

December 2024

## TURNOVER OF INDUSTRY AND SERVICES

■ In December, estimates for the seasonally adjusted turnover industrial index decreased by 2.7% in value (-2.5% in volume) when compared to the previous month (-3.0% in value and -2.7% in volume in the domestic market and -2.1% in value and -2.3% in volume in the non domestic one). For services, the seasonally adjusted turnover increased in the month on month series by 0.3% in value terms while decreasing by 0.1% in volume.

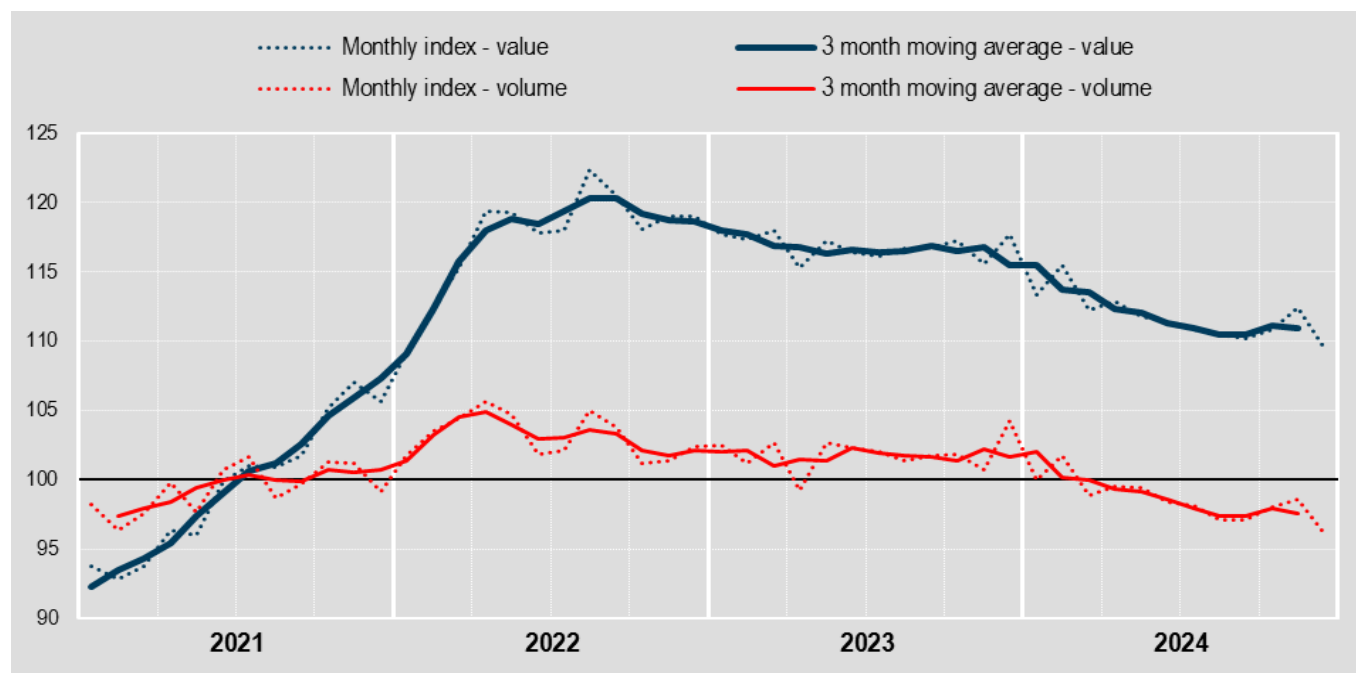
■ In the 4<sup>th</sup> quarter of 2024, the seasonally adjusted industry turnover increased both in value and volume (+0.4% and +0.2% respectively) when compared to the previous quarter. In the same period, the services turnover increased by 0.8% in value and 0.7 in volume.

■ On a year-on-year basis, in December 2024, the calendar adjusted industry turnover index dropped in both value (-7.2%) and volume (-7.7%), registering a 7.0% decrease in value in the domestic market (-8.3% in volume) and a 7.5% drop (-6.4% in volume) in the non-domestic one. Calendar working days in December 2024 were 20 versus 18 in December 2023.

■ In services, turnover increased by 1.9% in value and by 0.1% in volume when compared with the same month a year earlier.

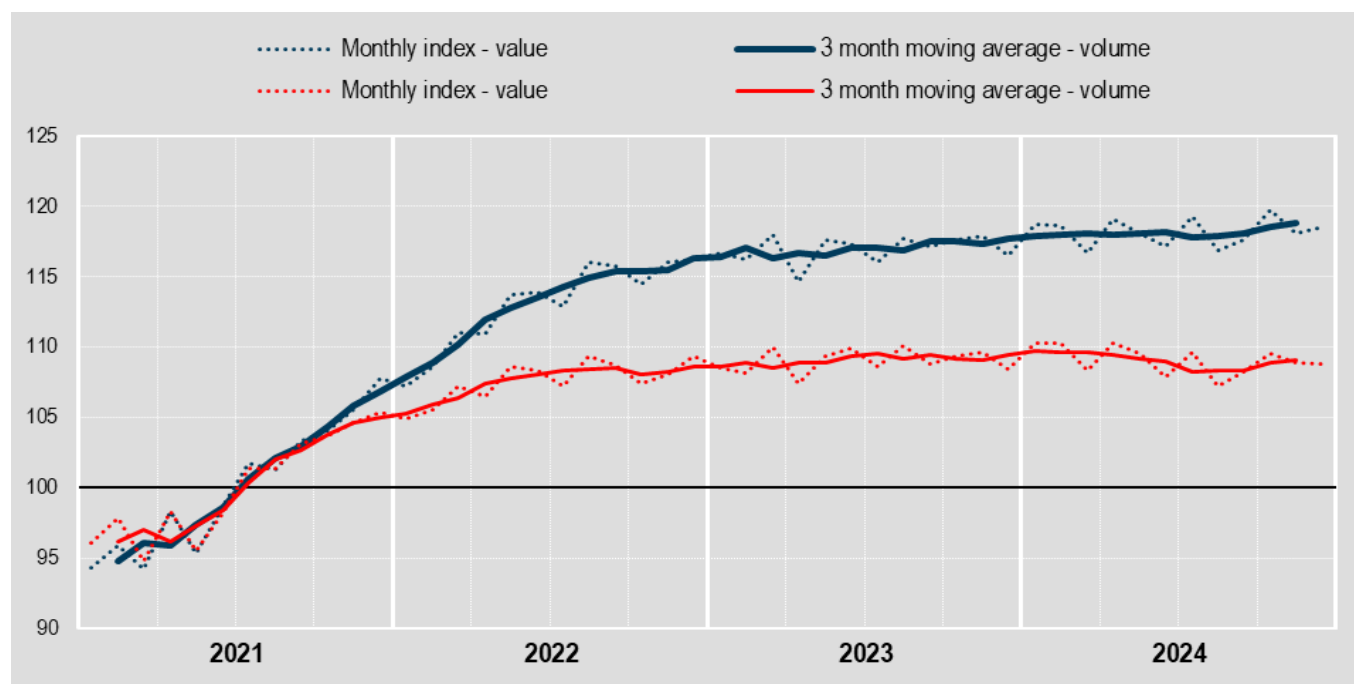
### CHART 1. TURNOVER OF MINING AND MANUFACTURING INDUSTRY, INDEX AND THREE MONTH MOVING AVERAGE

January 2021 – December 2024, seasonally adjusted indices and three-month moving average (base 2021=100)



## CHART 2. TURNOVER OF SERVICES

January 2021 – December 2024, seasonally adjusted indices and three-month moving average (base 2021=100)



## TABLE 1. TURNOVER OF MINING AND MANUFACTURING INDUSTRY AND SERVICES - VALUES

December 2024, months on previous months and months on same months a year ago percentage changes, seasonally adjusted, calendar adjusted and non-seasonally adjusted (index, 2021=100)

	Seasonally adjusted		Calendar adjusted (b)		Unadjusted	
	Dec 24 Nov 24	Oct-Dec 24 Jul-Sep 24	Dec 24 Dec 23	Jan-Dec 24 Jan-Dec 23	Dec 24 Dec 23	Jan-Dec 24 Jan-Dec 23
B – Mining	-14.5	+0.6	-8.0	+7.5	-5.4	+8.2
C – Manufacturing	-2.9	+0.5	-7.1	-4.3	-1.3	-3.5
<b>B-C – Mining and manufacturing industry</b>	<b>-2.7</b>	<b>+0.4</b>	<b>-7.2</b>	<b>-4.3</b>	<b>-1.4</b>	<b>-3.4</b>
G – Wholesale trade, wholesale and retail trade and repair of motor vehicles and motorcycles (a)	+1.0	+0.1	+0.6	-0.6	+0.6	-0.6
H – Transporting and storage	+0.2	+0.7	+3.8	+2.9	+3.8	+2.9
I – Accommodation and food service activities	-0.1	+1.3	+4.0	+3.9	+4.0	+3.9
J – Information and communication	+1.0	+0.7	+3.0	+3.7	+3.0	+3.7
L – Real estate activities	-0.4	+2.4	+0.6	+2.8	+0.6	+2.8
M – Professional, scientific and technical activities	-1.8	+1.9	+2.0	+2.6	+2.0	+2.6
N – Administrative and support service activities	+0.2	+2.3	+5.1	+4.9	+5.1	+4.9
H-N – Other services	-0.2	+1.4	+3.3	+3.5	+3.3	+3.5
<b>G-N – Total services (a)</b>	<b>+0.3</b>	<b>+0.8</b>	<b>+1.9</b>	<b>+1.3</b>	<b>+1.9</b>	<b>+1.3</b>

(a) Not including G 47 Retail trade

(b) Indices for services sectors are not calendar adjusted, therefore the changes reported are the same as for the unadjusted indices

**TABLE 2. TURNOVER OF MINING AND MANUFACTURING INDUSTRY AND SERVICES - VOLUMES**

December 2024, months on previous months and months on same months a year ago percentage changes, seasonally adjusted, calendar adjusted and non-seasonally adjusted (index, 2021=100)

	Seasonally adjusted		Calendar adjusted (b)		Unadjusted	
	Dec 24 Nov 24	Oct-Dec 24 Jul-Sep 24	Dec 24 Dec 23	Jan-Dec 24 Jan-Dec 23	Dec 24 Dec 23	Jan-Dec 24 Jan-Dec 23
B – Mining	-13.3	+0.7	-26.3	+21.4	-26.4	+21.3
C – Manufacturing	-2.3	+0.2	-7.3	-3.6	-1.5	-2.7
<b>B-C – Mining and manufacturing industry</b>	<b>-2.5</b>	<b>+0.2</b>	<b>-7.7</b>	<b>-3.2</b>	<b>-2.1</b>	<b>-2.3</b>
G – Wholesale trade, wholesale and retail trade and repair of motor vehicles and motorcycles (a)	+0.8	0.0	+0.3	-0.1	+0.3	-0.1
H – Transporting and storage	-0.2	-0.5	-0.5	+0.4	-0.5	+0.4
I – Accommodation and food service activities	+0.1	+0.8	+1.2	0.0	+1.2	0.0
J – Information and communication	+0.6	+1.4	+0.7	+1.7	+0.7	+1.7
L – Real estate activities	-0.9	-0.1	-6.6	-1.2	-6.6	-1.2
M – Professional, scientific and technical activities	-2.3	+1.8	+0.5	+0.5	+0.5	+0.5
N – Administrative and support service activities	-0.1	+1.2	-0.9	+0.1	-0.9	+0.1
H-N – Other services	-0.4	+0.9	-0.2	+0.4	-0.2	+0.4
<b>G-N – Total services (a)</b>	<b>-0.1</b>	<b>+0.7</b>	<b>+0.1</b>	<b>+0.3</b>	<b>+0.1</b>	<b>+0.3</b>

(a) Not including G 47 Retail trade

(b) Indices for services sectors are not calendar adjusted, therefore the changes reported are the same as for the unadjusted indices

**TABLE 3. TURNOVER OF MINING AND MANUFACTURING INDUSTRY - TOTAL, DOMESTIC AND NON-DOMESTIC MARKET – VALUE** December 2024, months on previous months and months on same months a year ago percentage changes, seasonally adjusted, calendar adjusted and non-seasonally adjusted (index, 2021=100)

	Seasonally adjusted		Calendar adjusted		Unadjusted	
	Dec 24 Nov 24	Oct-Dec 24 Jul-Sep 24	Dec 24 Dec 23	Jan-Dec 24 Jan-Dec 23	Dec 24 Dec 23	Jan-Dec 24 Jan-Dec 23
<b>Total</b>	-2.7	+0.4	-7.2	-4.3	-1.4	-3.4
<i>Domestic market</i>	-3.0	+0.9	-7.0	-4.7	-1.4	-3.7
<i>Non domestic market</i>	-2.1	-0.6	-7.5	-3.6	-1.3	-2.6

**TABLE 4. TURNOVER OF MINING AND MANUFACTURING INDUSTRY - TOTAL, DOMESTIC AND NON-DOMESTIC MARKET – VOLUME** December 2024, months on previous months and months on same months a year ago percentage changes, seasonally adjusted, calendar adjusted and non-seasonally adjusted (index, 2021=100)

	Seasonally adjusted		Calendar adjusted		Unadjusted	
	Dec 24 Nov 24	Oct-Dec 24 Jul-Sep 24	Dec 24 Dec 23	Jan-Dec 24 Jan-Dec 23	Dec 24 Dec 23	Jan-Dec 24 Jan-Dec 23
<b>Total</b>	-2.5	+0.2	-7.7	-3.2	-2.1	-2.3
<i>Domestic market</i>	-2.7	+0.6	-8.3	-3.7	-2.8	-2.9
<i>Non domestic market</i>	-2.3	-0.5	-6.4	-2.2	-0.8	-1.4

The table below shows routine revisions for November 2024 calculated in percentage points comparing the current percent changes to those released last month. With regard to the month on previous month percent changes calculated on seasonally adjusted indices, an additional source of revision is the updating of the seasonal factors applied to the unadjusted time series.

Updated time series are available at IstatData data warehouse.

**TABLE 5. REVISIONS TO PERCENTAGE CHANGES**

November 2024, differences in percentage points (index. 2021=100)

	Month on previous month (a)	Month on same month a year ago (b)
<b>Value</b>		
B-C – Mining and manufacturing industry	-0.1	+0.1
G-N – Total services (c)	+0.2	-0.1
<b>Volume</b>		
B-C – Mining and manufacturing industry	0.0	+0.1
G-N – Total services (c)	0.0	-0.2

(a) Figures are calculated on seasonally adjusted data.

(b) Figures are calculated on unadjusted data.

(c) Not including G 47 Retail trade

**Consumer durables:** examples of consumer durables production include household appliances, furniture, motorcycles and audio and video equipment.

**Consumer non-durables:** examples of consumer non-durables include food and beverages processing and preservation, several kinds of textile manufacturing and pharmaceutical manufacturing.

**Intermediate goods:** examples of intermediate goods include chemical industry, metal fabrication, metal products and electrical appliances manufacturing, wood industry and textiles processing.

**Capital goods:** examples include production of machinery and manufacturing equipment, measuring and test equipment and vehicles.

**Survey sample:** subset of statistical units selected from a larger population in order to conduct a survey.

**Energy:** examples of energy industries include extraction of raw materials (petroleum, natural gas, coal) and refining processes.

**Turnover index:** the turnover index measures the monthly changes of sales at current prices.

**Turnover volume index:** the volume of turnover index measures the sales over time in volume terms. In order to determine the volume of turnover index, the value of index is divided by an appropriate price index.

**Calendar adjusted data:** calendar adjusted data are data adjusted for calendar effects such as the number of working days, the occurrence of public holidays (including Easter moving holiday) and of leap years. Calendar adjusted data permit to better compare year-on-year percent changes and average annual percent changes.

**Seasonally adjusted data:** seasonally adjusted data are data adjusted for seasonal variations (such as weather conditions, administrative measures, etc.) including calendar effects when relevant. Seasonal adjustment permits the comparison of consecutive months.

**Non-domestic market:** non-domestic market refers to customers operating in foreign countries.

**Domestic market:** domestic market refers to customers operating in Italy.

**Main industrial groupings:** consumer durables, consumer non-durable, intermediate goods and energy. The main industrial groupings (MIGS), laid down in European Commission Implementing [Regulation 2020/1197](#) of 30 July 2020, are based on the statistical classification of economic activities in the European Community (NACE rev. 2), whose Italian version is ATECO 2007. Istat also releases the Consumer Goods Index, calculated as the weighted average of the durable and non-durable components.

**Period on previous period percent change:** period on previous period percent change compares a period (typically a month or quarter) with the previous period.

**Period on same period a year ago percent change:** period on the same period a year ago percent change compares a period (typically a month or quarter) with the same period from the previous year.

## Introduction and regulatory framework

The turnover index for industry and services measures the change over time of the amount of sales of enterprises operating in industry and services. The sectors involved include mining as well as manufacturing industries (classified under sections B and C of the Ateco 2007 classification). alongside enterprises operating in services (classified under sections G. H. I. J. L. M. N. excluding division G47).

[Regulation \(EU\) 2019/2152](#) of the European Parliament and of the Council of 27 November 2019 (followed by the European Commission Implementing [Regulation 2020/1197](#) of 30 July 2020) entered into force on 1 January 2021, replacing the European Council Regulation No. 1165/1998. The new Regulation defines the level of detail, methodology and frequency for the calculation of the economic indicators and data transmissions to Eurostat. These indicators provide timely information on the dynamics of the value of sales for the sectors they refer to, incorporating changes in both volumes and prices.

The surveys contributing to the compilation of the turnover index for industry and services, namely the monthly survey on industrial turnover and the monthly survey on turnover in services, are provided for in the current National Statistical Programme.

The surveys are conducted using a sampling methodology, where the unit of observation is the economic activity unit (EAU). The variable requested is the net turnover in the reference month and, if referred to manufacturing sectors, the turnover must be disaggregated into domestic and foreign components. The turnover definition adheres to the guidelines outlined in [Regulation No. 1503/2006](#) of the European Commission and the regulations leading the compilation of corporate financial statements in Italy.

The reference list for identifying the sample of enterprises is made up of the Italian Business Register, named Statistical Archive of Active Enterprises (ASIA).

## Reference population and estimation domains.

### *Mining and manufacturing industry*

The reference population comprises enterprises within the mining as well as manufacturing industry (sections B and C of NACE Rev.2 classification).

Estimation domains for the industry sector consist of NACE groups found in sections B and C. Other relevant domains include Main Industrial groupings and domestic and foreign turnover.

### *Services*

The reference population comprises enterprises within the service sectors (sections G. H. I. J. L. M. N C of NACE Rev.2 classification, excluding division G47).

For the services sector, estimation domains mostly correspond to groups of economic activity. Considering their structural characteristics, an extension to four digits has been considered for classes such as 49.31 (Urban and suburban passenger land transport), 49.41 (Road freight transport), 52.21 (Service activities incidental to land transportation), 52.29 (Other transport support activities), 73.11 (Advertising agencies) and 73.12 (Media representation).

## Sampling design

### *Mining and manufacturing industry*

Regarding the subset of industrial enterprises, reasoned sample is drawn from the Statistical Archive of Active Enterprises (ASIA), primarily focusing on enterprises with a minimum of 20 employees across most sectors. For sectors characterised by the presence of small-scale units, the reference universe consists of all enterprises without any constraint on the number of employees. Enterprises within the sample are identified at the level of economic activity groups (NACE Rev.2 classification at 3 digits) using a cut-off criterion. This involves selecting enterprises in descending order of turnover until at least 70% of the total sector turnover is covered.

The unit of observation is the Unit of Economic Activity.

## Services

The heterogeneity of structural characteristics across the sectors under examination necessitated the adoption of varied methods for selecting enterprises to participate in the survey.

In sectors featuring a substantial number of enterprises with relatively uniform characteristics, stratified simple random sampling designs were preferred. These designs are stratified by economic activity categories or groups and business size. In sectors where market dynamics are primarily influenced by a small number of large enterprises (such as divisions 50 - Water transport, 51 - Air transport, 53 - Postal and courier activities, 61 - Telecommunications, and 78 - Employment activities), cut-off unit selection schemes have been implemented. These schemes involve selecting larger enterprises until they collectively represent a significant portion, typically over 80%, of the total sector turnover.

For other sectors, a random sample selection of enterprises was performed, specifying a threshold (measured in terms of number of employees) to identify the reference subpopulation of enterprises. As a general rule, a minimum threshold of 2 employees has been set. However, exceptions apply to sectors with a higher prevalence of medium-large enterprises, where the threshold is set at 5 employees (45.1 - Sale of motor vehicles, 49.1 - Passenger rail transport, 49.2 - Freight rail transport, 52 - Warehousing and support activities for transportation). Additionally, the Wholesale trade intermediaries group (46.1) does not use a threshold. In sectors where medium-small enterprises predominate, a stratified simple random sampling design was chosen. This design involved stratifying enterprises based on economic activity (at the group level, 3 digits of the Ateco 2007 classification) and business size (measured by employee class: 2 to 5, 5 to 20, and 20 to 100 employees, with the upper limit of each class excluded) as stratification variables. Enterprises with at least 100 employees constituted the self-representative stratum.

For the sectors Real estate activities (Section L) of Professional, Scientific and Technical Activities (section M) and Administrative and Support Service Activities (section N) different rules were applied. In sectors with a notable presence of small-sized enterprises (68 - Real estate activities, 69 - Legal and accounting activities, 70.2 - Management consultancy activities, 71 - Architectural and engineering activities; technical testing and analysis, 74 - Other professional, scientific and technical activities), no employee threshold was established. Instead, sample units were chosen from the subset of enterprises with an annual turnover exceeding 50,000 euros. For Travel agency, tour operator reservation service and related activities (division 79) the threshold value is set at 2 employees, for Advertising and market research (division 73) it is set at 5 employees, while for Security and investigation activities (division 80) this value is set at 20 employees. In general, employee classes are defined as follows: from 1 to 2 employees, from 2 to 5 employees, from 5 to 10 employees, from 10 to 20 employees, from 20 to 50 employees, from 50 to 100 employees, with the upper limit of each class excluded. For Cleaning activities (group 81.2) an additional class, from 100 to 250 employees, was used, and enterprises with a number of employees equal to or greater than 250 constituted the self-representative stratum.

The calculation of sample sizes within strata was conducted using the Mauss-R software. This software integrates a generalised procedure developed by Istat, which is based on Neyman's allocation method for cases involving multiple variables. This approach follows a generalisation proposed by Bethel (1989)<sup>1</sup>.

## Indexes and Calculation Methodology

Istat produces and disseminates monthly turnover indicators for both industry and services across various sectors of economic activity, presented as index numbers. Starting from the press release related to January 2024, the indices are computed with a reference base year of 2021=100, following the Ateco 2007 classification of economic activities. Ateco 2022 is the Italian adaptation of Nace Rev. 2, the internationally recognised classification system. These indices are then aggregated according to the Laspeyres formula, using a fixed-weight structure reflecting the sectoral distribution of turnover from extractive, manufacturing and service enterprises in the year 2021. The turnover indices for industry and services do not include the sectors of electricity and gas, nor retail sales activity (though retail sales of automobiles and motorcycles are included).

For specifics concerning the modifications implemented during the transition to the 2021 base year, please refer to the informational note "[Turnover indices for industry and services: The new 2021 base](#)" published on April 12, 2024 (available in Italian only).

<sup>1</sup> Bethel, J., 1989. Sample Allocation in Multivariate Surveys. Survey Methodology, 15, 47-57.

Due to the structural differences in the subpopulations of interest for the industry and services sectors, two distinct statistical approaches have been adopted for calculating sectoral turnover indices.

**Mining and manufacturing industry** Data collected from enterprises, suitably aggregated, facilitate the computation of elementary indices referring to the economic activity group. These elementary indices are computed separately for both domestic and foreign markets. Syntheses for subsequent aggregation levels are conducted applying the weighting structure referenced to the base year. Additionally, total indicators are computed for each level of economic activity, serving as a synthesis of those related to both domestic and foreign markets.

### Services

The methodology utilized for estimating indices at the domain level involves employing a method that assesses turnover variation among consistent respondents between the reference month and the corresponding month of the previous year.

### Weighting Structure

The indices calculated at the individual domain level are subsequently aggregated using a weighting system derived from turnover estimates developed within the scope of statistics on [Structural Business Statistics: Enterprises and enterprises Groups - Year 2021](#), taking the Turnover variable into account. For the industrial sectors, shares are also calculated for the breakdown between domestic and foreign turnover, for which information from the monthly foreign trade survey for the year 2021 was also used.

As far as the weighting system for the volume indices is concerned, their values are constructed from the value added variable; only for section G they are the same weights used to aggregate the value indices, i.e. based on the turnover variable.

### Seasonal and calendar adjustment

Alongside the unadjusted indices (commonly referred to as "raw" indices), adjusted indices for calendar effects and seasonally adjusted indices are also made available. Consistent with the seasonal adjustment guidelines outlined by the European Statistical System, these adjustments are implemented using the regression method, facilitated through the application of the Tramo procedure. This method allows for the identification of the effect of working days (calendar days of the month minus Saturdays, Sundays and national civil and religious holidays not coinciding with Saturdays and Sundays), leap years and Easter by introducing a set of regressors into the univariate model that describes the trend of the series. It is crucial to underscore that the indices, once adjusted for calendar effects using this method, would not converge to an average of 100 for the base year (2021 in this specific case), as the effect of working days does not have a zero mean on an annual basis. To ensure the broad dissemination of indices with a standardised base and to facilitate Eurostat's operations in compiling aggregates at the European level, the adjusted time series are reported on a base of 2021=100 through rescaling, thus preserving the original dynamic profile. Furthermore, this adjustment process involves revising the data, as each newly added or modified monthly observation within the series may result in updated estimates of regression parameters.

For the service sectors, due to the shortness of the available time series, no calendar effect adjustment is made at the moment. Conventionally, therefore, the calendar adjusted series in these sectors are set equal to the similar raw aggregates.

In examining an equivalent number of working days, discrepancies in trend between the unadjusted and adjusted series may emerge. Minor differences are usually associated with rescaling and subsequent rounding, whereas more significant variations result from factors like leap years, Easter and the distinct methodologies used for addressing calendar effects. These differences are inversely proportional to the index level and directly proportional to the absolute value of trend variations observed in the raw series.

The seasonally adjusted indices are derived through the Tramo-Seats+ procedure. Similar to other seasonal adjustment methodologies, Tramo-Seats operates under the assumption that any time series with a non-annual frequency can be decomposed into distinct but unobservable components: a cycle-trend component reflecting medium and long-term trends, a seasonal component characterised by periodic fluctuations that occur throughout the year, and an irregular component stemming from erratic factors. Tramo-Seats+ adopts a model-based approach, relying on the identification of a statistical model representative of the behaviour of the time series undergoing seasonal adjustment. However, to effectively remove seasonality, a decomposition of the "raw" series into these components is required. Seasonal adjustment is accomplished through a multiplicative decomposition approach (the observed data represents the product of these unobservable components).

The indices undergo seasonal adjustment separately for both domestic and foreign market turnover within the main industrial groupings. Total turnover is subsequently derived through a synthesis of these adjustments. The statistical models used for seasonality adjustment and correction are reviewed annually to ensure their ability to accurately represent the trend of the individual time series.

The exceptional fluctuations observed in the raw data during the 2020-21 health emergency have been managed in accordance with the [guidelines](#) set forth by Eurostat.

To facilitate users in analysing seasonally adjusted time series, Istat's specifications within the Tramo-Seats procedure are available upon request.

## Volume indices

The calculation of the volume indices is done by dividing the turnover value indices by a suitable price index at the most disaggregated level possible. The resulting elementary volume indices are then aggregated using the value added of the base year 2021 as the weighting variable, or, only for section G, the turnover of the base year 2021.

For the deflation of the elementary indices of the mining and manufacturing sectors, the producer price indices of industrial products, considered separately for foreign and domestic markets, are used. For the trade and services sectors, various sources are used: services output price indices, harmonised consumer price indices, producer price indices. Where necessary, monthly estimates of quarterly indices are made, as well as forecasts of price data not yet available.

## Revision of indices

The turnover indices for both industry and services referring to the most recent month are provisional and subject to revision in the following month, based on additional information received from enterprises. The volume indices of the service sectors may also have revisions for several previous periods (usually up to 6 months), due to the use in the first edition of estimated data for some price indices, for which definitive data gradually become available.

Furthermore, an additional revision of the indicators for the previous year is carried out annually.

These revisions aim to integrate new information received after the initial estimates are published and to refine estimation methodologies, while also addressing any errors. Key factors influencing revisions include incorporating responses received from enterprises after the release of monthly estimates or rectifying previously provided data. Corrections are often associated with corporate restructuring events, typically exerting minimal effects on period indices but potentially significant impacts on monthly dynamics.

For further information regarding revisions of business cycle indicators, please refer to the [dedicated section](#).

## Territorial Breakdown

Turnover indices for both industry and services are calculated and disseminated at national level.

## Timeliness and Dissemination

The monthly turnover indices for industry and services are disseminated through press releases, usually in provisional form approximately 60 days after the end of the reference month. The most recent monthly series of turnover indices for both industry and services are available on the press release webpage, accessible through the Excel file named "Serie storiche."

The press releases also include a description of the main methodological aspects of the survey and are available on the website <http://www.istat.it/en>. Additionally, the indicators for [industry](#) and [services](#) are available on the Istat data warehouse [IstatData](#)

## For technical and methodological information

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