

APRIL 2015
EUROSTAT

COWI

EUROSTAT 2015 PRICING GUIDELINES

ADDRESS COWI A/S
Parallelvej 2
2800 Kongens Lyngby
Denmark

TEL +45 56 40 00 00

FAX +45 56 40 99 99

WWW cowi.com



CONTENTS

1	Introduction – GDP Volume Comparison	5
2	Representativity and comparability of items	6
3	Standard Construction Projects	7
4	Bills of Quantities	8
5	Prices to be collected	9
6	Reporting unit prices	11
7	Source of the Unit prices	11
	Appendix A	12
	Appendix B	14

1 Introduction – GDP Volume Comparison

In economic analysis, Gross Domestic Product (GDP) is often regarded as the main indicator for measuring a country's economic activity during a year. GDP is generally broken down according to the various uses distinguished in the national accounts. International comparisons of economic aggregates such as GDP uses require firstly that the basis of measuring the aggregates is consistent for the countries under comparison, and secondly that a comparable unit of measurement is employed. Consistency in the basis of measuring the aggregates is achieved through compliance with the European System of National Accounts.

The differences in GDP expenditure values between countries include both a "volume of goods and services" component and a "level of prices" component. In order to obtain a comparison of volumes, it is essential to use conversion factors (spatial deflators) which reflect the differences in the level of prices between countries. The use of exchange rates as the conversion factors does not allow a true comparison because they usually reflect other elements than price differences alone. Purchasing Power Parities (PPPs) have been specifically developed to be appropriate for use as conversion factors (spatial deflators). They can be used to convert the values of the countries' economic aggregates expressed in national currency into a common currency. These new figures can then be used for a pure volume comparison, since the price level component has been eliminated.

PPPs are obtained as the averages of the price ratios between the different countries for a basket of comparable goods and services which are representative of consumption patterns in the participating countries and which are selected to represent the whole of a well-defined classification of goods and services (similar to the one used for GDP). Generally, prices should be prices which have been actually paid, i.e. market prices.

Eurostat coordinates price collection in 37 European countries in order to calculate PPPs and to achieve volume comparison between these countries. The annual price collection of construction and civil engineering projects is part of this.

Eurostat works in close cooperation with OECD which coordinates similar price collection every third year for the remaining OECD countries and which calculates PPPs and carries out volume comparison for this different group. Eurostat and OECD apply the same methodological approach.

2 Representativity and comparability of items

The representativity of the items includes two important elements. Firstly, the item must be representative for the domestic pattern of consumption. This means that the item must be available and used up to some degree and ideally although not necessarily the market leader. Secondly, to secure a balanced comparison between the countries, the item should be equally representative for the other participating countries. It goes without saying that the items must be representative to the class of products to which they relate. However, as a general rule, comparability takes precedence over representativity.

Construction practices, norms and tastes vary a lot from country to country, mainly due to different geographical characteristics such as climate. Construction projects or their component which are typical and thus representative in one country (for example a Nordic house) may not be available in other countries (for example a Mediterranean island) and are not representative there. Therefore, the price collection cannot be based on real completed construction projects sold in all markets.

To cover both representativity and comparability at the same time, the price collection is not based on real completed construction items but on a list of fictitious standard construction projects which are nevertheless based on real construction methods and practices and components that can be found in real construction projects.

3 Standard Construction Projects

At the annual meeting of the Working Group on Purchasing Power Parities, the group decides the content of the list of standard construction projects for which prices are to be collected. For 2015, the list of projects contains eight different construction and civil engineering projects.

A standard construction project consists of a number of major components ("chapters") such as earthworks, concrete, masonry, roofing etc. Each major component comprises a number of elementary components (or items) such as excavation of foundations, transportation of spoil, compacting of sand in trenches etc.

For the price collection, the elementary components (and thus the major components, and whole project) are detailed in bills of quantities. Even when only key elementary items require pricing, the bills of quantities will display all items for reference.

4 Bills of Quantities

Bills of quantities are defined in great detail to facilitate the exact identification of the content, supported where necessary by appropriate explanations of materials used and technical drawings. To obtain sufficient representativity and to make the pricing of a bill of quantities possible by most of the participating countries, it is necessary from time to time to interpret the definitions of bills and quantities with some flexibility. Thus, if strict adherence to the specifications means that the component cannot be priced or that the price would be exceptional (and not representative), a more readily available domestic substitute should be priced instead.

When the national standards do not match with the definitions, the components should be priced according to the national standards which are closest to the dimensions/compositions indicated in the definitions. This may include but is not limited to:

- › thickness of the brick wall due to the different standard size or shape of the bricks
- › dimensions of windows, doors and other joinery works
- › electrical and other fittings.

The flexibility should not become too liberal because this could severely distort the comparability. Hence, for example, substituting concrete bricks for clay bricks is allowed but replacing a brick wall by a reinforced concrete wall is not. Usually, substitution is acceptable when the elements affected represent only a small share of the total price of the project and the basic features of the construction remain unchanged. Therefore, a degree of common sense must be applied.

It is extremely important to always indicate and explain how a priced element deviates from the specification in the definitions. The definitions will reflect compromises in order to achieve sufficient degree of representativity and comparability. A compromise definition might be unrepresentative (for example due to a specified thickness of glazing or roofing) but for comparability these elements should be priced if possible.

5 Prices to be collected

In principle, the prices collected should be purchasers' prices, i.e. prices actually paid in the markets for the construction projects defined in detail through the bills of quantities. However, the fictitious projects are not available in the markets and to achieve the closest possible estimates of the market prices, various things must be taken into account when prices are being collected:

The unit prices used in the bills of quantities must cover **the producer's costs** proper for each elementary component (such as materials, labour, hire of equipment, sub-contractor's fees etc.).

The unit prices must be adjusted to include **the profit margin** of the contractor, general expenses (including the appropriate share of main office overheads) and all preliminary expenses connected to the construction project (including site preparation). The most common general and preliminary expenses are listed in Appendix 1. They must be taken into account if the contractor usually is obliged to pay them, either by law or by common practice. If specific non-deductible tax rates (other than VAT) are applied to certain components, the tax has to be added to the price of that component directly.

The collected prices represent the price that the buyer pays. As a general rule every cost element that is passed on to the buyer should be included in the unit price. In terms of **Contingencies**, such as for example winter pricing or long term building insurance, these should be included in item prices only if they are contractually passed on to the buyer. If they represent the contractor's cost and not the price paid by the buyer, they should not be added to the unit prices of the BQ. Contingencies to cover changes in design or mistakes in bill of quantities measurements should not be included.

The unit prices shall not include architects' or engineers' fees or VAT because they will be added on separately (see below).

The unit prices shall not be adjusted for the expenditure incurred for the **purchase of land** (cost of the land itself and related financial and notary costs).

Architects' and engineers' fees (together with any other professionals' fees) will be added to the total sum of all the components of the bills of quantity. The percentage should cover both the realisation of the project and supervision of the work. The most common elements are listed in Appendix 2 but national rules and practices must be taken into account when applying the list.

VAT and other sales taxes will be added to the total sum by Eurostat at a later stage and should **not** be included with the bills of quantity. If specific non-

deductible tax rates (other than VAT) are applied to certain components, the tax must be added to the price of that component directly (see above).

The unit prices collected should represent annual average prices at national average price levels:

Countries should report prices that are annual averages, that is, prices that reflect the level of national prices over the whole year. Since it would be too expensive to take prices throughout the whole year, countries are only required to provide the national average prices prevailing in May/June. If for any reason, you think that in your country prices taken in this period do not represent mid-year prices, you will have to make adjustments to obtain mid-year prices.

To obtain the **national average unit prices**, prices should in principle be recorded in various regions and the output weighted average calculated. If this is not possible, the national average unit prices should be estimated. The price report should clarify how the national average unit prices have been established.

6 Reporting unit prices

The prices must be reported to Eurostat via eDAMIS in electronic format using the pre-formatted survey forms supplied by COWI. Any other reporting media is not acceptable.

7 Source of the Unit prices

The unit prices can be obtained either from existing BoQs prepared for a real (winning) tender by construction companies, or from a database maintaining information on unit costs.

- 1 Using existing real bills of quantities will automatically reflect actual market prices. However, if it is known that the profit/loss margin included is excessively high/low due to the prevailing market situation or the order book situations of the particular contractors, an appropriate adjustment should be made and explained in the price report.
- 2 Using a unit costs database as the information source, the bills of quantities should:
 - › firstly be valued on a resource cost basis.
 - › secondly be adjusted to reflect purchasers' prices (market prices) based on information about general profit margins.

Even though both approaches are acceptable as such, it is preferable to use the unit cost approach, i.e. the option (2) above, because this approach provides prices at unit cost level which are comparable between all participating countries.

Applying the option (1) above may mean that the total prices might be comparable but that a breakdown of the unit costs underlying the total price might not be realistic (for example, due to different allocation policies of construction companies) and thus not comparable.

Appendix A

The following are some of the items not specified in the bills of quantities, the cost of which should nonetheless be included by countries in the unit prices:

- › The taking out of a builder's all-risk insurance which includes public liability cover, contractor's liability cover, fire insurance, earthquake insurance and any other cover or insurance usually required by the standard contract
- › The giving and placing of all notices and notifications, the obtaining of the necessary permits, the paying of all associated charges and any other statutory fees or local taxes that may be required
- › The setting-out of the works, including a set-out guide for subcontractors, and the paying of any registered surveyor's fees
- › The provision of a temporary power supply and the paying of all charges associated with its connection and use
- › The provision of a temporary water supply and the paying of all charges associated with its connection and use
- › The provision of a temporary telephone and the paying of all charges associated with its connection and use
- › The provision of a temporary toilet and washing facilities and the paying of all associated charges
- › The provision of a site office, a kitchen/eating place or other accommodation for the workers, and facilities for the storage of material and tools, and their subsequent removal on completion of the works
- › The provision and maintenance of a suitably placed job sign board and its subsequent removal on completion of the works
- › The provision and maintenance of competent managers or foremen to supervise the works
- › The provision and maintenance of any temporary fences or barriers required for the security of the works or for safety precautions
- › The provision of temporary scaffolding and trestles
- › The provision of a bankers guarantee or a performance bond as usually required by the standard contract
- › The removal of all rubbish from the site as it accumulates and at the completion of the works
- › The cleaning of the building, inside and out, and the removal of all stains etc. to the satisfaction of the supervisor
- › The protection of other property from damage
- › The share of the main office overheads

- › Other preliminary expenses not elsewhere specified
- › Provision of working drawings
- › Plant which is not readily allocated to specific work items (such as a tower crane)
- › Furnished office for clerk of works (including telephone and heating)
- › Temporary roads and hardstanding
- › Compliance with statutory requirements in relation to working conditions
- › Profit margin of the contractor.

Appendix B

Preliminary services

Work stage A: Inception

- › Discuss the client's requirements including timescale and any financial limits; assess these and give general advice on how to proceed; agree the architect's services
- › Obtain information from the client about ownership and any lessors and lessees of the site, any existing buildings on the site, any boundary fences and other enclosures and any known easements, encroachments, underground services, rights of way, rights of support and other relevant matters
- › Visit the site and carry out an initial appraisal
- › Advise on the need for other consultant's services and on the scope of these services
- › Advise on the need for specialist contractors, sub-contractors and suppliers to design and execute part of the works to comply with the architect's requirements
- › Advise on the need for site staff
- › Prepare where required an outline timetable and fee basis for further services for the client's approval.

Work stage B: Feasibility

- › Carry out such studies as may be necessary to determine the feasibility of the client's requirements; review with the client alternative design and construction approaches and cost implications; advise on the need to obtain planning permissions, approvals under building acts or regulations, and other similar statutory requirements.

Basic services

Work stage C: Outline proposals

- › With other consultants where appointed, analyse the client's requirements; prepare outline proposals and an approximation of the construction cost for the client's preliminary approval.

Work stage D: Scheme design

- › With other consultants where appointed, develop a scheme design from the outline proposals taking into account amendments suggested by the client; prepare a cost estimate; where applicable, give an indication of possible start and completion dates for the building contract. The scheme design will

illustrate the size and character of the project in sufficient detail to enable the client to agree to the spatial arrangements, materials and appearance.

- › With other consultants where appointed, advise the client of the implications of any subsequent changes on the cost of the project and on the overall programme.
- › Make application where required for planning permission. The permission itself is beyond the architect's control and no guarantee that it will be granted can be given.

Work stage E: Detailed design

- › With other consultants where appointed, develop the scheme design; obtain the client's approval of the type of construction, quality of materials and standard of workmanship; co-ordinate any design work done by consultants, specialist contractors, sub-contractors and suppliers; obtain quotations and other information in connection with specialist work.
- › With other consultants where appointed, carry out cost checks as necessary; advise the client of the consequences of any subsequent changes on the cost and the programme.
- › Make and negotiate where required applications for approvals under building acts, regulations or other statutory requirements.

Work stage F and G: Production information and bills of quantities

- › With other consultants where appointed, prepare production information including drawings, schedules and specification of material and workmanship; provide information for bills of quantities, if any, to be prepared and all other information to be completed in sufficient detail to enable a contractor to prepare a tender.

Work stage H: Tender action

- › Arrange, where relevant, for other contracts to be let prior to the contractor commencing work.
- › Advise on and obtain the client's approval to a list of tenderers.
- › Invite tenders from approved contractors; appraise and advise on tenders submitted. Alternatively, arrange for a price to be negotiated with a contractor.

Work stage I: Project planning

- › Advise the client on the appointment of contractor and on the responsibilities of the client, contractor and architect under the terms of the building contract; where required, prepare the building contract and arrange for it to be signed by the client and the contractor; provide production information as required by the building contract.

Work stage J: Operation on site

- › Administer the terms of the building contract during operations on site.

- › Visit the site as appropriate to inspect generally the progress and quality of the work.
- › With other consultants where appointed, make where required periodic financial reports to the client including the effect of any variations on the construction cost.

Work stage K: Completion

- › Administer the terms of the building contract relating to completion of the work.
- › Give general guidance on maintenance.
- › Provide the client with a set of drawings showing the building and the main lines drainage; arrange for drawings of the services installations to be provided.