**State Statistical Office**

# Statistical survey on the value of completed and contracted construction works, total number of employees and effective hours worked

## BS_GRAD.21_M_EN_2024_12

## Reference Metadata in SIMS 2.0 structure

| S.1 | Contact |
|---|---|
| | |
| S.1.1 | Contact organisation |
| State Statistical Office | |
| S.1.2 | Contact organisation unit |
| Department for industry, construction and business tendencies | |
| S.1.3 | Contact name |
| Natasha Cenova | |
| S.1.4 | Contact person function |
| Advisor. | |
| S.1.5 | Contact mail address |
| Dame Gruev 4, 1000 Skopje, Republic of North Macedonia | |
| S.1.6 | Contact email address |
| natasa.cenova@stat.gov.mk | |
| S.1.7 | Contact phone number |
| 00389 2 3295 663 | |
| S.1.8 | Contact fax number |
| 00389 2 3111 336 | |
| S.2 | Metadata update |
| | |
| S.2.1 | Metadata last certified |
| 11/06/2025 | |
| S.2.2 | Metadata last posted |
| 11/06/2025 | |

| S.2.3 | Metadata last update |
|---|---|

11/06/2025

| S.3 | Statistical presentation |
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| S.3.1 | Data description |
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-Nominal values of contracted construction works (Nace Rev.2) by types of constructions

-Nominal and real indices of completed construction works (Nace Rev.2) by types of constructions

-Seasonally adjusted indices of completed construction works (Nace Rev.2) by types of constructions

-Nominal and real values of completed construction works (Nace Rev.2) by types of constructions

| S.3.2 | Classification system |
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National Classification of Activities - NKD Rev.2;

Nomenclature of type of construction and construction works - NGOGR.

| S.3.3 | Sector coverage |
|---|---|

Section F - Construction, according to the NKD Rev.2., Division 41 - Buildings and Division 42 - Civil Engineering Works.

| S.3.4 | Statistical concepts and definitions |
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Construction is any separated, freestanding functional structure (subterranean, surface and hydraulic construction), whose purpose is determined in advance and it is located in a specific area. According to the type, constructions as a part of construction activity are classified into: - Building constructions - Civil engineering works (constructions) Building construction comprises building of constructions which are mainly above the ground surface and that are built in height. This group includes all residential and business buildings, and all the buildings that are auxiliary to the civil engineering and hydraulic engineering constructions (terminal buildings, airport buildings, transformer stations, harbor terminals, silos, etc.). Civil engineering comprises building of constructions that are mainly located on the surface or underground. This group includes constructions such as: roads, railways, bridges, tunnels, etc. Building unit is any independent structure constructed above ground, with fundaments, enclosed with external walls and covered by a roof, whether designed for residential or for agricultural, commercial, industrial or cultural purposes or for the provision of services. - The value of completed construction works is an invoiced value without VAT for the monthly completed (realised) construction works. - Values of contracted construction works, that are supposed to be finished in the current year. - Number of employees in the business entity in the reporting month. Covered are the employees in the reporting unit at the end of the month regardless if they were that day at work, vacation, sick leave or other. - Number of effective hours worked for all the employees in the business entity in the reporting month. Data is collected for the average number of effective hours worked during the month. Deflator from the construction costs is used for calculation of the indices for completed construction works, from 2010 onwards.

| S.3.5 | Statistical unit |
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Statistical unit are the business entities with scope of the construction activity in accordance with the section F from the National Classification of Activity - NACE Rev.2, Division 41 - Buildings and Division 42 - Civil Engineering Works, as well as the business entities that are not classified in the construction sector but are performing large-scale construction activities.

| S.3.6 | Statistical population |
|---|---|

Statistical population are the business entities with scope of the construction activity in accordance with the section F from the National Classification of Activity - NKD Rev.2, Division 41 - Buildings and Division 42 - Civil Engineering Works, as well as the business entities that are not classified in the construction sector but are performing large-scale construction activities.

| S.3.7 | Reference area |
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NUTS 1 and 2 (Republic of North Macedonia)

| S.3.8 | Time coverage |
|---|---|

From 1952 until 2007 (previous year = 100). From 2007 (2010 = 100) according to the Nomenclature of type of construction and construction works.

| S.3.9 | Base period |
|---|---|

2015=100

| S.4 | Unit of measure |
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indices,%, thousand denars, number, hour.

| S.5 | Reference period |
|---|---|

Month.

| S.6 | Institutional mandate |
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| S.6.1 | Legal acts and other agreements |
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NATIONAL LEGISLATION
Law on State Statistics ("Official Gazette of the Republic of Macedonia" No. 54/1997, 21/2007, 51/2011, 104/2013, 42/2014, 192/2015, 27/16, 83/18, 220/18 and "Official Gazette of the Republic of North Macedonia" No. 31/20) ( https://www.stat.mk/en/about-us/legal-acts/law-on-state-statistics/ )
Programme of Statistical Surveys 2023-2027 ("Official Gazette of the Republic of North Macedonia" No. 29/23 and 57/25) ( https://www.stat.mk/en/about-us/legal-acts/program-for-statistical-surveys/ )

NATIONAL LEGISLATION

Council Regulation 1165/98

COMMISSION REGULATION (EC) No 1503/2006 of 28 September 2006 implementing and amending Council Regulation (EC) No 1165/98

Regulation (EU) 2019/2152  on European business statistics, and it's implementing Regulation 2020/1197 laying down technical specifications.

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| Eurostat Methodology of short-term business statistics, 2006. | |
| **S.6.2** | **Data sharing** |
| Time series from January 2007, via eDAMIS transmited to Eurostat. | |
| **S.7** | **Confidentiality** |
| | |
| **S.7.1** | **Confidentiality - policy** |
| 1. The protection of individual data is regulated by the Law on State Statistics ( https://www.stat.mk/en/about-us/legal-acts/law-on-state-statistics/ ). 2. The basic principles and activities undertaken to ensure data confidentiality are described in the Policy on Statistical Confidentiality ( https://www.stat.mk/en/about-us/policies-and-strategies/policy-on-statistical-confidentiality/ ). | |
| **S.7.2** | **Confidentiality - data treatment** |
| Pursuant to Article 38 of the Law on State Statistics ( https://www.stat.mk/en/about-us/legal-acts/law-on-state-statistics/ ) and the Policy on Statistical Confidentiality ( https://www.stat.mk/en/about-us/policies-and-strategies/policy-on-statistical-confidentiality/ ), individual data are not published. However, if access is granted to microdata from the relevant survey, then the methods used to prevent data disclosure should be specified. | |
| **S.8** | **Release policy** |
| | |
| **S.8.1** | **Release calendar** |
| The date of data publication is determined in the Advance Release Calendar, which is updated quarterly. | |
| **S.8.2** | **Release calendar access** |
| https://www.stat.mk/en/publishing-calendar/#/ | |
| **S.8.3** | **User access** |
| All users have equal access to statistics at the same time: this means that the publication dates are announced in advance and no user has access to official statistics before they are published. Statistical data are first published in the "News Releases" edition on the website of the State Statistical Office at 12:00. | |
| **S.9** | **Frequency of dissemination** |
| Monthly. | |
| **S.10** | **Accessibility and clarity** |
| | |
| **S.10.1** | **News release** |
| News Releases are published and they are available on the website of the SSO in the section: "News Releases" ( https://www.stat.mk/en/all-new-releases ), | |
| **S.10.2** | **Publications** |

The last publication:'' Construction in the Republic of Macedonia''.

http://www.stat.gov.mk/PrikaziPoslednaPublikacija_en.aspx?id=12

| S.10.3 | On-line database |
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MAKStat database - Construction

Number of page views: 1 380.

http://makstat.stat.gov.mk/PXWeb/pxweb/en/MakStat/MakStat__Gradeznistvo__MesecPodatoci
Gradeznistvo

| S.10.3.1 | AC1. Data tables - consultations |
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Number of page views: 1 380.

| S.10.4 | Micro-data access |
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The use of microdata by external users is possible only for research purposes and is done in accordance with the Law on State Statistics (Article 41, Article 42 and Article 43). Access to anonymised microdata is defined by an internal procedure of the State Statistical Office "Access to anonymised microdata for scientific research purposes" ( https://www.stat.mk/en/about-us/procedures/rules-for-access-to-anonymised-microdata-for-research-purposes/ ).

| S.10.5 | Other |
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At the request of users, data are also prepared in a form according to their needs.

| S.10.5.1 | AC 2. Metadata - consultations |
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Metadata views <15.

| S.10.6 | Documentation on methodology |
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Methodological explanations are released on the SSO web site.
http://makstat.stat.gov.mk/PXWeb/pxweb/en/MakStat/MakStat__Gradeznistvo__MesecPodatoci
Gradeznistvo/175_Grad_Mk_Indeksi_mesecniG21_en.px/?rxid=46ee0f64-2992-4b45-a2d9-
cb4e5f7ec5ef

Short Term Business Statistics Methodology,EUROSTAT

https://circabc.europa.eu/sd/a/fd45995c-7bfd-4db0-986e-
14ac23072343/Methodological%20manual%202006%20KS-BG-06-001-EN.pdf

| S.10.6.1 | AC 3. Metadata completeness - rate |
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Metadata coverage of statistical outputs = 88.9%.

Metadata coverage of statistical processes = 87.5%.

Metadata coverage of quality = 64.7%.

| S.10.7 | Quality documentation |
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Metadata views <15.

| S.11 | Quality management |
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| S.11.1 | Quality assurance |
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The quality of the processes and products in the State Statistical Office is ensured by adhering to the European Statistics Code of Practice ( https://www.stat.mk/en/about-us/quality/code-of-practice/ ) and the Quality Assurance Framework within the European Statistical System ( ESS Quality Assurance Framework – https://ec.europa.eu/eurostat/documents/64157/4392716/ESS-QAF-V2.0-final.pdf ). The quality criteria are also determined in the Law on State Statistics in Article 4b and Article 4c ( https://www.stat.mk/en/about-us/legal-acts/law-on-state-statistics/ ).

| S.11.2 | Quality assessment |
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The State Statistical Office carries out statistical activities in accordance with the Statistical Business Process Model, which is based on the international model - Generic Statistical Business Process Model (GSBPM). The application of this model and international standards in statistical production ensures a high level of accuracy and comparability of data.

| S.12 | Relevance |
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| S.12.1 | User needs |
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Data for the completed and contracted construction works are used by the Government, Economic Chamber, business subjects, International organisations. The external users are using: - the indicators for completed construction works as an important indicator for the economy and monetary police; - the PEEI main economic indicators for the economic movements in the EU; The Economic Chambers, scientific researchers, business subjects and other various users that have needs for the short-term statistics for their's policy creation.

| S.12.2 | User satisfaction |
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Starting from 2009, the State Statistical Office conducts a User Satisfaction Survey every three years.

| S.12.3 | Completeness and R1. Data completeness - rate for U |
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All aggregation levels, according to the short-term statistics regulations, are calculated and published nationally and transmitted to Eurostat.

Completeness of national data = 100%.

Completeness of Eurostat data = 100%.

| S.12.3.1 | R1. Data completeness - rate for P |
|----------|-------------------------------------|

Number of data provided at national level = (3data*12months) = 36.
Number of data to be provided at national level = (3data*12months) = 36.
R1. - Completeness of data at national level = (12/12*100) = 100%.
Number of data sent to Eurostat = (3data*12months) = 36.
Number of data to be sent to Eurostat = (3data*12months) = 36.
R1. - Completeness of data in Eurostat = (12/12*100) = 100%.

| S.13 | Accuracy and reliability |
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| S.13.1 | Overall accuracy |
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| The survey methodology and the data collection method ensure good coverage and accuracy of the data. | |
| **S.13.2** | **Sampling error and A1. Sampling errors - indicators for U** |
| The survey is not conducted with random sample and there is no calculation of sampling errors. | |
| **S.13.2.1** | **A1. Sampling errors - indicators for P** |
| Not applicable. | |
| **S.13.3** | **Non-sampling error and A4. Unit non-response - rate for U and A5. Item non-response - rate for U** |
| Coverage errors: Overcoverage rate is 4%. Measurement errors: The reporting units are informed about the survey via information note that is created automatically from eStat. Data editing errors: In eStat implemented are validation rules. Also implemented are rules for controls and calculation of output data. Imputation is done from the data from the previous period. Non - response errors: The unit non-responce rate is 0%. | |
| **S.13.3.1** | **Coverage error** |
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| **S.13.3.1.1** | **A2. Over-coverage - rate** |
| Not measured. | |
| **S.13.3.1.2** | **A3. Common units - proportion** |
| Proportion of common units = 0%. | |
| **S.13.3.2** | **Measurement error** |
| There are no errors in data collection. Differences in the values of the collected and actual data are currently being processed and are not being measured. | |
| **S.13.3.3** | **Non response error** |
| This statistical survey has 100% coverage of units and characteristics. Non-response units (non-covered units of the target population) = 0%. Non-response characteristics = 0%. | |
| **S.13.3.3.1** | **A4. Unit non-response - rate** |
| Units without response = 0% | |
| **S.13.3.3.2** | **A5. Item non-response - rate** |
| No response marks = 0%. | |
| **S.13.3.4** | **Processing error** |
| No measurement of errors is performed during data processing. | |
| **S.13.3.5** | **Model assumption error** |
| Not applicable. | |
| **S.14** | **Timeliness and punctuality** |
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| S.14.1 | Timeliness and TP2. Time lag - final results for U |
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T + 45.

| S.14.1.1 | TP1. Time lag - first results for P |
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Time difference to first results = 0.

| S.14.1.2 | TP2. Time lag - final results for P |
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Time difference until definitive results = 45.

| S.14.2 | Punctuality and TP3. Punctuality - delivery and publication for U |
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The data are published on the day announced in the Advance Release Calendar.

| S.14.2.1 | TP3. Punctuality - delivery and publication for P |
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Time difference of transmission to Eurostat (average monthly) = 0 days.

| S.15 | Coherence and comparability |
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| S.15.1 | Comparability - geographical |
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There is geographical comparability of the released data at national and regional level. With respect to geographical comparability with other EU countries, it is also ensured because data are collected in line with EU regulations.

| S.15.1.1 | CC1.Asymmetry for mirror flow statistics - coefficient |
|---|---|

Not applicable.

| S.15.2 | Comparability - over time and CC2. Length of comparable time series for U |
|---|---|

Time series from January 2007 onwards and there is no break-up in the time series. The number of reference periods in the time series from the last break-up is 192.

| S.15.2.1 | CC2. Length of comparable time series for P |
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Length of comparable time series = 192 reference periods.

| S.15.3 | Coherence - cross domain |
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"Data comparisons are made on a micro level with the data from the survey ""Annual report on constructions built by business entities"", while on a macro level comparisons are made with the data from the Labour Force Survey. Data are coherent"

| S.15.3.1 | Coherence - sub annual and annual statistics |
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The data are compared with the annual data from the Statistical Survey on Construction Facilities on which work has been performed by business entities for buildings, civil engineering and hydraulic engineering (annually) (GRAD.11). The comparison is made, if necessary, to control the logicality of the value of performed construction work.

| S.15.3.2 | Coherence - National Accounts |
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The indices of completed construction works are applicable in the calculations in National Accounts.

| S.15.4 | Coherence - internal |
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| Internal coherence of data is ensured. | |
| **S.16** | **Cost and burden** |
| Not calculated. | |
| **S.17** | **Data revision** |
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| **S.17.1** | **Data revision - policy** |
| Data revision is made in accordance with the Statistical Data Revision Policy of the SSO: ( https://www.stat.mk/en/about-us/policies-and-strategies/data-revision/ ). | |
| **S.17.2** | **Data revision - practice and A6. Data revision - average size for U** |
| Data revision is done always when there is change in the base year and change in the methodology. | |
| **S.17.2.1** | **A6. Data revision - average size for P** |
| Number of data revisions =132 | |
| **S.18** | **Statistical processing** |
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| **S.18.1** | **Source data** |
| "This statistical survey is a sample survey. The sample is created using the method of total coverage with cut-off treshhold. The sample for the "Monthly report on the value of completed and contracted construction works (GRAD 21)" covers 82% from the total value of the completed construction works by the business entitites. The sample is revised every year. The sample for 2024 comprises of 176 business entities. " | |
| **S.18.2** | **Frequency of data collection** |
| Monthly. | |
| **S.18.3** | **Data collection** |
| "Data for the value of completed construction works, value of contracted construction works, number of employees and effective hours worked are collected with the questionnaire ""Monthly report on the value of completed and contracted construction works (GRAD 21)"" via eStat data collection system. Data collection from the business entities is done witn non-random sample, with method of self-fulfilling. The business entities report the data for the reference month and send to the SSO latest to the 15-th day next month." | |
| **S.18.4** | **Data validation** |
| Data are controlled according to the defined rules for controls. In eStat implemented are mathematical and logical controls. Also in the application implemented are rules for controls and calculation of output data. | |
| **S.18.5** | **Data compilation** |
| Editing: After data are withdrawn they are controlled, with logical controls, imputations of missing values from the previous period, and afterwarrds data entering is done in appropriate application with implemented on-line controls. Data analysys and validation is done before and | |

after data dissemination, on agregated level. Weighting: The output data are no weighted and no weights are calcullated.

| S.18.5.1 | A7. Imputation - rate |
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The imputation rate has not been calculated.

| S.18.6 | Adjustment |
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Data are both seasonally and working day adjusted using JDemetra+.

| S.18.6.1 | Seasonal adjustment |
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The time series is fitted using the JDemetra+ software, which uses the Tramo/Seats specification (TRAMO-SEATS, ARIMA, Ljung-Box test).

| S.19 | Comment |
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| A.1 | Annexes |
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