VOLUME INDICES OF SERVICE ACTIVITIES

NOTES ON METHODOLOGY

As from 2023, volume turnover indices of service activities are published monthly on the dissemination site of the Croatian Bureau of Statistics https://podaci.dzs.hr/en in the STS Database (Short-term Business Statistics Database).

The time series of the volume turnover indices of service activities starting with 2010, with the base year 2021 = 100, annual and monthly growth rates, are published on the dissemination site of the Croatian Bureau of Statistics in the STS database (Short-Term Business Statistics Database) in the section Services under the heading Volume Turnover Indices of Service Activities − monthly data. The tables in databases published with the previous base year (2015 = 100) will no longer be updated.

Precise publishing dates are specified in the Calendar of Statistical Data Issues 2023, which is available on the website of the Croatian Bureau of Statistics https://podaci.dzs.hr/en.

Monthly indices on the basis of 2021, working-day adjusted, seasonally and working-day adjusted and unadjusted, are submitted to Eurostat on a regular monthly basis and are available on Eurostat's website https://ec.europa.eu/eurostat, with indicators of all EU Member States with which they are comparable.

Sources and methods of data collection

Data for this indicator are collected from the existing surveys of the Croatian Bureau of Statistics. The basis for the calculation of volume indices of service activities is the nominal turnover obtained from the regular survey Monthly Report on Service Activities (USL-M form).

The deflators used for the calculation of indices are the following:

- consumer price indices
- services producer price indices
- indices of average gross earnings
- industrial producer price indices
- agricultural price indices
- physical indicators – transport of goods.

The methodology for this survey is based on Regulation (EU) 2019/2152 of the European Parliament and of the Council of 27 November 2019 on European business statistics, repealing 10 legal acts in the field of business statistics, and Commission Implementing Regulation (EU) 2020/1197 of 30 July 2020 laying down technical specifications and arrangements pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council on European business statistics repealing 10 legal acts in the field of business statistics. This survey is conducted on the basis of the Official Statistics Act (NN, Nos 25/20, 155/23, 124/25 – corr. and 69/26).

The main purpose of the indicator is to measure the dynamics of changes in the turnover of service activities in real terms.

Coverage and comparability

The volume turnover index of service activities is published at the following NKD 2007 levels:

NKD 2007 Code	Name
GTN	Total service activities
HTNXK	Services of the business economy (except trade and financial and insurance activities)
G	Wholesale and retail trade; repair of motor vehicles and motorcycles (except division 47)
H	Transportation and storage
I	Accommodation and food service activities
J	Information and communication
L	Real estate activities
M_STS	Professional, scientific and technical activities (except group 70.1 and divisions 72 and 75)
N	Administrative and support service activities
G45	Wholesale and retail trade and repair of motor vehicles and motorcycles
G46	Wholesale trade, except of motor vehicles and motorcycles
H49	Land transport and transport via pipelines
H50	Water transport
H51	Air transport
H52	Warehousing and support activities for transportation
H53	Postal and courier activities
I55	Accommodation
I56	Food and beverage service activities
J58	Publishing activities
J59	Motion picture, video and television programme production, sound recording and music publishing activities
J60	Programming and broadcasting activities
J61	Telecommunications
J62	Computer programming, consultancy and related activities
J63	Information service activities
L68	Real estate activities
M69	Legal and accounting activities
M702	Management consultancy activities
M71	Architectural and engineering activities; technical testing and analysis
M73	Advertising and market research
M74	Other professional, scientific and technical activities
N77	Rental and leasing activities
N78	Employment activities

N79	Travel agency, tour operator and other reservation service and related activities
N80	Security and investigation activities
N81	Services to buildings and landscape activities
N82	Office administrative, office support and other business support activities

The Decision on the National Classification of Activities, 2007 version – NKD 2007, will be applied in the Survey until 31 December 2027 in line with the transitional provision from Article 6 of the Decision on the National Classification of Activities, 2025 version – NKD 2025 (NN, No. 47/24): "For statistical and analytical purposes of official statistics of the Republic of Croatia, in the transitional period until 31 December 2027, the Decision on the National Classification of Activities, 2007 version – NKD 2007 (NN, Nos 58/07 and 72/07 – correction) shall be concurrently applied" and the Regulation (EU) 2019/2152 of the European Parliament and of the Council of 27 November 2019 on European business statistics, repealing 10 legal acts in the field of business statistics.

Seasonal and working-day adjustment method

In the process of seasonal adjustment, the software package JDemetra+ and X13 ARIMA method is used. This process identifies and assesses seasonal and working-day effects in time series using statistical models and procedures.

The revision of the previously published seasonally and working-day adjusted indices is performed due to several causes. The most common cause is a change in the estimated parameters of existing statistical models while conducting new estimates, which occurs due to new observations. Other causes are changes in source data or in applied statistical models.

Calendar effects have a significant impact on movements in time series, the most common of which are the effect of moving holidays, the effect of the leap year and the effect of working days.

Seasonally and working-day adjusted indices

The term "seasonally and working-day adjusted indices" is used to indicate that gross indices are adjusted for both seasonal and working-day effects. The indices adjusted in that way and associated rates of change in two consecutive observations are used to compare data with data from the previous month.

Working-day adjusted indices

Working-day adjusted indices imply that gross indices are adjusted only for calendar effects. The indices adjusted in that way and associated inter-annual rates of change are used to compare data with data from the same month of the previous year.

Gross, unadjusted indices

This term is used to indicate that these indices are not adjusted for seasonal nor for working-day effects.

The indices are expressed in real terms, that is, the price change effect is excluded from them.

Definitions

Volume turnover index of service activities (**ISP** - index of services production) shows the monthly changes of the price adjusted output of service activities. It is calculated by deflating the monthly nominal turnover data with the corresponding deflator (price index). Turnover (business revenue) is the value of all goods sold and services provided on the market in the observed period, irrespective of whether they are paid for or not. Value added tax is excluded.

Calculation of indices

The volume turnover index of service activities is calculated by deflating the nominal turnover of service activities at the micro level using different price indices. First, the annual indices are calculated at the elementary level of the NKD 2007 group or class.

When physical indicators are used instead of price indices, deflation is not performed, but these indices are used directly instead.

For aggregation at higher NKD levels (groups, divisions, sections), the Laspeyres-type index is calculated using weights (value added variable) from structural business statistics. The weights are updated every year and refer to the period t-2.

Base year indices are then calculated, which are further used for seasonal and working-day adjustments.

Data revision

Given that the largest number of deflators that are the best source for deflation are available at the quarterly level, a revision of the previously published data that were calculated using auxiliary monthly deflators is necessary.

Abbreviations

EU	European Union

EC	European Community
Eurostat	Statistical Office of the European Union
NKD 2007	National Classification of Activities, 2007 version
NN	Narodne novine, official gazette of the Republic of Croatia