



**Assessment of sources and methods used in  
the provision of basic information for  
Purchasing Power Parities (PPPs)**

**COUNTRY: North Macedonia**

**2024**



## CONTEXT

1. Regulation (EC) No 1445/2007 of the European Parliament and of the Council of 11 December 2007 establishing common rules for the provision of basic information on Purchasing Power Parities and for their calculation and dissemination ("the PPP Regulation") requires Eurostat to assess each Member State's compliance with the PPP Regulation at least once every six years and to publish a report, based on the assessment, on its website.
2. Most Candidate Countries already participate in Eurostat's PPP Programme. Since the PPP exercise is in its nature multilateral, it is desirable to conduct similar assessments in the Candidate Countries in order to identify any remaining challenges and potential for improvement.
3. The present report on the sources and methods used by the State Statistical Office of the Republic of North Macedonia (hereafter "SSO") in preparing and providing input to the PPP exercise is based on information in the *PPP inventory of sources and methods* (version 2024), and on other data and documentation supplied in the course of the regular cycle of PPP work. In addition, information provided during a videoconference on 16 May 2024 is taken into account.

## ORGANISATIONAL ISSUES

4. The PPP work in the SSO is organised within the Department for the calculation of GDP by the expenditure approach. Three staff members are involved in the PPP work, including the national coordinator, who is working full-time on PPPs. External staff (not employees of the SSO) are hired to collect prices for consumer goods and equipment goods, and to carry out the construction survey. Data for the survey on hospital services is provided by the Health Insurance Fund. PPP staff cooperate closely with the department in charge of the CPI and the Household Budget Survey.

SSO maintains a dedicated web page on PPPs, which contains links to Eurostat releases and to Statistics Explained. Beyond this, there is no specific dissemination policy in place.

## FINDINGS BY PPP SURVEY

### Consumer goods and services

5. All phases of these surveys are taken care of by one staff member, assisted by two external price collectors. The Internet is an important source of information during the preview and pre-survey phases, while traditional field work (visiting physical outlets) dominates during price collection. Price collectors are briefed before each survey. Prices for certain services, cars and motorcycles, hotels and pharmaceuticals are to a large extent collected online or by phone. There is no use of transaction data for the time being. Although prices are collected in the capital city only, no spatial adjustment factors are estimated.



## **Housing services**

6. North Macedonia uses the user cost approach in national accounts. In the PPP calculation, the quantity approach is used. The quantity and quality data are taken from the latest census, extrapolated by data on the completion and demolition of dwellings, provided by the SSO Department of construction.

## **Compensation of government employees**

7. In national accounts, compensation of government employees is calculated on the basis of data on public sector entities from the Central Registry Office. These data cannot be broken down to the level of specific occupations. Hence, PPP staff undertake a survey with the various ministries to obtain salary data for the sample of occupations in the PPP questionnaire. For non-survey years, the salaries are extrapolated with the annual average wage index. Social contributions are provided by the Department for calculating GDP by the production approach.

## **Hospitals**

8. The SSO has an agreement on mutual cooperation and data exchange with the Health Insurance Fund. Provision of data for the PPP hospital survey is part of that agreement. An expert in Health Insurance Fund fills in the PPP questionnaire. The quasi-prices provided are administrative prices derived from the DRGs. They include all costs for the provision of services, except for the consumption of fixed capital. Contrary to the survey guidelines, costs related to research and development, and to training and education, are included in the quasi-prices.

## **Education**

9. Data from the UNESCO-OECD-Eurostat education database is provided to the countries by Eurostat for checking. This is especially important if there are gaps in the database and imputations have been made. Since the data for North Macedonia is complete, this does not apply.

## **Equipment goods**

10. The survey is carried out by the PPP team, assisted by price collectors. In the preview and pre-survey stages, the main sources of information are company webpages and direct contact with producers, importers and distributors by telephone or email. For the data collection, external price collectors with a background in mechanical engineering are hired. Prices are mostly collected the traditional way, by visiting outlets and interviewing professionals. This is especially important when item descriptions are very detailed. To some extent, phone calls and email are used as well. Relations with respondents are generally good. Since it is difficult to estimate discounts for purely hypothetical transactions, no information about discounts is collected. It can sometimes be challenging to ensure that prices are without VAT; in these cases, additional checks are carried out.



## **Construction**

11. The construction survey is outsourced to an external expert with long experience in working with the SSO. The expert takes part in survey preparation, data collection and validation. Data is collected from construction companies, from producers of materials, and from professionals working in the construction sector who have access to extensive, recent price data. Prices are collected from all over the country.

## **VAT on capital goods**

12. Non-deductible VAT is calculated by the Department for calculating GDP by expenditure approach.

## **Expenditure weights**

13. The expenditure weights questionnaire is filled in by the PPP experts in the Department for calculating GDP by expenditure approach. For household final consumption expenditure, the main data source is the Household budget survey. Expenditure on non-profit organisations serving households and on general government are requested at a high level of aggregation, and can be taken directly from national accounts data. Detailed data on gross fixed capital formation is available according to the CPA classification.



## CONCLUSIONS AND SUMMARY OF ACTION POINTS FOR THE SSO

North Macedonia complies well with the PPP Regulation. The data is generally of good quality and the resulting PPPs are plausible. Some potential improvement points raised during the discussions are summarised in the table below.

Topic	Action points
Organisation	Streamline the PPP inventory in line with the guidelines. Continue to develop the national dissemination policy.
Consumer goods and services	Explore new data sources, especially transaction data, with a view to implementation in the PPP surveys. Provide evidence, e.g. based on CPI data, for the assumption that there are no significant price level differences within the country (SAF=1).
Housing	None.
Compensation of government employees	None.
Hospitals	Liaise with the data provider to investigate whether costs related to research and development and to training and education can be excluded from the quasi-prices.
Education	None.
Equipment goods	None.
Construction	None.
VAT on capital goods	None.
Expenditure weights	None.