.

Wholesale and retail trade:

- Volume of sales (deflated turnover): Month;
- Turnover (value): Month;
- Labour input indicators: Quarter.

Services:

- Turnover (value): Quarter;
- Labour input indicators: Quarter;
- Producer prices (Output prices): Quarter.

CONCEPT 6 – INSTITUTIONAL MANDATE

Sub-Concept 6.1: Legal acts and other agreements

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

The legal basis for the STS indicators is [Regulation 2019/2152](#) and [Implementation Regulation 2020/1197](#) repealing [Council Regulation No. 1165/98](#) of 19 May 1998 concerning short-term statistics, amended by [Regulation No. 1158/2005](#) of 6 July 2005 concerning short-term statistics.

Moreover, [Regulation \(EC\) No. 1893/2006](#) of 20 December 2006 establishes the statistical classification of economic activities NACE Revision 2.

Sub-Concept 6.2: Data sharing

Data sharing matters are governed by the [Malta Statistics Authority Act XXIV of 2000](#). The following outputs are disseminated by the unit:

- Monthly/Quarterly News Releases;
- Monthly/Quarterly transmission of data to Eurostat;

- Outputs for external users (including CBM, EPD and UN);
- Outputs for internal users – in particular, indices and raw data which are shared with the National Accounts Unit.

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 on a daily basis 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

STS data are disseminated in index form. As a result, no confidentiality rules are applied.

CONCEPT 8 – RELEASE POLICY

Sub-Concept 8.1: Release Calendar

An advance 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.

National statistical releases are issued according to the release calendar and are made available to all users simultaneously. All releases are posted on the NSO website.

CONCEPT 9 – FREQUENCY OF DISSEMINATION

Monthly and quarterly.

CONCEPT 10 – ACCESSIBILITY AND CLARITY

Sub-Concept 10.1: News release

STS data are released in the form of news releases which are available on the NSO's website.

Monthly news releases:

- [Index of Industrial Production](#)
- [Industrial Producer Price Indices](#)

Quarterly news releases:

- [Short-term Industrial Indicators](#)
- [Short-term Services Indicators](#)

Sub-Concept 10.2: Publications

The short-term statistics unit publishes only a few selected indicators in an annual compendium named [Trends in Malta](#).

Sub-Concept 10.3: Online Database

The NSO website also offers an online statistical database, [StatDB](#), that provides a more in-depth analysis for the more expert statistical user or researcher. Each data set has a last updated date clearly indicated and similar data published in other statistical products may not add-up due to revisions/updates.

Quarterly STS Industrial Indicators are disseminated on StatDB.

Sub-Concept 10.4: Micro-data access

Microdata are not disseminated. In general, index results made available to Eurostat ensure a sufficient degree of representativeness of data. In limited cases, when confidentiality clauses are not within the remit of the Malta Statistical Authority Act (2000) or [Article 20 of Regulation \(EC\) No. 223/2009](#) of the European Parliament and of the Council of 11 March 2009, the data are flagged as confidential.

Sub-Concept 10.5: Other

Among other users of the STS, the data are provided to the Central Bank of Malta, The Economic Policy Division, the International Monetary Fund (IMF), the United Nations (UN) and other international organisations.

Sub-Concept 10.6: Documentation on methodology

The Eurostat handbook entitled [Methodology of Short-term Business Statistics, Interpretation and guidelines, 2006](#), contains a comprehensive set of recommendations on the compilation of short-term statistics. Furthermore, methodological notes are available on the Short-term Statistics news releases published on the NSO's website as well as on internal methodological documents.

Work processes and procedures for the compilation of short-term statistics are documented in a standardised reporting template and aligned to the GSBPM model. The model covers all phases of the statistical production process, from the initial stages of identifying what statistics are needed and the scope of the survey, to the final stages of dissemination and evaluation. GSBPM is only available internally and may be accessed by all NSO employees.

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

Quality reports are provided to the Commission according to [EC Regulation 2019/2152](#).

STS 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 NSO quality assurance principles are developed according to the ESS Handbook for Quality Reports (2014), specific methodological manuals and an internal policy on the Documentation of Data Quality and Methodology.

Quality checks and validation of data are done throughout the whole process, from the inputting stage till the transmission or publication stage. Spreadsheet and database application tools are used for such checks. The main checks done are for data inputting and comparisons between the previous transmissions and the current transmission in order to check any discrepancies and to compare estimates and actual data received.

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.

Sub-Concept 11.2: Quality Assessment

The general quality of Short-term Statistics (STS) is very good.

Several automatic and manual checks on raw data and indices are made throughout the whole statistical production process.

CONCEPT 12 – RELEVANCE

Sub-Concept 12.1: User needs

The spectrum of users of short-term statistics is widespread and therefore it is difficult to identify them in order of importance. Amongst the various users, one finds the Ministry for Finance and other governmental departments such as the Economic Policy Division.

Other institutions such as the Central Bank of Malta make frequent reference to the data. The general business community and educational institutions also make use of these statistical indicators.

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

The only data sets that are not being produced are the Services Producer Price Indices (SPPIs). The plan is to produce all the required indices by the second quarter of 2020.

CONCEPT 13 – ACCURACY AND RELIABILITY

Sub-Concept 13.1: Overall accuracy

In view of the various quality checks done, the overall accuracy of the STS indices can be considered of good quality.

Sub-Concept 13.2: Sampling errors

Co-efficient of variation (for base year 2010):

Industrial Indicators:

- Turnover (5.7)
- Gross wages (3.9)
- Employment (3.3)

Construction:

- Gross wages (2.5)
- Hours worked (2.6)
- Employment (2.5)

Other services:

- Turnover (3.2)
- Gross wages (2.8)
- Hours worked (2.4)
- Employment (2.3)

Retail services:

- Turnover (3.6)
- Gross wages (1.7)
- Hours worked (1.7)
- Employment (1.6).

Sub-Concept 13.3: Non-sampling error

A main source of non-sampling error relates to data inputting errors when keying-in data from printed questionnaires. These are detected using a number of technique and are corrected immediately by inputting the correct data.

Sub-Concept 13.3.1: Coverage error

The population frame source is the Statistical Business Register, and a cut-off target population is considered.

The cut-off population constitutes all enterprises that:

- Have 50+ employees; or
- Collectively make up the top 80% of turnover in their activity strata.

Sub-Concept 13.3.1.1: Over Coverage

Not applicable.

Sub-Concept 13.3.1.2: Common Units Proportion

Not applicable.

Sub-Concept 13.3.2: Measurement error

The main source of measurement error in short-term statistics is the high speed and frequency with which data needs to be published. This affects the surveys' response rates and the accuracy of the first estimates.

Sub-Concept 13.3.3: Non-response error

Every non-response is estimated using either statistical software such as JDemetra+ or established statistical techniques in order to have a complete dataset.

Sub-Concept 13.3.3.1: Unit non-response

Not available.

Sub-Concept 13.3.3.2: Item non-response

Not available.

Sub-Concept 13.3.4: Processing error

A main source of processing error relates to data inputting errors when keying-in data from printed questionnaires. These are detected using a number of techniques and are corrected immediately by inputting the correct data.

Sub-Concept 13.3.5: Model assumption error

The main output of short-term statistics is published in the form of indices. In theory, there are a lot of techniques to publish an index. However, for practical reasons, only a handful of index techniques are used. This is the case for the majority of NSIs.

CONCEPT 14 – TIMELINESS AND PUNCTUALITY

Sub-Concept 14.1: Timeliness

The average production time for each release of data is currently not available.

Sub-Concept 14.2: Punctuality

All news releases and Eurostat transmissions were published and sent on time and according to the announced release calendars.

CONCEPT 15 – COHERENCE AND COMPARABILITY

Sub-Concept 15.1: Comparability – Geographical

To ensure geographical comparability across Member States, the index is compiled according to the STS Regulations and [Short-term Business Statistics Methodological Guidelines](#). Minor methodological deviations may exist due to specific conditions that apply to each Member State.

Sub-Concept 15.2: Comparability – Over Time

In general, series have been compiled either from the year 2000, 2005 or 2010. Overall, there are no limitations in the use of data regarding comparisons over time.

Sub-Concept 15.3: Coherence – Cross Domain

Data are currently not compared to other statistical domains.

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

Not applicable.

Sub-Concept 15.3.2: Coherence – National Accounts

Not available.

Sub-Concept 15.4: Coherence – Internal

Not available.

CONCEPT 16 – COST AND BURDEN

Data burden is considered high from the NSO's point of view. With regards to burden on respondents, the completion of a questionnaire takes around 10 minutes.

CONCEPT 17 – DATA REVISION

Sub-Concept 17.1: Data revision – Policy

Revision of data is compliant with the ESS Code of Practice principles and [EC regulation 1165/98](#).

The same revision policy is applied to both data released nationally and those sent to Eurostat. Revision analysis is carried out before every news release is published locally or sent to Eurostat and clear explanations are also sought. Detailed explanations at micro data level are also analysed but only used internally for quality information purposes.

Generally, STS indices have routine minor revisions due to actual data replacing estimates because of non-response. Major revisions are carried out on an exceptional basis.

A revision calendar does not exist.

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

In practice, routine revisions are done when actual data are received, and estimates are replaced. The below Quality Performance Indicators (QPIs) were obtained using annual growth rates for December 2018 as the latest release. To calculate the revisions, the previous 36 monthly periods were used.

For the Index of Industrial Production:

- Unadjusted annual growth rates:
- Mean Revision (MR): -0.21
- Mean Absolute Revision (MAR): 0.8
- Relative Mean Absolute Revision (RMAR): 0.55

Working-day annual growth rates:

- Mean Revision (MR): -0.28
- Mean Absolute Revision (MAR): 0.74
- Relative Mean Absolute Revision (RMAR): 0.52

For the Industrial Producer Price Index:

- Unadjusted annual growth rates:
- Mean Revision (MR): -0.05
- Mean Absolute Revision (MAR): 0.12
- Relative Mean Absolute Revision (RMAR): 0.13

CONCEPT 18 – STATISTICAL PROCESSING

Sub-Concept 18.1: Source data

The main source for data collection is a statistical survey, however, in certain cases, administrative data are used.

Sub-Concept 18.2: Frequency of data collection

Industry:

- Production: Month.
- Turnover: Month.
- Output prices (Producer prices): Month.
- Import prices: Month.
- Labour input indicators: Month.

Construction:

- Production: at least quarter.
- Building permits indicators: Month.
- Construction costs (Construction input prices): at least quarter.
- Labour input indicators: at least quarter.

Wholesale and retail trade:

- Volume of sales (deflated turnover): Month.
- Turnover (in value): Month.
- Labour input indicators: Quarter

Services:

- Turnover (value): Quarter
- Labour input indicators: Quarter

Sub-Concept 18.3: Data Collection

Data are collected mainly by means of a statistical questionnaire. Questionnaires are sent by post and their collection is done via post, fax, e-mail or through an online system.

The use of administrative data from the Planning Authority, Building Regulations Office, IRD and Malta Communications Authority are also used.

Sub-Concept 18.4: Data Validation

Data are validated through regular checks throughout the system lifecycle comprising the data input stage, data processing and analysis stage. Various analytical checks are executed by statisticians while other validations are in-built in our data systems.

Validation checks are done using access queries. In addition, trends are checked for the identification of any outliers. Estimation methods are also checked with the Demetra+, in order to verify that the estimates used are the most appropriate.

Sub-Concept 18.5: Data Compilation

Indices are normally calculated as fixed-base indices (currently 2015=100.0) by using a variation of the Laspeyres formula. The data are usually collected with the use of statistical surveys or administrative data. In the case of non-response, estimation methods are used. The STS regulation permits the use of statistical estimation procedures. For the index calculation, weights are used for grossing up the sample and activity weights are used for aggregation purposes. Seasonal adjustments are also carried out.

Sub-Concept 18.5.1: Imputation

Imputation is carried out using either the JDemetra+ software or other established estimation techniques.

Sub-Concept 18.6: Adjustment

Most of the STS indices are provided in a calendar and seasonally adjusted form. Price indices, however, are only provided in an unadjusted form.

Sub-Concept 18.6.1: Seasonal Adjustment

Seasonal adjustment is carried out according to best practices.

The Charts and S-I Ratio in the Main Results tab are always checked. Calendar effects are checked by analysing t tests, p values and the outlier effect.

Seasonality is checked mainly by analysing the stability and seasonality tests (Friedman test, Kruskal-Wallis test, evolutive seasonality test, combined seasonality test and residual seasonality test) of the series in the Diagnostics tab.

Adjusted data are then compared with the previous transmission data to check for large discrepancies.

CONCEPT 19 – COMMENT

No further comments.