

Joint Eurostat/OECD 2019 questionnaire on the methodology underlying capital stocks data in national accounts

Country: Norway

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Information regarding Gross Fixed Capital Formation (GFCF) compilation

This information sheet presents metadata provided by the country for publication by Eurostat. It informs on the methods and sources used to compile GFCF under the [European System of Accounts 2010 \(ESA 2010\)](#). While the questionnaire has a common structure, the level of detail of replies differs from one country to another and, therefore, only available country replies are shown here.

For easier cross-country comparison, users of GFCF data are invited to consult the tabular presentation of metadata on estimation of capital stocks by asset type, industry and institutional sector:

[Capital Stock Metadata in Tabular Format](#)

N111. Dwellings

Question 1. What is/are the main source/s to estimate GFCF in dwellings in your country, and which are the products or assets included under this asset category? Please specify if sources differ across industries and/or institutional sectors.

The data sources for GFCF are often the same as for output and intermediate consumption, and include Structural Business Statistics, construction statistics, central and local government accounts, etc. In general, data quality for GFCF is not as good as for output. This asset category also includes own account investment and the costs of ownership transfer.

Question 2. What is the length of the GFCF series for dwellings? If long GFCF series are available (previous to 1995), how do you estimate historical data? Please, describe additional sources and/or methods, and specify if these differ across industries and institutional sectors.

The GFCF time series are available from 1970 onwards. To be able to start the PIM estimates for capital stock and depreciation in the same year, the GFCF series have been extrapolated backwards, in some cases back to 1870.

Question 3. Are costs of ownership transfer included in GFCF? How do you define them and treat them in the estimation of capital stocks of dwellings (e.g. treated equally to GFCF, or specific average service life/depreciation profile for these costs)?

The costs of ownership transfer are included in GFCF as a separate asset type. In the PIM, they have a shorter assets life than the related asset.

Question 4. What price indices do you use to deflate GFCF in dwellings, and how do you construct these indices? How do you account for quality improvements? Do you use specific price indices for detailed asset categories? Do these price indices differ across industries / institutional sectors? If they are available, please provide links to and/or relevant documents and metadata on their construction.

The price index for GFCF of an asset is a weighted average of the price indexes of the construction services that make up each asset type. The data sources include construction cost indexes for residential buildings and roads, price indexes for new detached houses, etc.

The price indexes are the same across industries/institutional sectors. The cost based indexes are not adjusted for changes in productivity and profitability. For new detached houses, quality adjustment is a challenge.

N1121. Buildings other than dwellings

Question 1. Do you have specific GFCF series for detailed asset categories (e.g. office buildings, industrial buildings, public buildings, etc.)? Are your GFCF series broken down by industry and/or institutional sector? If your answer is yes to any of these questions, please describe and provide the link to available data and relevant documents.

There are no specific GFCF series for detailed asset categories, but own account investment is a separate category. All GFCF series are broken down by industry and/or institutional sector in the Norwegian national accounts compilation system. Please refer to the answers to Question 1 in the spreadsheet of '2. General information'.

Question 2. What is/are the main source/s to estimate GFCF in buildings other than dwellings in your country? Please specify if sources differ across industries and/or institutional sectors.

The data sources for GFCF are often the same as for output and intermediate consumption, and include Structural Business Statistics, construction statistics, central and local government accounts, etc. In general, data quality for GFCF is not as good as for output. This asset category also includes own account investment and the costs of ownership transfer.

Question 3. What is the length of the GFCF series? If long GFCF series are available (previous to 1995), how do you estimate historical data? Please, describe additional sources and/or methods, and specify if these differs across assets within this asset category, industries and institutional sectors.

The GFCF time series are available from 1970 onwards. To be able to start the PIM estimates for capital stock and depreciation in the same year, the GFCF series have been extrapolated backwards, in some cases back to 1870.

Question 4. Are costs of ownership transfer of buildings other than dwellings included in this GFCF series? How do you define them and treat them in the estimation of net capital stocks of buildings other than dwellings (e.g. treated equally to GFCF, or specific average service life/depreciation profile for these costs)?

The costs of ownership transfer are included in GFCF as a separate asset type. In the PIM, they have a shorter assets life than the related asset.

Question 5. What price indices do you use to deflate GFCF in buildings other than dwellings, and how do you construct these indices? How do you account for quality improvements? Do you use specific price indices for detailed asset categories? Do these price indices differ across industries/institutional sectors? If they are available, please provide links to and/or relevant documents and metadata on their construction.

The price index for GFCF of an asset is a weighted average of the price indexes of various product inputs that make up each asset type, it is the same across industries/institutional sectors. No quality adjustment has been explicitly made.

N1122. Other structures

Question 1. Do you have specific GFCF series for detailed asset categories (e.g. roads, railways, bridges, etc.)? Are your GFCF series broken down by industry and/or institutional sector? If your answer is yes to any of these questions, please describe and provide the link to available data and relevant documents.

Specific GFCF series for detailed asset categories (e.g. roads, railways, pipelines, etc.) are available. All GFCF series are broken down by industry and/or institutional sector in the Norwegian national accounts compilation system. Please refer to the answers to Question 1 in the spreadsheet of '2. General information'.

Question 2. What is/are the main source/s to estimate GFCF in other structures in your country? Please specify if sources differ across industries and/or institutional sectors.

The data sources for GFCF are often the same as for output and intermediate consumption, and include Structural Business Statistics, construction statistics, central and local government accounts, external trade statistics on imports of fixed assets, special investment surveys, etc. In general, data quality for GFCF is not as good as for output.

Question 3. What is the length of this GFCF series? If long GFCF series are available (previous to 1995), how do you estimate historical data? Please, describe additional sources and/or methods, and specify if these differs across assets within this asset category, industries and institutional sectors.

The GFCF time series are available from 1970 onwards. To be able to start the PIM estimates for capital stock and depreciation in the same year, the GFCF series have been extrapolated backwards, in some cases back to 1870.

Question 4. Are costs of ownership transfer of other structures included in this GFCF series? How do you define them and treat them in the estimation of net capital stocks of other structures (e.g. treated equally to GFCF, or specific average service life/depreciation profile for these costs)?

The costs of ownership transfer related to land are included in Land improvements asset.

Question 5. What price indices do you use to deflate GFCF in other structures, and how do you construct these indices? How do you account for quality improvements? Do you use specific price indices for detailed asset categories? Do these price indices differ across industries / institutional sectors? If they are available, please provide links to and/or relevant documents and metadata on their construction.

The price index for GFCF of an asset is a weighted average of the price indexes of various product inputs that make up each asset type, it is the same across industries/institutional sectors. No quality adjustment has been explicitly made.

N1123. Land improvements

Question 1. Does GFCF in other buildings and structures (N112) reported in questionnaires 0102 (GDP identity from the expenditure side), 0302 (Capital formation) and 2200 (Cross-classification of gross fixed capital formation (GFCF) by industry and by asset (transactions)) include land improvements (N1123)?

Yes.

Question 2. What is/are the main source/s to estimate the value of GFCF in land improvements in your country? Please specify if sources differ across industries and/or institutional sectors.

The data sources for GFCF are often the same as for output and intermediate consumption, and include Structural Business Statistics, construction statistics, central and local government accounts, etc. In general, data quality for GFCF is not as good as for output.

Question 3. Are costs of ownership transfer of land included in land improvements (N1123) and hence in the aggregate asset category other buildings and structures (N112) that you report in the national accounts questionnaires 0102, 0302 and 2200?

Yes.

Question 4. What price indices do you use to deflate GFCF in land improvements, and how do you construct these indices? Do you use specific price indices for detailed asset categories? Do these price indices differ across industries / institutional sectors? If they are available, please provide links to and/or relevant documents and metadata on their construction.

The price index for GFCF of an asset is a weighted average of the price indexes of various product inputs that make up each asset type, it is the same across industries/institutional sectors.

N1131. Transport equipment

Question 1. What is/are the main source/s to estimate GFCF in transport equipment in your country?

The data sources for GFCF are often the same as for output and intermediate consumption, and include Structural Business Statistics, construction statistics, central and local government accounts, external trade statistics on imports of fixed assets, special investment surveys, etc. In general, data quality for GFCF is not as good as for output.

Question 2. Do you have specific GFCF series for detailed asset categories (e.g. motor vehicles, ships, railway locomotives, aircrafts, etc.)? Are your GFCF series broken down by industry and/or institutional sector? If your answer is yes to any of these questions, please describe and provide the link to available data and relevant documents.

Specific GFCF series for detailed asset categories (e.g. motor vehicles, ships, railway locomotives, aircrafts, etc.) are available. All GFCF series are broken down by industry and/or institutional sector in the Norwegian national accounts compilation system. Please refer to the answers to Question 1 in the spreadsheet of '2. General information'.

Question 3. What is the length of these GFCF series? If long GFCF series are available (previous to 1995), how do you estimate historical data? Please, describe additional sources and/or methods, and specify if these differ across assets within this category, industries and institutional sectors.

The GFCF time series are available from 1970 onwards. To be able to start the PIM estimates for capital stock and depreciation in the same year, the GFCF series have been extrapolated backwards, in some cases back to 1870.

Question 4. What price indices do you use to deflate GFCF in transport equipment, and how do you construct these indices? How do you account for quality improvements? Do you use specific price indices for detailed asset categories? Do these price indices differ across industries/institutional sectors? If they are available, please provide links to and/or relevant documents and metadata on their construction.

The price index for GFCF of an asset is a weighted average of the price indexes of various product inputs that make up each asset type, it is the same across industries/institutional sectors.

ICT equipment (N1132): computer hardware (N11321) + telecommunications equipment (N11322)

Question 1. What is/are the main source/s to estimate GFCF in computer hardware (N11321) and telecommunications equipment (N11322) in your country? Do you have specific GFCF series for detailed assets within these categories (e.g. data processing machines, peripheral equipment, storage units, etc.) in different industries and/or institutional sectors?

The data sources for GFCF are often the same as for output and intermediate consumption, and include Structural Business Statistics, construction statistics, central and local government accounts, external trade statistics on imports of fixed assets, special investment surveys, etc. In general, data quality for GFCF is not as good as for output. There are no specific GFCF series for detailed assets within these categories (e.g. data processing machines, peripheral equipment, storage units, etc.).

Question 2. What is the length of GFCF in computer hardware and telecommunications equipment? If long GFCF series are available (previous to 1995), how do you estimate historical data? Please, describe additional sources and/or methods, and specify if these differ across detailed assets within these asset categories, industries and/or institutional sectors.

The GFCF time series are available from 1970 onwards. To be able to start the PIM estimates for capital stock and depreciation in the same year, the GFCF series have been extrapolated backwards, in some cases back to 1870.

Question 3. What price indices do you use to deflate GFCF in computer hardware and telecommunications equipment, and how do you construct these indices? How do you account for quality improvements? Do you use specific price indices for detailed asset categories? Do these price indices differ across industries / institutional sectors? If they are available, please provide links to and/or relevant documents and metadata on their construction.

The price index for GFCF of an asset is a weighted average of the price indexes of various product inputs that make up each asset type, it is the same across industries/institutional sectors.

Other machinery and equipment and weapons systems (N110): Other machinery and equipment (N1139) + weapons systems (N114)

Question 1. What is/are the main source/s to estimate GFCF in other machinery and equipment and weapons systems in your country? Do you have specific GFCF series for detailed assets within these categories (e.g. electrical equipment, weapons, etc.) in different industries and/or institutional sectors?

The data sources for GFCF are often the same as for output and intermediate consumption, and include Structural Business Statistics, construction statistics, central and local government accounts, external trade statistics on imports of fixed assets, etc. In general, data quality for GFCF is not as good as for output. There are several specific GFCF series for detailed assets within these categories.

Question 2. What is the length of GFCF in other machinery and equipment and weapons systems? If long GFCF series are available (previous to 1995), how do you estimate historical data? Please, describe additional sources and/or methods, and specify if these differ across assets within each asset category, industries and/or institutional sectors.

The GFCF time series are available from 1970 onwards. To be able to start the PIM estimates for capital stock and depreciation in the same year, the GFCF series have been extrapolated backwards, in some cases back to 1870.

Question 3. What price indices do you use to deflate GFCF in other machinery and equipment and weapons systems, and how do you construct these indices? How do you account for quality improvements? Do you use specific price indices for detailed asset categories? Do these price indices differ across industries / institutional sectors? If they are available, please provide links to and/or relevant documents and metadata on their construction.

The price index for GFCF of an asset is a weighted average of the price indexes of various product inputs that make up each asset type, it is the same across industries/institutional sectors.

Cultivated biological resources (N115)

Question 1. What is/are the main source/s to estimate GFCF in cultivated biological resources in your country? Do you have specific GFCF series for detailed assets within these categories (e.g. orchards, crops, dairy cattle, etc.) in different industries and/or institutional sectors?

The main data source is agricultural accounts. There are two specific GFCF series for detailed assets within these categories : breeding animals and fruit trees.

Question 2. What is the length of GFCF in cultivated biological resources? If long GFCF series are available (previous to 1995), how do you estimate historical data? Please, describe additional sources and/or methods, and specify if these differ across products within this asset category, industries and/or institutional sectors.

The GFCF time series are available from 1970 onwards.

Question 3. What price indices do you use to construct volume measures of cultivated biological resources, and how do you construct these indices? How do you account for quality improvements? Do you use specific price indices for detailed asset categories? Do these price indices differ across industries / institutional sectors? If they are available, please provide links to and/or relevant documents and metadata on their construction.

The method of direct counting is applied for constructing the volume measure.

Research and development (N1171)

Question 1. Do you estimate GFCF in R&D by detailed R&D asset type? If yes, please specify the detailed R&D asset breakdown.

Have replied to the Eurostat-OECD Survey of Capital Measures for Research and Development, and Software and Databases.

Question 2. What is/are the main source/s to estimate GFCF in research and development (R&D)? Please describe briefly the architecture of your estimation method and specify if these differ across different R&D assets (if a breakdown is available), industries and/or institutional sectors.

Have replied to the Eurostat-OECD Survey of Capital Measures for Research and Development, and Software and Databases.

Question 3. What is the length of GFCF in R&D in your country? If long GFCF series are available (previous to 1995), how do you estimate historical data? Please, describe additional sources and/or methods, and specify if these differ across assets within this category, industries and institutional sectors.

The GFCF time series are available from 1970 onwards.

Question 4. What price indices do you use to deflate GFCF in R&D and how do you construct these price indices? How do you account for quality improvements? Do you use specific price indices for detailed asset categories? Do these price indices differ across industries / institutional sectors? If they are available, please provide links to and/or relevant documents and metadata on their construction.

Have replied to the Eurostat-OECD Survey of Capital Measures for Research and Development, and Software and Databases.

Mineral exploration and evaluation (N1172)

Question 1. Do you estimate GFCF in mineral exploration and evaluation by detailed asset type? If yes, please specify the detailed asset breakdown.

Own account investment is separately estimated.

Question 2. What is/are the main source/s to estimate GFCF in mineral exploration and evaluation? Please describe briefly the architecture of your estimation method and specify if these differ across detailed assets within this asset category, industries and/or institutional sectors.

The data sources for GFCF are often the same as for output and intermediate consumption, and include Structural Business Statistics, construction statistics, central and local government accounts, external trade statistics on imports of fixed assets, special investment surveys, etc. In general, data quality for GFCF is not as good as for output.

Question 3. What is the length of GFCF in mineral exploration and evaluation? If long GFCF series are available (previous to 1995), how do you estimate historical data? Please, describe additional sources and/or methods, and specify if these differ across assets within this category, industries and institutional sectors.

The GFCF time series are available from 1970 onwards.

Question 4. What price indices do you use to deflate GFCF in mineral exploration and evaluation and how do you construct these price indices? How do you account for quality improvements? Do you use specific price indices for detailed asset categories? Do these price indices differ across industries/institutional sectors? If they are available, please provide links to and/or relevant documents and metadata on their construction.

The price index for GFCF of an asset is a weighted average of the price indexes of various product inputs that make up each asset type, it is the same across industries/institutional sectors.

Computer software and databases (N1173)

Question 1. Do you produce separate estimates of computer software? Tick all boxes that apply:

Have replied to the Eurostat-OECD Survey of Capital Measures for Research and Development, and Software and Databases.

Question 2. What is/are the main source/s to estimate GFCF in computer software and databases? Please describe briefly the architecture of your estimation method and specify if these differ across types of software (see previous question), industries and/or institutional sectors.

Have replied to the Eurostat-OECD Survey of Capital Measures for Research and Development, and Software and Databases.

Question 3. What is the length of this GFCF series? If long GFCF series are available (previous to 1995), how do you estimate historical data? Please, describe additional sources and/or methods, and specify if this differ across assets within this category, industries and institutional sectors.

The GFCF time series are available from 1970 onwards.

Question 4. What price indices do you use to deflate GFCF in computer software and databases and how do you construct these price indices? How do you account for quality improvements? Do you use specific price indices for detailed asset categories? Do these price indices differ across industries / institutional sectors? If they are available, please provide links to and/or relevant documents and metadata on their construction.

Have replied to the Eurostat-OECD Survey of Capital Measures for Research and Development, and Software and Databases.

Entertainment, literary and artistic originals (N1174)

Question 1. Do you estimate GFCF in entertainment, literary and artistic by detailed asset type? If yes, please specify the detailed asset breakdown.

Yes. Own account investment is separately estimated.

Question 2. What is/are the main source/s to estimate GFCF in entertainment, literary and artistic originals? Please describe briefly the architecture of your estimation method and specify if these differ across detailed products within this asset category, industries and institutional sectors.

The data sources for GFCF are often the same as for output and intermediate consumption, and include Structural Business Statistics, construction statistics, central and local government accounts, external trade statistics on imports of fixed assets, etc. In general, data quality for GFCF is not as good as for output.

Question 3. What is the length of GFCF in entertainment, literary and artistic originals? If long GFCF series are available (previous to 1995), how do you estimate historical data? Please, describe additional sources and/or methods, and specify if this differ across assets within this category, industries and institutional sectors.

The GFCF time series are available from 2003 onwards.

Question 4. What price indices do you use to deflate GFCF in entertainment, literary and artistic originals and how do you construct these price indices? How do you account for quality improvements? Do you use specific price indices for detailed asset categories? Do these price indices differ across industries / institutional sectors? If they are available, please provide links to and/or relevant documents and metadata on their construction.

The price index for GFCF of an asset is a weighted average of the price indexes of various product inputs that make up each asset type, it is the same across industries/institutional sectors.