



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

COUNTRY: Denmark

2021



CONTEXT

1. This report is written in the context of the implementation of article 7 (on quality criteria and control) of 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").
2. The PPP Regulation requires all Member States to maintain documentation which gives a full description of the manner in which the Regulation has been implemented (the "PPP Inventory"). It requires Eurostat to assess each Member States' compliance with the PPP Regulation at least once every six years and to publish a report, based on the assessment, on its website.
3. The current assessment report is based on the information presented by Statistics Denmark in the "PPP Inventory of sources and methods", version January 2021, as well as on other data and reports prepared in the context of the PPP programme. In addition, information provided during a videoconference on 5 November 2021 is taken into account.

ORGANISATIONAL ISSUES

4. The PPP team at Statistics Denmark is part of the Economic Statistics Department and the Division of Prices and Consumption. The division is responsible for the Consumer Price Index, the Producer Price Index, the Housing Price Index and the Household Budget Survey, in addition to PPPs. The PPP team consists of one full-time coordinator and one full-time officer, both with long experience in the area. Price collectors work with both the CPI and the PPPs. The PPP team interacts with the CPI team to exploit synergies between the two domains, especially as concerns the implementation of transaction data.
5. The PPP team is responsible for the surveys on consumer goods and services, rents, temporal adjustment factors and expenditure weights. Data on the compensation of government employees ("the salaries survey") are provided by Statistics Denmark's Division for Wages, while an external agency, the National Board of Health Data, provides the data for the hospitals survey. The surveys on equipment goods and on construction are outsourced to commercial companies. Total work hours allocated to PPPs are estimated at 3300 per year, not including the two outsourced surveys.



FINDINGS BY PPP SURVEY

Consumer goods and services

6. The surveys on consumer goods and services are carried out by the PPP team and a dedicated group of experienced CPI and PPP price collectors. Traditional price collection takes place mainly in the greater Copenhagen area, supplemented by prices from the internet, from magazines and catalogues, and from the CPI. For certain market services, questionnaires are distributed to the service providers. Transaction data covering the entire economic territory are used in the Food, beverages and tobacco survey, as well as for certain basic headings in the Personal appearance and House and garden surveys. Statistics Denmark is encouraged to further explore and implement new data sources in the consumer goods surveys.
7. An analysis conducted in 2019 based on CPI data indicate that for most basic headings, capital city prices can be assumed to reflect national averages. The dominance of major shop chains with uniform pricing policies throughout the country points in the same direction. Uncertainty remains about potential price differences for services, due to limited comparability between the CPI and PPP samples.

Housing services

8. The PPP rents survey is based on data from the CPI rents survey and the Central Register for Residential Buildings and Dwellings. The rents survey covers the total population of government dwellings and a smaller sample of private and cooperative dwellings. Weights for these categories of dwellings are based on dwelling stock data from the register. The Ministry of Social Affairs provides data on subsidies and allowances relating to social housing, ensuring that reliable estimates of the total market price for these dwellings can be made. National Accounts estimate rentals based on a different source which does not align with the requirements in the PPP questionnaire. However, there are plans to gradually implement data from the CPI rents survey in National Accounts and thus improve the coherence between the two domains.

Compensation of government employees

9. The PPP salaries survey is compiled by the Division for Wages, based on detailed payroll data from central and regional/local government and in line with ISCO 2008. Employers' social contributions (D121 and D122) are included in the basic salaries, i.e. not shown separately in the questionnaire. There are minor deviations from the ESA 2010 definitions as concerns social contributions, estimated to be in the 1 – 3 percent range.

Hospitals

10. Data are collected from the hospitals by the National Board of Health Data, which belongs to the Ministry of Health. The PPP team maintains close relations with the data provider and tries to communicate a basic understanding of the PPP concept. All hospitals are covered, and the prices reported are administrative prices. The internal



consistency of the data is checked by the PPP coordinator before submitted to Eurostat's contractor.

Education

11. Statistics Denmark checks the results calculated by Eurostat against the Danish data in the UOE education database, against other countries and over time.

Equipment goods

12. Statistics Denmark has outsourced this survey to an external contractor with long experience in the area. Information about product availability and prices is collected from the internet as well as from importers, who are contacted by phone. The pre-survey list is considered to be representative enough for Denmark, hence no specific effort is made to define new item proposals. Businesses are usually cooperative and willing to provide information. The technical validation work is carried out by the contractor in cooperation with Eurostat's contractor, while the PPP team gets involved in the inter-country validation phase. Due to discrepancies in the value of certain technical parameters, the classification of items as either "identical" or "equivalent" can sometimes be challenging.

Construction

13. The construction survey is outsourced to a commercial company with long experience in this area, as well as in PPP work. The subcontractor has access to price data on actual construction projects in the form of two booklets, "V&S Prisinformation Husbygning" for construction and "V&S Prisinformation Anlæg" for civil engineering. Some additional price data are collected from tenders. The subcontractor also interacts with Eurostat's contractor during the validation phase.

VAT on capital goods

14. Statistics Denmark includes only non-deductible VAT.

Expenditure weights

15. The expenditure weights are prepared by the PPP team. Data at the level of expenditure classes are taken from National Accounts, while the underlying expenditure weights for household final consumption expenditure at basic heading level are based on CPI weights, which in turn are calculated from the Household Budget Survey (HBS). For Non-Profit Institutions Serving Households and for General Government, no further processing of the data from National Accounts is required. The expenditure breakdown for Gross Fixed Capital Formation is compiled by using detailed information from supply-use tables to align expenditures with the Classification of Products by Activity (CPA).



CONCLUSIONS AND SUMMARY OF ACTION POINTS FOR STATISTICS DENMARK

Denmark complies well with the PPP Regulation. The data are 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
1 Organisation	Continue to explore potential synergies between CPI and PPP.
2.1 Consumer goods and services	Continue efforts to explore and implement new data sources (administrative data, transaction data, web-scraping). Investigate further the possibilities to produce better spatial adjustment factors for services and other areas where the analysis based on CPI data does not produce reliable results, potentially via the grants agreement.
2.2 Housing	Continue to liaise with National Accounts in order to improve consistency in view of the different data sources used.
3.1 Compensation of government employees	Report social contributions (D121 and D122) separately from the basic salaries, and minimise the deviations from the ESA 2010 definitions.
3.2 Education	None.
3.3 Hospitals	None.
4.1 Equipment goods	Liaise with the subcontractor to ensure that representativity is interpreted and implemented correctly.
4.2 Construction	None.
4.3 VAT on capital goods	None.
5. Expenditure weights	None.