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

Country: Poland

Date: August 2019

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.

> Different data sources are used across institutional sectors:
>
> - statistical reports for sectors S.11 and S.13;
>
> - estimates for individual residential buildings for sector S.14;
>
> - data are not compiled for sectors S.12 and S.15.

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.

> Statistics Poland has time series from 1995. Data has been developed in accordance with the ESA methodology since 1995.

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)?

> Costs of ownership transfer are included in investment outlays on fixed assets according to the Accounting Act. As the data on investment outlays are the base for calculating GFCF, cost of ownership transfer are included in GFCF estimates.

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

Price index for residential buildings (annual-average Producers' price index).

The basic source of information on changes in prices of construction and assembly production, of which in new residential buildings, is the monthly survey C-01b - "Report on producer prices of construction and assembly works". This survey is prepared by purposely selected entities of the national economy in which the number of employees is 10 or more people. STS B310 New residential buildings (output price index in construction) is used for the aim of price indices to deflate GFCF in dwellings.

Price indices are calculated at the following levels:

1) work (representative) – price indices are compiled for each work by comparing the price for the current month with the price for the previous month.

2) Individual price indices previous month = 100 are the basis for calculation of price indices at the particular aggregation level:

2a) type of works within enterprise – price indices are compiled as a weighted average of individual price indices of representatives. The value of sales of these types of works in an enterprise is used as weight;

2b) type of works in the scale of country – indices are compiled as a weighted average of price indices of type of works within enterprise. The annual revenues from sale of production of construction in an enterprise is used as weight;

2c) constructions– price index for building is a weighted average of price indices for a type of works realized on the given building and the shares of these types of works in the building;

2d) new residential building – as a weighted average of price indices for six residential constructions (detached single family dwelling house without basement; Detached single family dwelling house partly basement; terrace building – detached single family segment; Multi-family residential four-story building; multi-family residential five-story building; Multi-family residential fourteen-story building).

Type of index - Monthly price indices are compiled with the previous month = 100. They are aggregated applying a Paasche formula. Price indices on other bases are calculated using a chain method. Quality changes are not taken into account. Type of indices doesn't differ across industries. Metadata regarding STS B310-New residential buildings are available at the website of Eurostat: https://ec.europa.eu/eurostat/cache/metadata/EN/sts_cons_pri_esms_pl.htm#contact1568117818424.

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.

Statistics Poland does not have specific GFCF series for detailed asset categories such as office buildings, industrial buildings, public buildings, etc and other structures (N1121, N1122). We collect and compile data at item level for ""Other buildings and structures"" (N112).

For the item ""Other buildings and structures"", Statistics Poland has GFCF series broken down by industry (A10/A21) and does not have GFCF series broken down by institutional sectors.

There is no cross classification of gross fixed capital formation (GFCF) by industry and by institutional sector.

Link to the Eurostat database: https://ec.europa.eu/eurostat/data/database (tables according to the ESA 2010 transmission program: T0102; T0302; T2200).

Link to a publication containing information about GFCF: https://stat.gov.pl/obszary-tematyczne/rachunki-narodowe/roczne-rachunki-narodowe/rachunki-narodowe-wedlug-sektorow-i-podsektorow-instytucjonalnych-w-latach-2014-2017,4,14.html (page 261).

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.

Statistical reports are used to calculate data by industries. Estimates are made for individual buildings in agriculture (S14).

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.

Statistics Poland has time series from 1995. Data have been developed in accordance with the ESA 2010 methodology since 1995.

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)?

Costs of ownership transfer are included in investment outlays on fixed assets according to the Accounting Act. As the data on investment outlays are the base for calculating GFCF, cost of ownership transfer are included in GFCF estimates.

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.

Price index for different kinds of buildings (annual-average Producers' price index):

The basic source of information on changes in prices of construction and assembly production of which in buildings other than dwellings is the monthly survey C-01b - "Report on producer prices of construction and assembly works". This survey is based on purposely selected entities of the national economy in which the number of employees is 10 or more people.

Price indices are calculated at the following levels:

1) work (representative) – price indices are compiled for each work by comparing the price for the current month with the price for the previous month.

2) Individual price indices previous month = 100 are the basis for calculation of price indices at the particular aggregation level:

2a) type of works within enterprise – price indices are compiled as a weighted average of individual price indices of representatives. The value of sales of these types of works in an enterprise is used as weight;

2b) type of works in the scale of country – indices are compiled as a weighted average of price indices of type of works within enterprise. The annual revenues from sale of production of construction in an enterprise is used as weight;

2c) constructions– price index for building is a weighted average of price indices for a type of works realized on the given building and the shares of these types of works in the building;

2d) buildings other than dwellings – as a weighted average of price indices for nine buildings (office and administrative building, trade pavilion, supermarket, parking-open multi-level garage, industrial hall, warehouse, primary school building, institutional care building, sports hall).

Paasche index with reference previous month = 100 is aggregated at the higher level with using as weight relevant value of sold production of current month. Laspeyres chained index is constructed with other reference base period e.g. XII 2017=100, 2015=100. The Polish classification of construction objects PKOB are used to classify buildings other than dwellings. Quality changes of construction and assembly works are not taken into account. Specific price indices are not used for detailed asset categories. Type of indices doesn't differ across industries."

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.

The same explanations as in item N1121.

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.

Statistical reports are used to calculate data by industries.

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.

Statistics Poland has time series from 1995. Data has been developed in accordance with the ESA 2010 methodology since 1995.

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)?

Costs of ownership transfer are included in investment outlays on fixed assets according to the Accounting Act. As the data on investment outlays are the base for calculating GFCF, cost of ownership transfer are included in GFCF estimates.

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.

Price index for different kind of structures (annual-average producer's price index):

The basic source of information on changes in prices of construction and assembly production of which in other structures is the monthly survey C-01b - ""Report on producer prices of construction and assembly works"". This survey is based on purposely selected entities of the national economy in which the number of employees is 10 or more people.

Price indices are calculated at the following levels:

1) work (representative) – price indices are compiled for each work by comparing the price for the current month with the price for the previous month.

2) Individual price indices previous month = 100 are the basis for calculation of price indices at the particular aggregation level:

2a) type of works within enterprise – price indices are compiled as a weighted average of individual price indices of representatives. The value of sales of these types of works in an enterprise is used as weight;

2b) type of works in the scale of country – indices are compiled as a weighted average of price indices of type of works within enterprise. The annual revenues from sale of production of construction in an enterprise is used as weight;

2c) constructions– price index for building is a weighted average of price indices for a type of works realized on the given building and the shares of these types of works in the building;

2d) on different category of constructions: other structures – as a weighted average of price indices for six constructions (external water pipeline system with PEHD pipes of 160 mm in diameter, external water pipeline system with PVC pipes of 250 mm in diameter, overhead line S.N. 15 kV, MV cable line 15 kV, school pitch, general purpose storage hall).

Paasche index with reference previous month = 100 is aggregated at the higher level with using as weight relevant value of sold production of current month. Laspeyres chained index is constructed with other reference base period e.g. XII 2017=100, 2015=100. The Polish classification of construction objects PKOB are used to classify other type of constructions. Quality changes of construction and assembly works are not taken into account. Specific price indices are not used for detailed asset categories. Type of indices doesn't differ across industries."

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)?

Data on other buildings and structures (112) include the value of land improvement (1123) according to ESA 2010. The value is not presented separately in GFCF estimates, but it is calculated separately.

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.

Statistical reports are used to calculate data by industries.

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?

Costs of ownership transfer are included in investment outlays on fixed assets according to the Accounting Act. As the data on investment outlays are the base for calculating GFCF, cost of ownership transfer are included in GFCF estimates.

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.

Price index for construction and assembly is applied. The basic source of information on changes in prices of construction and assembly production is the monthly survey C-01b - ""Report on prices of producers of construction and assembly works"" prepared by purposely selected entities of the national economy in which the number of employees is 10 or more people. The basic selection criterion is the need to ensure representation in all Polish classification PKD (NACE) groups in Section F - Construction. The survey covers approx. 400 construction entities.

The subject of the survey is the price and sales value (excluding VAT) of representative selected construction and assembly works carried out by a construction company in the country in the reporting month. A representative work may be construction and assembly work carried out in the reporting month, but not necessarily sold. This is due to the specificity of settling receivables for completed construction works. It is common practice to settle accounts according to the so-called as-built cost estimates. The long cycles of construction of the objects mean that waiting for the subcontract estimate would significantly hinder making monthly measurements of price changes. Therefore, the price of construction and assembly works is determined on the basis of the so-called cost-price base or current cost estimate.

The construction of index is the following:

1) Paasche index is calculated at the level of representative of construction and assembly works (current month with relation to the previous month=100).

2) Aggregated price indices by using relevant weights based on individual price indices are constructed:

2 a) at the level of enterprises as weighted averages of individual price indices of the representatives, using as a weight system, the value of their sales in the surveyed month;

2b) for groups, divisions, section F according to Polish classification PKD (NACE) - as average price indices of lower-level aggregates, weighted by their full sales value in the surveyed month.

The method of chain indexes is used to calculate price indices for other time bases, currently with the base year 2015. Specific price indices are not used for detailed asset categories. Type of price indices doesn't differ across industries. Quality changes are not taken into account in indices.

N1131. Transport equipment

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

Statistical reports are used to calculate data by industries.

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.

Statistics Poland does not have specific GFCF series for detailed asset categories such as motor vehicles, ships, railway locomotives, aircrafts, etc. We collect and compile data at item level for "Transport equipment" (N1131).

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.

Statistics Poland has time series from 1995. Data has been developed in accordance with the ESA methodology since 1995.

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.

Price index for transport equipment (from domestic production and from Import). Price indices of transport equipment (domestic) are calculated on the basis of data obtained from the monthly survey C-01- „Report on producer prices of products and services". They refer to purposely selected entities in section C-Manufacturing by Polish classification PKD (NACE rev.2) with 10 employees and more. Price indices are calculated based on the following information: - total sales price of the representative (excluding VAT) at producer prices and- total sales value of the representative (excluding VAT) at producer prices.   All representatives are included in the calculations belonging to the relevant classes of Polish classification PKWiU (CPA) in which sales prices of representatives at producer prices are bigger than 1000 PLN.

Quarterly price indices are calculated on the basis of data for months ending individual quarters. Following information are taken into account: price of the representative in the month ending the surved quarter with relation to representative price in the month ending the previous quarter. The calculated price indices at the level of representatives (7- digit level of Polish classification PKWiU) are forwarded in the form of a working table to the National Accounts Department for verification.

Then aggregated price indices (6- digit level of Polish classification PKWiU) are elaborated with use of relevant weights of representatives basing on value of sales of specific representative from the month ending given quarter. Quality changes of construction and assembly works are not taken into account. Specific price indices are not used for detailed asset categories. Type of indices doesn't differ across industries. Metadata regarding wider context of this producer price index in industry (STS A310, STS 311) is available at the website of Eurostat and also of International Monetary Fund:

https://ec.europa.eu/eurostat/cache/metadata/EN/sts_ind_pric_esms_pl.htm

https://dsbb.imf.org/sdds/dqaf-base/country/POL/category/PPI0.

For goods from Import: Surveys on prices of goods in the foreign trade are conducted in PLN on increasing data on a monthly basis.   The source of information for the calculation of the prices is the secondary use of data on the quantity and value of turnover derived from the INTRASTAT declaration (trade turnover of Poland conducted only with the EU Member States) and from customs declarations (trade turnover of Poland conducted with the so-called "third countries", i.e. countries which are not EU Member States).

Calculation of the price indices is based on a purposively selected sample, covering commodities on the lowest 8-digit level of CN classification. Observation of changes in prices of selected commodities is conducted with the use of data on foreign trade turnover (for imports - on the cif basis, and for exports - on the fob basis). Prices have been specified per commodity weight unit (i.e. per kg, or if there occurs a supplementary weight unit, then the price is specified per piece, m², liter, etc.). Price indices for the lowest CN levels are calculated as ""unit value"" and, then, aggregated according to SITC divisions and sections. Paasche formula is used for price indices calculation.

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?

Statistics Poland had derogation up to 1 January 2020 to develop obligatory time series i.e. distinguishing computer hardware and telecommunications equipment.

Other machinery and equipment and weapons systems (N11O): 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?

GFCF estimation is based on:

- statistical reports for other machinery and equipment and
- data from Ministry of Defense for weapons systems.

Statistics Poland does not have specific GFCF series for detailed asset categories of equipment.

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.

Statistics Poland has time series from 1995. Long GFCF series before 1995 are not available.

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.

Price indices of machines and equipment (domestic) are calculated on the basis of data obtained from the monthly survey C-01- „Report on producer prices of products and services". Data refer to purposely selected entities in section C-Manufacturing by Polish classification PKD (NACE rev.2) with 10 employees and more. Price indices are calculated based on the following information: - total sales price of the representative (excluding VAT) at producer prices and total sales value of the representative (excluding VAT) at producer prices. All representatives are included in the calculations belonging to the relevant classes of Polish classification PKWiU (CPA) in which sales prices of representatives at producer prices are bigger than 1000 PLN.

Quarterly price indices are calculated on the basis of data for months ending individual quarters. Following information are taken into account; price of the representative in the month ending the served quarter with relation to representative price in the month ending the previous quarter. The calculated price indices at the level of representatives (7- digit level of Polish classification PKWiU) are forwarded in the form of a working table to the National Accounts Department for verification.

Then aggregated price indices (6- digit level of Polish classification PKWiU) are elaborated with use of relevant weights of representatives basing on value of sales of specific representative from the month ending given quarter. Quality changes of machinery and equipment are not taken into account. Specific price indices are not used for detailed asset categories. Type of indices doesn't differ across industries. Metadata regarding wider context of this producer price index in industry (STS A310, STS A311) is available at the website of Eurostat and also of International Monetary Fund:

https://ec.europa.eu/eurostat/cache/metadata/EN/sts_ind_pric_esms_pl.htm

https://dsbb.imf.org/sdds/dqaf-base/country/POL/category/PPI00.

Price indices for goods from Import - see explanation on transport equipment.

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?

Statistical reports are used to calculate data by industries. Statistics Poland does not have specific GFCF series for detailed asset categories such as orchards, crops, dairy cattle, etc.

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.

Statistics Poland has time series from 1995. Data has been developed in accordance with the ESA methodology since 1995.

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.

Price indices of cultivated biological resources are estimated on the basis of data obtained from the monthly report C-01b - "Report on producer prices of construction and assembly works". Data refer to purposely selected entities with 10 employees and more. The national classification: systematics of construction and assembly works (by Catalog of Material Expenses KNR) is used to identify cultivated biological resources within earth works.

The calculation of price indices is carried out in the same way as described in N1123 Q4 i.e. price index is compiled at the level of representative earth work and aggregated with use of relevant weight at the level of earth works in the scale of country. Quality changes are not taken into account. Specific price indices are not used for detailed asset categories. Type of indices does not differ across industries.

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.

Statistics Poland publishes GFCF series for intellectual property products (N117). Those time series are presented by NACE Rev.2. ""Research and development (N1171)"" and ""Computer software and databases (N1173)"" values are presented only as a total economy. Statistics Poland does not estimate GFCF in R&D by detailed R&D asset type.

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.

Estimates on R&D are calculated according to Eurostat recommendations (Manual on measuring Research and Development, Eurostat) using bridge tables based on PNT survey, compiled according to Frascati Manual. Detailed description of sources and methods is included in our GNI Inventory.

When implementing ESA 2010, the sectorisation of R&D producers was done according to NA rules, on the level of the institutional unit. Additionally, a list of S.13 units is updated every year due to sector changes, and newly surveyed units are assigned to a proper sector. NACE Rev.2 divisions are applied for institutional sectors.

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.

Statistics Poland has time series from 1995. Long GFCF series before 1995 are not available.

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.

Price changes are not measured. The single CPI index is used. The same price indices is used across industries and institutional sectors. Please see metadata (link below) to know how the consumer price indices (CPI) are calculated:

https://dsbb.imf.org/sdds/dqaf-base/country/POL/category/CPI00.

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.

Statistics Poland does not estimate GFCF in mineral exploration and evaluation by detailed asset type. Data are not separately measured, are included in other intangible assets (according to Accounting Act) and therefore are included in IPP estimates.

Computer software and databases (N1173)

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

We collect data on purchased software and estimate data on own-account software.

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.

The main sources to estimate GFCF in computer software and databases are:

— structural business surveys,

— labour force surveys that measure hours worked on development.

Structural business surveys are the base for purchased software. Own-account software is estimated on the base of labour force surveys.

Detailed description on estimates for own-account software is included in our GNI Inventory. Data on purchased software is based on the survey on outlays occurred by units. This expenditures

indicate investment outlays of which definition is coherent with Polish Accounting Act, which is also in line with ESA 2010 rules on GFCF.

Estimation of GFCF in software is done for: S11, S12 and S13. NACE Rev.2 divisions are applied for institutional sectors. Data on purchased software are broken into institutional sector at the unit level (survey results). Data on own-account software are broken down into institutional sectors using the data on labour costs by NACE divisions and public and private sector.

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.

Statistics Poland has the time series from 1995. Long GFCF series before 1995 are not available

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.

Price changes are not measured. The single CPI index is used.

The same price indices is used across industries and institutional sectors. Please see metadata (link below) to know how the consumer price indices (CPI) are calculated:

https://dsbb.imf.org/sdds/dqaf-base/country/POL/category/CPI00

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.

Statistics Poland does not estimate GFCF in entertainment, literary and artistic originals (N1174) by detailed asset type. There is an AP placed by Eurostat on this field, the work is in progress.