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**Research Report**

## Introducing the wiiw COMECON Dataset

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## Statistical Report 13

# Introducing the wiiw COMECON Dataset

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# Abstract

This paper introduces the historical dataset with economic time series of socialist Bulgaria, Czechoslovakia (CSSR), the German Democratic Republic (GDR), Hungary, Poland, Romania, the Soviet Union (USSR) and Yugoslavia from 1944 to 1993 as well as a new dataset on Albania created as part of this project. The paper explains the dataset's structure and gaps as well as the harmonisation efforts and accounting methodologies adopted in the member countries of the Council of Mutual Economic Assistance (CMEA or COMECON) during that period. The paper serves as a companion for the users of the wiiw COMECON Dataset.

**Keywords:** CMEA, COMECON, socialist countries, Albania, Bulgaria, CSSR, GDR, Hungary, Poland, Romania, Soviet Union, Yugoslavia, population, net material product, GDP, investment, labour market, prices, wages, production, consumption per capita, budget, trade by partners, trade by commodities and regions, conversion factors, external finance, economic history, comparative economic systems, historical dataset of economic time series.

**JEL classification:** B22, B24, B27, B40, B41, N14, N34, N44, N54, N64, N74, P20, P30, P51



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# 1. Introduction

The economic history of socialist countries continues to be a subject of significant scholarly interest decades after the fall of the Soviet Union and its satellite states (Morys 2021). This relevance stems from several factors. Although the collapse of the planned economies at the time of transition served as major proof of the superiority of the market-based economies, the debate surrounding the economic performance of the command economies and the actual reasons for their collapse is still active (Gaidar 2003; Vonyó 2017).

There are several reasons for this. First, understanding the economic mechanisms and outcomes of centrally planned economies provides crucial insights into alternative economic systems and their long-term viability (Kornai 1992). Second, the transition processes from socialist to market economies offer unique case studies in institutional change and economic development (Roland 2000). Third, reassessing the economic performance of these countries with improved data and methodologies can shed new light on comparative economic growth, challenging or refining our understanding of twentieth-century economic history (Vonyó 2017).

Moreover, the legacy of socialist economic policies continues to influence the economic structures and institutions of post-socialist countries, making historical analysis essential for comprehending contemporary economic challenges in these regions (Bridger and Pine 2013). Additionally, as debates about economic systems and the role of state intervention have been revived (Angus 2016; Foster et al. 2010; Klein 2015) in the light of problems that require global coordination (e.g. climate change), the experiences of socialist economies – be they successes or failures – remain relevant for policy discussions.

This paper introduces a comprehensive historical dataset of economic time series for the former member countries of the Council of Mutual Economic Assistance (COMECON or CMEA) from 1944 to 1993. This council, which existed from 1949 to 1991, was an intergovernmental body that coordinated trade and economic planning across the former socialist economies: Bulgaria, Czechoslovakia (CSSR), the German Democratic Republic (GDR), Hungary, Poland, Romania and the Soviet Union (USSR). Additionally, the dataset includes Yugoslavia, which was never a full COMECON member but rather an aggregate of the CMEA region. All of the data are directly digitised from the statistical yearbooks of the former socialist economies (wiiw had a very well organised exchange of publications via the Academy of Sciences between Austria and the respective CMEA countries). Estimates of time series based on Western statistical information were only made if these were not available from the primary sources (e.g. in the chapter on foreign finance). Mirror statistics were used in terms of foreign trade data, as wiiw already had access to various international organisations, such as the Organisation for Economic Co-operation and Development (OECD), the International Monetary Fund (IMF), the United Nations Economic Commission for Europe (UNECE), and the Bank for International Settlements (BIS).

In addition to the eight socialist countries already available, a completely new dataset was created for Albania as part of this project. To do this, the first step was to obtain the statistical yearbooks. Unfortunately, Albania's Institute of Statistics was unable to provide us with printed versions due to a

lack of availability. A project member therefore painstakingly photographed all available yearbooks in Tirana. Based on this extensive image material, OCR-capable PDFs (searchable and editable) were created for each individual yearbook. This laid the foundation for creating the same range of indicators for Albania as for the CMEA countries.

Once the harmonisation of the historical COMECON dataset had been completed, work began on compiling the Albanian data on this basis. For this reason, Albania is not included in any of the following analyses in tables and graphs. The wiiw COMECON Dataset thus covers a total of nine countries.

This paper provides an explanation of the dataset's structure, identifies gaps in the data, describes harmonisation efforts, and gives an overview of accounting methodologies adopted by COMECON countries and their differences during this period. The dataset covers a wide range of economic indicators across multiple countries –more than 8,300 unique time series in total (including Albania) – offering a unique resource for analysing economic trends, structural changes and economic performance within the socialist bloc.

This paper and the dataset itself contribute to the field in two major ways. First, they contribute to the overall effort of economic historians to provide rich historical datasets (Bolt and van Zanden 2020). Despite certain limitations, the wiiw COMECON Dataset can serve as a foundation for a comprehensive, harmonised database for socialist economies and ease access for future researchers to more robust quantitative analyses of these economic systems. Second, the detailed documentation of data sources, digitisation processes and methodological considerations provides researchers with essential context for interpreting and utilising the data effectively.

Furthermore, the dataset's coverage of the so-called 'transition period' (1989-1993) offers valuable insights into the immediate economic effects of the shift from centrally planned to market economies. This can contribute to ongoing debates about the speed and nature of economic transitions (Lavigne 1999). The paper also highlights the challenges of data comparability across different economic systems, particularly the transition from the Material Product System (MPS) to the System of National Accounts (SNA), which is crucial for researchers engaging in long-term comparative studies (Havlik 2019; Richter 2021; World Bank 1993).

By providing this rich dataset and the accompanying analysis, the paper lays the groundwork for new research directions in the economic history of socialist and transition economies. It enables more nuanced comparisons between different socialist countries as well as between socialist and capitalist economies. This can potentially lead to reassessments of previous conclusions about economic growth, structural change and living standards under socialism (Bukowski and Novokmet 2021; Gaidar 2010; Kukić 2018), thereby contributing to a more comprehensive understanding of twentieth-century economic history.

## 2. Sources

The hard-copy versions of statistical yearbooks produced by the countries and the statistical office in the respective national language (English-language yearbooks were rare) were the primary sources of the wiiw COMECON Database, which were augmented by data reported by central banks and international statistical organisations (see Annex for the full list of sources).

The diversity of sources required a significant amount of harmonisation efforts. This is largely due to different methodological bases across the primary sources, as data produced by the international organisations and researchers living in market economies often stayed within the framework of the SNA, whereas the command economies followed the MPS. However, even when sources shared the same methodological basis, the scope and definitions of reported time series differed markedly among individual countries and sometimes within a single country itself.

The two most important primary sources forming the core of the wiiw COMECON Dataset are statistical yearbooks of national statistical agencies/institutes and the CMEA statistical yearbooks. These sources were complementary to each other. The CMEA yearbooks were an excellent complement to the national statistical yearbooks, as they provided a wide range of topics for all seven CMEA countries (there were no data for Yugoslavia and Albania), and sometimes more information on methodological issues was described than in the national yearbooks (recognisable in the database under the parameter 'classification', e.g. by CMEA sectors or CMEA products).

National statistical yearbooks were produced by national agencies independently from each other. Although all countries used the MPS as a basis, their models of development and scope of centralised planning varied. These differences are visible in national accounting, as the depth and coverage of individual industries and their definitions varied from country to country.

CMEA yearbooks adopted harmonised definitions across countries. This, however, did not necessarily guarantee strict comparability of time series in economic terms due to differences in ownership structures and price control settings. Certain CMEA countries (e.g. Hungary and Poland) allowed for private property and market-like pricing in some sectors of the economy, while others did not.

### 3. Digitisation process

The process consisted of four stages: data transfer from statistical textbooks to a standardised physical medium (the so-called 'cards'), data transfer to a digital storage medium, data harmonisation and data validation. The first two stages took place largely during the production of the original wiiw COMECON yearbooks in the 1970s and late 1980s.<sup>1</sup> The final two stages were completed between 2021 and 2024.

National statistical yearbooks were the primary source of information. wiiw had an exchange of publications either with other research institutes or with the central statistical offices in the respective countries (sometimes also via the Academy of Sciences of the respective countries). This enabled wiiw to build up a continuous series of all statistical yearbooks for the countries mentioned. At that time, dedicated staff transcribed and put data from the statistical yearbooks onto physical spreadsheets ('cards') and provided comments to the dedicated series (all sources used are described there).

**Figure 1 / Physical spreadsheets used for data coding and transfer from statistical yearbooks to digital format**

|                                     | 1980     | 1981     | 1982     | 1983     | 1984     | 1985     | 1986     | 1987     | 1988     | 1989     | 2023   |
|-------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------|
| SXTTT INSGESAMT                     | 49 634,5 | 57 107,8 | 63 165,0 | 71 890,6 | 74 383,7 | 72 663,7 | 68 284,6 | 68 142,2 | 67 115,4 | 68 741,3 | SXSSIN |
| SXYTT Sozialistische Länder         | 26 903,0 | 31 191,5 | 34 130,2 | 37 714,0 | 42 106,5 | 44 467,3 | 45 625,3 | 44 199,7 | 42 882,8 | 42 226,7 | SXSSIN |
| SXWTT RGW-Länder                    | 24 339,0 | 28 566,4 | 31 149,9 | 34 149,3 | 38 164,8 | 40 233,8 | 42 157,1 | 40 694,0 | 39 043,0 | 37 957,6 | SXSSIN |
| SXOTT Osteuropa                     | 20 949,5 | 24 320,0 | 26 285,4 | 29 152,1 | 32 393,8 | 34 020,0 | 35 842,8 | 34 370,3 | 32 194,9 | 31 728,0 | SXSSIN |
| SXITT Westliche Industrielle Länder | 15 261,9 | 17 244,0 | 18 849,0 | 19 652,9 | 21 349,4 | 18 529,4 | 13 109,2 | 14 185,5 | 14 665,6 | 16 392,4 | SXSSIN |
| SXETT Entwicklungsländer            | 6 869,6  | 8 609,3  | 10 179,8 | 10 527,7 | 10 928,5 | 9615,0   | 9550,8   | 9751,5   | 9567,0   | 10 142,3 | SXSSIN |
| SXWTT RGW - Osteuropa               |          |          |          |          |          |          |          |          |          |          |        |
| SXOTT Übrige o.a. Länder            | 2 568,0  | 2 625,1  | 2 986,9  | 3 864,2  | 3 914,7  | 42 62,5  | 34 68,9  | 20 62,7  | 2 245,2  | 6 704,4  | SXSSIN |

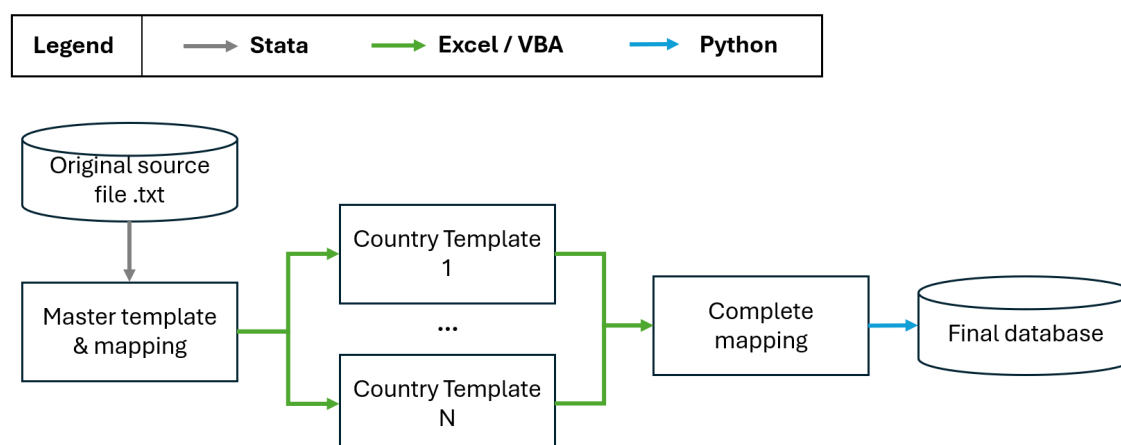
Source: wiiw statistics archive

After that, the staff digitised data at the Economic Computing Centre of WIFO (WSR), which was merged with the Austrian Institute for Economic Research (WIFO) at the end of 2023. The data would be transferred to the server using a dedicated interface, which was developed by WIFO, enabling the data to be stored in a database and the retrieval of tables and graphs, including all types of mathematical transformations. The data stored on the WSR server was later used as a basis for the publication of the wiiw COMECON statistical yearbooks (the very first wiiw COMECON statistical yearbook was published in 1973 in German; all subsequent yearbooks were published in English). A complete list of all the published COMECON yearbooks is provided at the end of the Annex.

<sup>1</sup> wiiw COMECON statistical yearbooks were a series of handbooks including statistical data on the economies of Eastern Europe, including Yugoslavia and the Soviet Union. It covered topics such as distribution and production, foreign trade and indebtedness, domestic finance, energy households, and standards of living.

After that (i.e. in the project period from 2021 to 2024), the data were exported from the WSR to a dedicated text file for the purpose of further harmonisation and validation. The data were split into the master Excel workbook, which contained a mapping from original descriptors to harmonised ones.

**Figure 2 / Data validation pipeline**



Source: own elaboration

The mapping matched the synthetic key from the original dataset with the individual country templates (eight in total for each region and the CMEA aggregate) and returned amended descriptors from the corresponding columns. The validation team manually went through the country templates to correct the data points, add new labels, mark decommissioned time series and add new ones whenever it was considered necessary. Manual revisions mainly resulted in the following changes:

After the data revision in the country templates was complete, the VBA macro compiled all country data into a single file, which was later transformed with a Python script into convenient data formats.

**Table 1 / Scope of the harmonisation and validation process**

| Action   | Description  |
|--|--|
| <b>Corrections to data entries</b>                   | Mislabelled or incorrectly defined data fields were corrected, such as by adjusting for incorrect units, mislabelled expenditure categories and misclassified indicators. Missing values in various datasets were identified and filled in, especially when discrepancies were noted (e.g. identification and correction of typing errors in the database or incorrect write-offs from the statistical yearbooks).   |
| <b>Revisions and updates to existing data</b>        | Historical data series were revised to better align them with updated industry breakdowns or economic developments. Revisions were made to classifications and hierarchies in areas such as production, investment, employment and wages to reflect a more accurate picture of the sectors. Additional fields were added to accommodate updated classifications and groupings.   |
| <b>Handling missing or incorrect classifications</b> | Missing or incomplete data for certain categories (e.g. regional or commodity groups) were addressed, and discussions were initiated about how to handle classifications that did not fit into existing structures. Classification systems (e.g. for industries and sectors) were aligned with the final dataset, ensuring that all relevant data were captured.   |
| <b>Formatting and labelling adjustments</b>          | Formatting issues (e.g. capitalisation inconsistencies and incorrect unit symbols) were corrected across multiple files. Labels were updated for clarity, especially in cases where identical labels caused confusion when attempting to distinguish different data series.  |
| <b>Integration of new and missing data</b>           | New data series were incorporated, and adjustments were made to ensure that they were properly categorised and integrated into the existing datasets. Data series that were duplicated or incorrectly added were removed or replaced with correct entries.   |
| <b>Harmonisation</b>                                 | <p>Harmonisation of indices within a topic to a uniform base index (countries mostly provided different basic indices);</p> <p>Harmonisation of units (e.g. recalculating billions of national currency to millions): This was only done if the size of the number allowed it, depending on the indicator and country size (e.g. Poland, Yugoslavia);</p> <p>Harmonisation of the sectoral breakdown so that each country has the same breakdown in terms of content (any deviations are shown in the 'Notes' field); Harmonisation of all spellings (spelling mistakes, mixtures of English and German, abbreviations etc.)</p> <p>However, the allocation of industries to productive/non-productive sectors was not changed by wiiw; the country-specific allocation (which might differ among countries) is still shown.</p> |

## 4. Dataset structure

The final results of the digitisation process is the wiiw COMECON Dataset. The dataset is organised hierarchically – in other words, time series are reported in a way that clarifies their relationship to larger categories in order to make it clear how each series is a subset of broader classifications. The most important components of the hierarchy are:

1. **Chapter:** The highest level, which defines the broad category under which data is grouped. All subsequent entries are subsets of this overarching category.
2. **Indicator:** A specific measurement within the chapter, further refining the focus of the data. It represents a subset of the broader chapter, providing more detailed information.
3. **Classification Type:** This layer reflect the principle or methodology according to which the data are broken down.
4. **Industry Levels 1 to 5:** The dataset may break down industries into multiple levels, progressing from broad classifications to more detailed subcategories. Each industry level is a subset of the preceding one, allowing users to drill down into increasingly specific activities.
5. **Partner:** For time series that compare countries or regions (e.g. in chapter Foreign trade), this layer provides additional granularity, showing bilateral trade flows between the country of origin and other countries, regions or the rest of the world.
6. **Unit:** The unit of measurement standardises how data is reported, ensuring that comparisons between subsets remain consistent and meaningful.

The dataset also includes additional features containing technical information that allows for easier data filtering or referencing according to when the data were collected. See Table 2 for a full reference.



**Table 2 / Feature description**

| Column_name                | Description   |
|----------------------------|---|
| synth_key_final            | Technical field. A concatenated string of all column values of the harmonised database that defines a unique identification string. Does not include 'value' column value |
| vlabel1_final              | Short identification label as used in the harmonised database   |
| country                    | Country name  |
| chapter_num_final          | Technical field: numerical code for chapters  |
| chapter_code_final         | Technical field: short code for chapters  |
| chapter_final              | Chapter name: defines a broad category to which a set of indicators belongs   |
| indicator_code_legacy      | Technical field: numerical code for indicators  |
| indicator_final            | Indicator name: defines a single reported time series   |
| classification_code_legacy | Technical field: numerical code for classification type   |
| classification_final       | Classification name: explains the breakdown logic within the hierarchy  |
| ind_code_legacy            | Technical field: numerical code for the industry code label   |
| ind_code_final             | Technical field: A concatenated string of all industry levels showing the path within the indicator hierarchy   |
| ind_lv1_final              | Sublevel within indicator_final   |
| ind_lv2_final              | Sublevel within level 1   |
| ind_lv3_final              | Sublevel within level 2   |
| ind_lv4_final              | Sublevel within level 3   |
| ind_lv5_final              | Sublevel within level 4   |
| partner_code_final         | Technical field: numerical code for classification type   |
| partner_final              | Name of the partner country/region  |
| unit_final                 | Reporting unit  |
| note_final                 | Additional information  |
| source_final               | Primary source of data  |
| updatd                     | When last updated in the unharmonised database  |

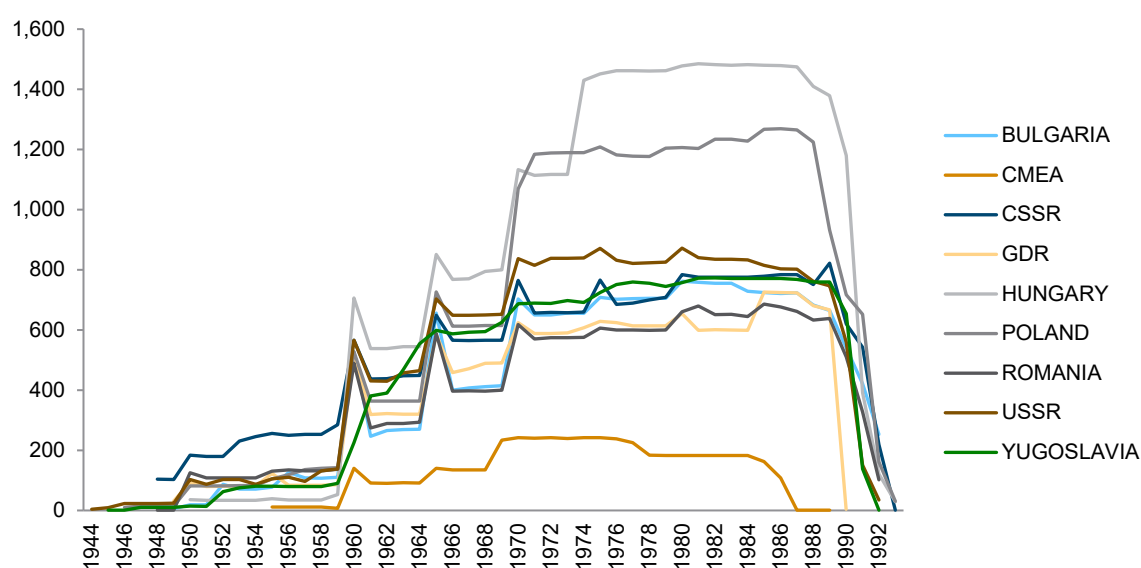
## 5. Dataset scope

The dataset encompasses time-series data from 1944 to 1993, covering various economic indicators across multiple countries within the former socialist bloc. Due to differences in reporting across time, countries and topics, it is necessary to be acquainted with the specific features of the dataset with regards to temporal, regional and topical coverage.

### 5.1. TEMPORAL COVERAGE

The temporal coverage of the dataset exhibits significant variability. The three main features are the significant data gaps before 1970, reporting spikes around the five-year planning periods, and the post-1989 decline in reporting.

**Figure 3 / Time series count by country**



Source: wiiw COMECON Dataset

**Pre-1970s gaps and spikes.** As Figure 3 shows, the data coverage is uneven across the time span. The 1960s and 1970s often only show five-year periods, which was based on an internal wiiw decision (in keeping with the format of the initial COMECON yearbooks). Although the individual intervening years would be available in the national yearbooks, they could not be included in this project phase due to time constraints. Priority was given to the years that were aligned with the five-year planning cycles of the socialist economies.

**Post-1989 decline.** A sharp decline in data points is observed after 1989, which coincides with the dissolution of the Soviet Union. This can be explained by the rapid transition of statistical agencies from the MPS to the SNA as well as by potential disruptions in data collection and reporting during the political and economic transitions of the early 1990s.

## 5.2. REGIONAL COVERAGE

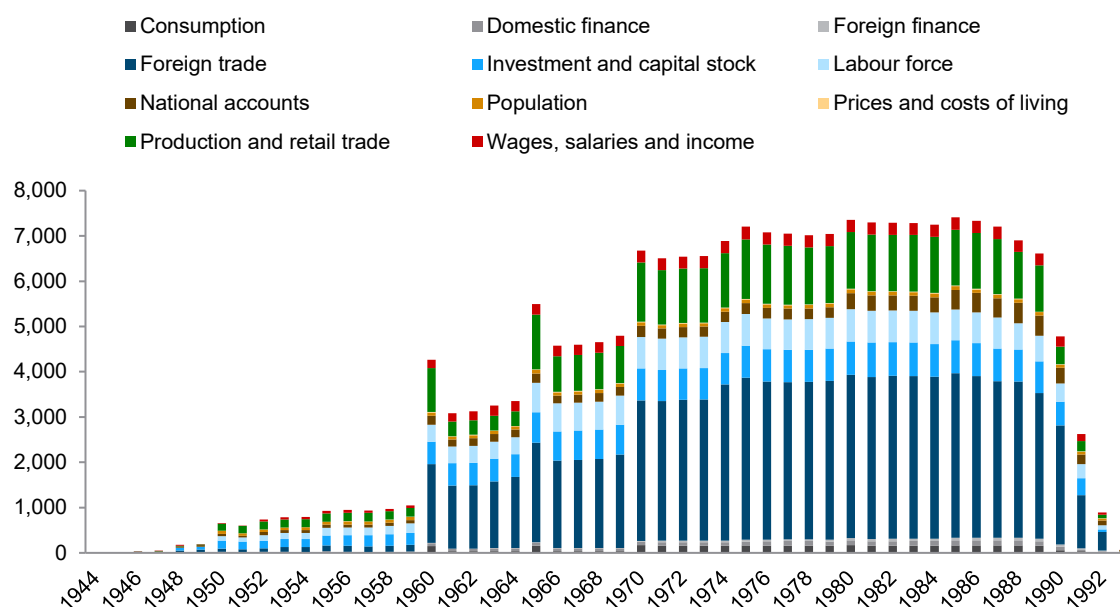
The dataset covers eight countries: Bulgaria, the CSSR, the GDR, Hungary, Poland, Romania, the USSR, Yugoslavia and one combined region (i.e. the CMEA region itself). Hungary and Poland have the most detailed coverage, with 1,200 and 1,400 time series being respectively reported in the 1970-1980s period. Data on the CSSR, the USSR, Bulgaria and Yugoslavia are significantly less detailed, with the number of time series ranging between 700 and 800 for each. There is even less information for the GDR and Romania, with slightly above 600 time series for each. The CMEA is the least covered, which is the result of challenges in harmonising national data across countries within the bloc to produce coherent series and a more limited reporting scope for CMEA as a reporting unit in the first place.

## 5.3. TOPICAL COVERAGE

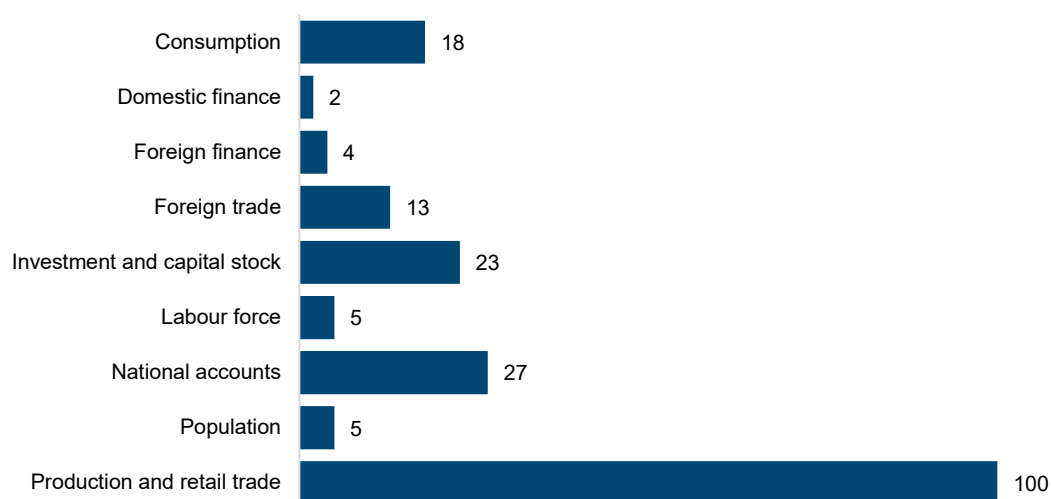
The dataset organises its time-series data into 11 distinct chapters, each focusing on a key aspect of economic and social indicators. These chapters collectively provide a broad overview of various aspects of national economies, ranging from consumption patterns and financial metrics to demographic trends and economic output.

1. Population: birthrates, death rates, natural increase, resident population
2. National accounts: gross domestic product, gross social product, national income
3. Investment and capital stock: Capital stock and gross investment volumes
4. Labour force: economically active persons, employees, labour productivity, unemployment
5. Wages, salaries and income: wage rates and income by different groups
6. Production and retail trade: gross production, agricultural production and input
7. Prices and costs of living: indices of consumer/retail prices and of cost of living
8. Consumption: volume of goods consumed by different product groups on a product level
9. Domestic finance: estimations of government finance, credit volume, money in circulation, and savings amount
10. Foreign trade: export/import volumes by product or partner, UN currency conversion factor
11. Foreign finance: estimations of external sovereign debt, assets abroad, exports and imports

It is worth noting, however, that the depth of coverage varies from chapter to chapter (see Figure 4). Foreign trade emerges as the most reported section, which is driven by extensive product-level reporting. Production and retail trade shows extensive coverage for the same reason. Population, labour force and investment are not covered as extensively, but they span back to 1950 due to the regularity of census data and the importance of demographic, labour and investment information for economic planning.

**Figure 4 / Time series count by chapter**

Source: wiiw Comecon Dataset

**Figure 5 / Comparable time series by chapter and country**

Source: wiiw Comecon Dataset

Coverage of other chapters is much less comprehensive. In some cases, it is driven by the institutional nature of the command economies. For example, the financial sector in the planned economies played a limited role and operated mostly as treasuries and money-transfer financial institutions. Other areas (e.g. national accounting and prices) enjoyed less attention from policy makers due to the seemingly stable price environment and the smaller emphasis on using the metric in decision making. Finally, some areas

were considered particularly sensitive at that time, which is why domestic finance and government debt reporting is largely based on external estimations rather than government agencies.

## 5.4. COMPARABILITY

Despite the harmonisation effort, reporting differences over time, country and topics remains a challenge for the cross-country comparisons. Most of those differences stem from the primary sources and reflect diverse approaches in national reporting definitions (see Annex and the 'note\_final' field in the dataset for more details).

Figure 5 shows that even without considering the unit measure, the number of comparable indicators available for all countries is (with the exception of production and retail trade) below 30 per chapter. Production statistics have the best comparability, benefiting from the harmonisation efforts of the CMEA yearbooks.

When considering strictly identical time series, the selection becomes even more limited and cannot be guaranteed across all chapters. This indicates that direct, one-to-one comparisons of countries' specific economic indicators may not be reliable without careful adjustment and consideration of methodological differences.

The comparability of time series in real terms is limited, as well. National statistical offices usually provided the time series on the basis of constant prices (e.g. 1976 constant prices, 1984 constant prices etc.). In this case, there are two main limitations: First, when introducing a new constant price basis, no recalculation backwards was available from the national source. To obtain continuous time series, wiiw concatenates the time series backwards with a coefficient of the new and old constant price basis. This method allows real growth rates to be retained, but the disadvantage is that subcomponents are no longer additive except for the period originally provided by the respective statistical office. Second, among the eight reporting countries, the available base of constant prices is always different, so a comparison between countries is only possible to a limited extent. The issue is closely related to the tight control of the socialist economies over foreign trade and foreign exchange markets, which resulted in vast uncertainty regarding the currency exchange rates of the socialist economies between each other and the rest of the world.

Finally, it should be noted that this dataset attempts to describe all deviations from defined standards (where this was clearly recognisable from the original source) in the 'Notes' field in order to capture all these limitations.

## 5.5. FINAL NOTES

The wiiw COMECON Dataset provides a foundation for analysing economic trends of the late socialist economies. Its primary utility lies in providing a comprehensive statistical foundation for investigating the long-term economic trends in centrally planned economies and facilitating research on the transition from socialist to market systems across various sectors and countries within the Soviet bloc.

Despite its strengths, the dataset is merely a stepping stone towards more comprehensive coverage and there are several areas where it could be improved to enhance its value to researchers. First, researchers can contribute by filling existing data gaps, particularly in the pre-1970 period and in sectors with less comprehensive coverage (e.g. finance).

Second, there is a potential way to achieve cross-country comparability of the time series provided in the dataset. The key component necessary to achieve this is comparable – and, if possible, sector-specific – price conversion indices, which would allow monetary indicators across countries to be recalculated into comparable monetary units common in economic history research (e.g. Geary-Khamis USD).

Third, the current dataset does not provide reconciliation between the MPS and SNA reporting, for which one would need additional sources that report on important accounting components within the MPS. Applying existing methodological bridges to reconcile the differences between the MPS and the SNA would ensure greater continuity in long-term analyses, which is especially crucial for studying the economic transition period between roughly 1988 and 1994.

Lastly, cross-validating this dataset with other historical economic data sources would serve to verify its accuracy and identify potential biases or reporting anomalies either in this or other datasets.

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# Annex

## A PRIMER ON REPORTING IN COMMAND ECONOMIES

In the setting of Cold War, there were largely two competing models of economic development – the command (or planned) economies and market economies – which had marked differences in economic organisation and accounting methodologies. Despite some similarities, one cannot use the reported data of the historically planned economies (HPEs) in the same way that one uses data collected under the System of National Accounts (SNA).<sup>2</sup> Below, we list the key differences one should be aware of. See the definitions section further below for a full list of definitions adopted in the COMECON countries.

### Foundation of national accounts

The command economies used the Material Product System (MPS) in their national accounting. The word ‘material’ is important for understanding its fundamental differences from the SNA. Compared to the SNA, the MPS had a different scope, which was defined through the lens of what the methodology considered to be *material* goods. This idea has its roots in the classical political economy writers going back to Karl Marx and Adam Smith, who only considered activities to be ‘productive’ if they actually produced tangible goods. This is the basis of *productive* and *non-productive* output, which plays a big role in the MPS.

**Productive outputs:** This is output composed of tangible goods. It is important to notice that it also includes some of the services, namely, those that were considered necessary to deliver goods to the end consumer or to extend the service life of tangible goods. It would therefore include repairs, maintenance, transportation and commerce. Only the value added of these outputs are counted in the national income.

**Non-productive outputs:** This is the output of all other industries. They include, among others, public administration (state and municipal), health, education, business and personal services. Within the MPS, these industries are not considered part of the national income.

As a result, reporting by the command economies was heavily skewed towards material output. These countries would provide a more detailed reporting on both physical inputs (capital, labour) and outputs in physical unit terms (kilograms/litres) than the market economies, while services would be underrepresented.

The main implication of this difference is the following: National accounts between the MPS and SNA countries are not comparable with each other either in levels or growth rates. The MPS would generally underestimate both the size and share of services in the economy. This also affects the growth rates, since the collective share of services grew rapidly after the 1950s in what could be considered non-

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<sup>2</sup> This section draws heavily on World Bank (1993).



productive sectors. A significant body of historical research was dedicated to reconstructing national accounts using the SNA methodology.<sup>3</sup>

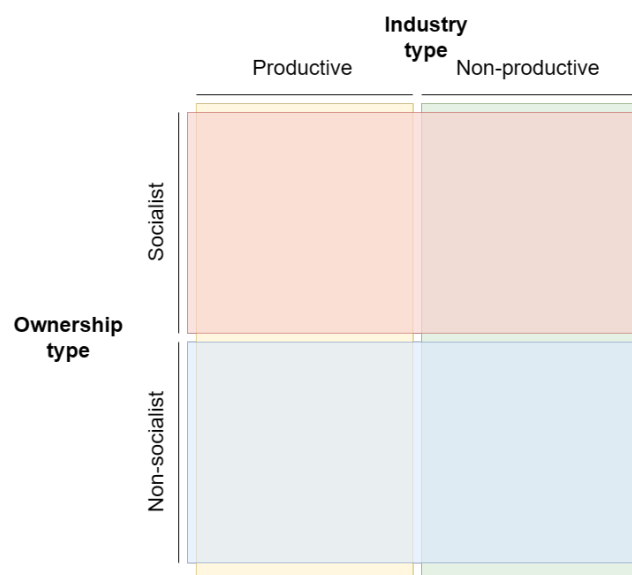
Another MPS definition, which is absent from the SNA, is the classification of industries into two major types: production of means of production (Group 'A') and production of consumer goods (Group 'B'). This definition is again driven by the Marxist thinking, which pays particular attention to the means of production in the political economy of resource allocation and the distribution of power.

## Ownership structure

Ownership in the command economies was of specific importance to economic agents, as it defined the extent to which the actor exercised control over prices. In the CMEA countries, the structure of ownership was categorised into two main types: socialist and non-socialist.

The socialist sector includes state enterprises and institutions, public organisations, cooperatives of all types, personal subsidiary plots of cooperative members, and personal subsidiary plots of workers and employees of state, public and cooperative enterprises and institutions. Non-socialist property accounted for all other types. Private property was technically possible, as was the case in Polish agriculture, but this was largely an exception. The figure below shows possible combinations in the style of a Venn diagram.

**Figure 6 / Combinations of industries and ownership types in the socialist economies**



<sup>3</sup> A different approach to calculate national income is the building block approach of Abram Bergson. He based his estimates on official data for the quantities of the products, but he did not use the prices of the goods as weights. Instead, he used the adjusted factor costs (AFCs), where prices were adjusted for subsidies and taxes, while also incorporating differences in quality. The results show substantially lower growth rates in the net material product (NMP) from 1950 to 1990 than the official statistics due to differences in coverage, weights and component indices. However, the building block approach has been subject to criticism. For example, some critics have argued that the output measured in units does not adequately account for improvements in quality or changes in production technology, resulting in an underestimation of growth.

Since official reporting did not always provide a full breakdown of output by both industry and ownership, not all upstream aggregations could be constructed for each category due to double counting issues.

## Prices

Prices in a centrally planned economy were administered by the central authorities. They reflected neither the relative resource costs nor the buyer's willingness to pay. Since the enterprises had no power over the price-setting mechanism, companies competed for subsidies and assets in the production hierarchy instead of competing on the consumer market. As a result, prices in command economies were frequently below market-clearing levels, with inflation taking the form of shortages and quality depreciation. This stimulated the development of black (or parallel) markets, but they were too thin to fully satisfy demand.

## Foreign trade and exchange rates

The command economies exercised tight control over foreign trade. This took the form of strict limits on the exchange of foreign currency, the use of multiple exchange rates for domestic and external markets, and trade restrictions. Hence, the official exchange rate did not reliably link domestic prices to global prices.

In HPEs, foreign trade was used to obtain critical technology or to fill gaps in material balances that could not be closed otherwise. Trade with market economies was difficult due to the ongoing geopolitical confrontations and the fact that those transactions could not be planned. Therefore, HPEs preferred a state of autarky (which proved impossible in reality) or trade with other planned economies. This is why the CMEA was introduced.

Trade was handled through the foreign trade organisations (FTOs), which had monopoly/monopsony powers over broad ranges of traded products. To minimise the external effects of foreign trade, the international prices were not passed on to domestic end users. Instead, differences between international and domestic prices were settled with the budget and the imbalances of FTOs were cleared directly or through the central bank.

European HPEs used US dollars or other convertible currencies to trade with the West at world market prices. To trade with other CMEA countries, they mostly used transferable roubles (TRs), with exceptions being made for food products or quality goods. The TR was the bookkeeping currency for intra-CMEA trade between 1964 and 1990. All transactions were settled within the International Bank for Economic Cooperation (IBEC). Specifically, the national bank of the exporting country was automatically credited with a TR claim on its counterpart in the importing country, and no hard cash had to change hands. If trade was not balanced at the end of the accounting period, claims were settled by building offsetting imbalances into bilateral trade agreements for the next accounting period.

For homogenous products, prices in intra-CMEA trade were based on international prices, averaged across a five-year span, and then converted into TRs.<sup>4</sup> Where this formula could not be applied, prices were negotiated between the planning offices or the FTOs. Sometimes, the trade and balance-of-

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<sup>4</sup> This was called the 'Bucharest' pricing formula.

payment items were initially denominated in USD or other convertible currencies, which made it possible to reconvert them using the same accounting rate. However, it is difficult to reconstruct the initial accounting rate, as there were inconsistent procedures across countries and over time. Prices might also be distorted given the role of the FTOs and the so-called price equalisation funds.

## Labour markets and social accounting

Comparing social services across countries is a difficult task, especially in the absence of unified measuring systems. Social services and their indicators are often subject to political objectives, which impedes comparison. For example, the following indicators, which were essential to planned economies, were not included in the Global Tables: job security, low crime, low disparity of income, and low wage differentials. Other indicators (e.g. access to childcare, family assistance, education, basic health and minimum shelter) are easier to measure. Nevertheless, the indicators do not say anything about the quality of the offered services.

Another barrier is the comparison of employment data. In central planning, the emphasis lay on plan fulfilment rather than efficient resource allocation. Employment was effectively enforced by the state and non-participation in the labour market by the able-bodied individuals was criminalised. On the one hand, this led to overstaffing in state-owned enterprises. On the other, targets set by the planners were often difficult to meet for individual firms, which made the hoarding of resources (including labour) a rational practice. Thus, unemployment was not as big a problem as underemployment. The shortage of housing also led to high labour immobility, enabling the existence of both labour shortages and excess employment at the same time.

Since labour costs were automatically recovered through producer taxes, firms did not have any incentive to cut back on labour costs. However, during the transition and the subsequent adjustment recession, these costs suddenly became painfully visible, potentially making the difference between whether a firm survived the transition or shut down. As the state-owned enterprises (SOEs) dominated the manufacturing sector in central planning, it was expected that the share of relative employment in this sector would decline, as some enterprises would shut down. In contrast, the share of employment in the services sector would rise, as this sector acted as the entrance door for new private firms.

## Banking system

The command economies largely used a one-level banking system, which was effectively playing the role of a centralised treasury for the entire economy. Its main role was to assure that enterprises were provided the liquidity they needed to reach their targets.

As a result, the functions of the banking system and monetary policy were rudimentary at best. Central banks of the command economies lacked the know-how and instruments that Western institutions had built up over decades. The basics of banking supervision, macroprudential policies, reporting systems and an interbank market for liquidity provision were absent.

## DATA-QUALITY ISSUES OF THE COMMAND ECONOMIES

The hierarchical nature of the command economies was the source of their problem. In central planning, official statistics were a means of controlling the economy and were used to define production targets. The targets, however, would be negotiated with the enterprises, which supplied information to the planning authorities in a bottom-up manner. This, in turn, created an incentive for enterprises to manipulate reporting by misrepresenting both output and input so as to receive more subsidies.

### Prices and inflation

The issue of pricing is the fundamental problem of the command economies. In the SNA, market prices were used to account for the value of goods, which follows – albeit somewhat loosely – from the marginal utility of a purchased good on a competitive market. Since prices were administered by a central authority in the command economies, they provided little information on the actual value of goods.

In theory, one could value goods at factor costs. This calculation, however, requires detailed accounts on taxes and subsidies, which are not available in the public sources. Only Hungary claimed to publish the national account data at factor costs, whereas the other HPEs used the established prices. Consequently, prices had little informational content and did not reflect the competitiveness of markets, factor costs or utility to the buyer.

### Surveying methods

In HPEs, the national account had full coverage because the planners needed complete information regarding production. It was not overly difficult to gathering reports from all enterprises, as the total number of firms was smaller, and the average size of firms was larger than in market economies. There were, however, some problems with this method. First, it was very time-consuming and very costly to get precise information from every firm. Second, since the reports were also used as success indicators, there was a substantial amount of fraudulent reporting. Finally, enterprise accounting did not necessarily fit the needed definitions for national accounting.

### Overvaluation of capital stock

Changes in capital stock are often overstated in the MPS owing to historical valuation and inadequate accounting for replacement at current prices. Depreciation was often understated because its values were based on the price of the fixed asset in the year of its acquisition, thereby falling short of replacement values. Since depreciation was understated, the net material product (NMP) was overstated. The NMP was the main macroeconomic indicator used for monitoring growth in national accounts of the COMECON countries.

Another problem is found in the revaluation of inventory. Stocks were revalued at their official prices using the ‘first in, first out’ (FIFO) method. As a result, the materials used from stock in production reflected the prices of an earlier period, whereas additions to stock were shown at the price level of the latest purchase. The difference between opening and closing stocks therefore incorporated price increases during the year, which exaggerated the changes in stock. This brings about the conclusion

that level values for investment are very difficult to estimate, which makes it the least reliable component of national income in both the SNA and MPS.

### Cross-country comparability

Cross-country comparability is frequently not assured between the CMEA countries. Here are a few examples of positions that were valued differently:

- › Capital stock:
  - Differences in valuing durables gross vs. net of taxes
  - Differences in valuing imported durables depending on the country and the origin
- › Interest and insurance payments:
  - In Bulgaria and Hungary, rented apartments were valued at rents actually paid
  - Other countries valued at rents at factor costs
- › Services: The relative importance of labour and capital differs across countries, especially in the health sector. There, the low fixed-fee services were typically undervalued, but informal fees were naturally unrecorded, leading to distortion.

### Classified data

Military expenditures are difficult to compare internationally, as the available information is often not credible and gives distorted results. Many countries did not publish full accounting of their military expenditures. Additionally, economies of some countries – the USSR, in particular – were highly militarised, and the distinction between civil and military production was blurred, with parts of funding flowing indirectly to the military producers. Hence, even when official figures were made public, these values were considered to be the lower bound.

### Foreign debt

Information on outstanding debt and repayment obligations was always an issue in HPEs. Loose concepts, slack procedures and a lack of control resulted in inadequate reporting before the transition. The problems were exacerbated once the transition started, and enterprises borrowed heavily without considering the long-term consequences and while the banking system was only then putting credit-quality assessment tools in place. Reporting improved foreign currency debts, as they influenced the standing of HPEs with international debtor clubs.

### Exchange rates

Given these factors, official exchange rates fail to connect domestic and world prices accurately, which complicates comparisons between HPEs and market economies. To address this issue, an average or unified exchange rate is sometimes used. However, this approach is also problematic because basic goods were often undervalued in HPEs. While useful for converting national income aggregates, the average exchange rate may not be appropriate for microeconomic data.

Until 1990, GDP per capita estimates in USD often relied on commercial exchange rates, which approximate the average rather than the marginal cost of foreign currency. These rates might be overvalued relative to market-determined hypothetical values, as evidenced by lower black market rates and substantial export subsidies in HPEs.

An alternative methodology to estimate the per capita GDP (originally the GNI/GNP was used, but the differences with GDP were small at the time) in USD is to use the synthetic Atlas-type conversion factor (SACF). This method. For this, the purchasing power parity (PPP) of the rouble is compared to those of five upper-middle-income countries. Since there is often a difference between income estimates converted at PPPs and those converted at the exchange rate, an adjustment is made for the exchange rate-PPP differences in the comparator countries. Then, the 1990 rouble per capita GNP estimates for the 15 former republics of the USSR are converted into USD using the SACF.

## Foreign trade

Foreign trade of the CMEA has two main issues: 1) non-comparability of trade amounts within the CMEA and with the rest of the world and 2) overvalued FX rates. Within the CMEA, countries traded effectively via barter schemes since the transferrable rouble (TR) was merely an accounting unit that did not reflect demand for goods. At the same, the FX rates used for foreign trade with the rest of the world were set administratively and therefore did not reflect the actual value of goods.

Since there are substantial differences between the official, the implicit and the implied TR/USD ratios by year, for exports and imports, for total trade and by commodity categories, a repricing of all intra-HPE trade at market prices would be necessary to re-evaluate trade flows and make them comparable with other economies. Scholars have used the following approaches to achieve it:

- › **Repricing trade flows at hypothetical dollar prices:** This approach is not generally applicable, as there is a scarcity of published commodity data and a high degree of uncertainty regarding the estimates of hypothetical dollar prices.
- › **Converting TR trade to dollars at the official exchange rate:** The assumption made in this approach implies that prices in CMEA trade were identical to world market prices, which is not accurate. Most of the time, the TR was overvalued for most manufactured goods, whereas the opposite may be true for energy and raw materials
- › **Converting each country's TR trade to dollars at own TR/USD cross rate:** This approach is more realistic than the first two, as it compares the average local-currency cost of earning a USD and a TR in exports. The drawbacks are that the coefficient derived from the costs of imports might be different because the composition and relative prices of exports and imports differ, and that commercial rates introduce a break in data consistency.
- › **Converting each country's TR trade to dollars at a uniform composite using the TR/USD cross rates:** This method uses the average cross rates of CMEA countries immediately after commercial rates were introduced. A uniform rate is then applied to all countries. Since the TR price levels of the countries depend, among other variables, on the commodity composition of bilateral trade, the validity of this approach is not faultless.

## LIST OF PRIMARY SOURCES

### Bulgaria:

- › Statisticheski Godishnik na Narodna Republika Bulgariya
- › Statisticheski spravochnik
- › Vanshna targoviya na Narodna Republika Bulgariya
- › Statisticheski izvestiya (quarterly)
- › Iznos i vnos
- › Rabotnichesko delo (daily)
- › National Bank of Bulgaria, foreign-exchange quotations

### CSSR:

- › Statisticka rocenka CSFR
- › Císla pro každého
- › Jahrbuch des Außenhandels der Tschechoslowakei
- › Ukazatelé hospodarského vyvoje v zahraničí
- › Statistické přehledy (monthly)
- › Zahraniční obchod (monthly)
- › Hospodarské noviny (weekly)
- › Rudé právo (daily)
- › Kursovní lístek, Statni Banka Ceskoslovenská
- › Sbírka zákonu
- › Statistika (monthly)
- › Dlouhodobý Vyvoj Finančních Ukazatelů CSSR (Federalní Ministerstvo Finančí 1989)

### GDR:

- › Statistisches Jahrbuch der DDR
- › Statistisches Taschenbuch
- › Neues Deutschland (daily)
- › Staatsbank der DDR, Devisenumrechnungssitze

### Hungary:

- › Statisztikai évkönyv
- › Statistical Pocket Book of Hungary
- › Külkereskedelmi statisztikai évkönyv

- › Statisztikai havi közlemények (monthly)
- › Budapesti Rundschau (weekly)
- › Népszabadság (daily)
- › Banque nationale de Hongrie, Cours officiels des devises étrangères
- › National Bank of Hungary, Annual report and Quarterly Review

Poland:

- › Rocznik statystyczny
- › Mały rocznik statystyczny
- › Rocznik statystyczny handlu zagranicznego
- › Rocznik statystyczny inwestycji i środków trwałych
- › Rocznik statystyczny finansów
- › Rocznik statystyczny pracy
- › Rocznik statystyczny przemysłu
- › Rocznik dochodu narodowego
- › Rocznik statystyki międzynarodowej
- › Kraje RWPG, GUS Warszawa
- › Biuletyn Statystyczny (monthly)
- › Wiadomości Statystyczne
- › Życie Gospodarcze
- › Rzeczpospolita (daily)
- › Report on the economic situation of Poland (statistical supplement), Central Statistical Office, Warsaw
- › Narodowy Bank Polski, Tabela Kursów

Romania:

- › Anuarul Statistic al R.P.R.
- › Romanian Economic Memorandum to Western Banks
- › Neuer Weg (daily)
- › Banca națională a Republicii socialiste România, Ustă de cursuri pentru valute
- › Revista Română de Statistică (monthly)



## USSR:

- › Narodnoye khozyaystvo SSSR
- › SSSR v tsifrakh
- › Vneshnyaya trgovlya
- › Aussenhandel UdSSR (monthly)
- › Byulleten' inostrannoy kommercheskoy informatsii (thrice weekly)
- › Ekonomika i zhizn (weekly)
- › Pravda (daily)
- › State Bank of the USSR, foreign-exchange quotations
- › Promyshlennost SSSR

## Yugoslavia:

- › Statisticki Godisnjak Jugoslavije
- › Statistical Pocket Book of Yugoslavia
- › INDEKS, Mesecni Pregled Privredne Statistike SFR Jugoslavije
- › Ekonomska Politika (weekly)
- › Udruzenje Banka Jugoslavije, Kursna lista za devize
- › National Bank of Yugoslavia; Quarterly Bulletin, Annual Report

## International statistics:

- › Statisticheskiy ezhegodnik stran chlenov SEV
- › ILO Yearbook of Labour Statistics, Geneva
- › Economic Survey of Europe
- › World Development Report, World Bank
- › UN Yearbook
- › Monthly Bulletin of Statistics, Statistical Office of United Nations
- › OECD Statistics of Foreign Trade and National Accounts
- › Bank for International Settlements, Basle
- › International Monetary Fund and the World Bank
- › International Financial Statistics, Bureau of Statistics at IMF
- › UNCTAD, Handbooks of International Trade and Development Statistics
- › UNCTAD, International Financial Cooperation for Development: Capital Flows to Developing countries TD/B/C.3/158
- › UN Annual Bulletin of General Energy Statistics for Europe

- › UN Annual Bulletin of Gas Statistics for Europe
- › UN Annual Bulletin of Coal Statistics for Europe
- › UN Energy Statistics Yearbook
- › UN The ECE Energy Series
- › FAO Yearbook, Production
- › OECD, IEA Energy Balances of OECD Countries

Other western sources:

- › wiiw estimates
- › Warenverkehr mit der DDR und Berlin (Ost), Statistisches Bundesamt, Wiesbaden
- › A Study of the Soviet Economy, Volume I, published by IMF, World Bank, OECD and EBRD, 1991
- › International comparison of gross domestic product in Europe 1985, UN, 1988

## COMECON STATISTICAL DEFINITIONS<sup>5</sup>

These definitions are direct translations of statistical definitions reported in the CMEA statistical yearbook in 1987. The coverage of the definitions in this section is different compared to the wiiw Comecon Dataset and is more extensive in many cases. The paper provides the complete list of definitions reported in the CMEA statistical yearbook used for completeness and future reference in case the dataset is expanded.

### Territory and population

**Territory:** The area of land surface including internal waters within the state borders established in the appropriate manner.

**Population size at the end of the year:** Determined annually by calculation based on the population size from the last census, considering natural population growth and migration.

**Population density per square kilometre:** Determined by the ratio of the population size at the end of the year to the country's territory.

**Population size according to the last census:** Calculated based on the data of the permanent population of the country. Permanent population includes all people permanently living in a given area regardless of whether they are present at the place during the census. Employees of diplomatic and trade missions and their family members abroad are included in the permanent population.

**Average annual population size:** Calculated as the arithmetic mean of the population size at the beginning and the end of the year.

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<sup>5</sup> The definitions are translated from CMEA (1987) from Russian into English using ChatGPT 3.5, version as of 6 June 2024.

**Urban and rural population size:** Determined in accordance with the prevailing regulations in each country for dividing the population into urban and rural.

**Birth rate:** Determined by the ratio of the number of live births to the average annual population size.

**Mortality rate:** Determined by the ratio of the number of deaths to the average annual population size.

**Natural population growth:** Determined by the ratio of the difference between the number of live births and the number of deaths to the average annual population size.

**Infant mortality rate:** Determined by the ratio of the number of children who died before one year of age to the number of live births.

**Average life expectancy:** The average number of years a generation of people born in a given year is expected to live, assuming that age-specific mortality rates remain constant throughout their lives.

**Marriages:** Determined by the ratio of the number of marriages to the average annual population size.

**Divorces:** Determined by the ratio of the number of divorces to the average annual population size.

## National income and consumption

**Share of the socialist sector in the national economy:** The socialist sector of the national economy includes state enterprises and institutions, public organisations, cooperatives of all types, personal subsidiary plots of cooperative members, and personal subsidiary plots of workers and employees of state, public and cooperative enterprises and institutions.

**Gross social product:** Represents the value of material goods produced in the branches of material production and is determined as the sum of the gross output of individual branches of material production.

**National income:** Represents the newly created value in the branches of material production. The volume of national income is determined by excluding from the value of the gross social product produced during the year the value of the means of production consumed in the production process (raw materials, fuel, electricity etc.).

**Per capita national income:** Calculated using data on the average annual population size.

**Use of national income:** National income is used for non-productive consumption (consumption fund) and accumulation (accumulation fund).

**Consumption fund:** Includes personal consumption of material goods by the population and material expenditures in institutions, organisations and enterprises of the non-productive sphere.

**Personal consumption of material goods:** Includes material goods acquired by the population at their own expense and those received in kind. This includes consumer goods (including agricultural

products); the cost of electricity, gas, water and steam consumed; and expenditures on transport and communication for personal needs, among others. Goods purchased by the population for production purposes (e.g. for agricultural production, individual construction) are not included.

**Accumulation fund:** Includes the increase in the value of fixed assets and material working capital and reserves (working capital).

**Increase in the value of fixed assets:** Determined by the sum of the cost of newly commissioned fixed assets and the costs of completed capital repairs minus the cost of consumed fixed assets (annual wear and tear) and the cost of fixed assets retired due to obsolescence, wear and tear, and natural disasters.

**Public consumption funds:** Represent the part of redistributed national income used for collective and individual consumption of the population in the form of material goods and non-material services, provided free of charge or at reduced rates, and in the form of monetary payments in addition to labour remuneration.

#### **Structure of Public Consumption Funds:**

Public consumption funds represent that part of the redistributed national income, which – through the state budget, state, cooperative, and public enterprises and organisations – is directed towards the collective and individual consumption of the population in the form of material goods and non-material services, provided free of charge or at reduced rates, as well as in the form of monetary payments in addition to labour remuneration.

1. **Pensions and benefits:** Include all types of pensions (old age, disability, survivor, length of service, social pensions) and all types of benefits (temporary disability, maternity and childbirth, child care, benefits for single mothers, large families, additional child benefits to salaries, and other benefits, such as to people affected by natural disasters, for burial etc.).
2. **Scholarships:** Include all types of scholarships paid to students of higher and secondary educational institutions, students of vocational schools, and graduate students.
3. **Expenditures on free health care, social security, physical culture and tourism:** Include current expenditures (excluding capital investments but including depreciation of non-productive fixed assets) of healthcare institutions (including sanitary and preventive institutions), nurseries, orphanages, homes for the elderly and disabled; tourism and recreation facilities; sports institutions aimed at providing free services.
4. **Expenditures on free education and culture:** Include current expenditures (excluding capital investments but including depreciation of non-productive fixed assets), aimed at general education and upbringing of children and adolescents (kindergartens, schools, pioneer camps, orphanages), adult education and personnel training, as well as expenditures on cultural and educational institutions (libraries, museums, exhibitions, cultural centres, clubs).
5. **Expenses for the maintenance of the housing fund not covered by rent payments:** These are determined as the difference between the actual expenses for the maintenance of the housing fund, including depreciation, and the rent payments.

**Other payments and benefits:** These include one-time cash rewards that are not part of labour remuneration, enterprise expenses for food in workplace canteens, and other similar expenditures.

**Fixed assets of the national economy:** These represent the totality of material values created by social labour, which, in their physical form, function over an extended period of time.

**Fixed assets of the national economy are divided into production and non-production funds.**

**Production fixed assets:** These include buildings and structures, power machinery and equipment, working machinery and equipment, transmission devices, vehicles, apparatus, instruments, mechanisms, working livestock, productive livestock of the main herd, perennial plantings, and other means of labour functioning in the sphere of material production. These assets take part repeatedly in the production of material goods while maintaining their physical form. The value of production fixed assets is gradually transferred to the product being created as they wear out.

**Non-production fixed assets:** These are fixed assets functioning in the non-production sphere that gradually wear out and lose their value in parts.

Objects used repeatedly but with a value and service life below the established limit and normative service life in the countries are not considered fixed assets.

Land, forest and water resources are not included in the fixed assets. Additionally, the fixed assets do not include equipment stocks (including spare parts) and unfinished construction of buildings and structures as well as uninstalled equipment. All available fixed assets of both the socialist and private sectors of the national economy are taken into account.

Indexes and structure of fixed assets are calculated based on the full value of assets (without deducting depreciation) in comparable prices.

**Indexes of real wages of workers and employees in the national economy:** Calculated as the ratio of the index of monetary (nominal) wages to the average index of prices for goods and services received by workers and employees.

**Indexes of real incomes per capita:** Calculated on the basis of income per family member of workers and employees as well as peasants.

Real incomes of the population express the quantity of material goods in which the monetary and in-kind incomes received in the form of labour remuneration, payments from public consumption funds (pensions, benefits, scholarships etc.), income from personal subsidiary farming, and other incomes used by the population to meet their material and cultural needs are realised.

**Electricity consumption by branches of the national economy:** The total electricity consumption by the national economy includes losses of electricity in general-purpose networks.

**Per capita consumption of basic food products:** Determined considering both direct and indirect consumption of all products produced and imported into the country regardless of the type of consumption and the method of product sales to the population.

In calculating these indicators, the following are considered: products directed to the retail trade network and public catering enterprises; personal natural consumption in agriculture; products purchased by the population from agricultural producers and at collective farm markets; non-market and other types of consumption of the product, including consumption in military units etc.; as well as indirect consumption of products (i.e. products used in further industrial processing for the production of other food products).

The total volume of food consumption is generally determined based on the calculation of the total resources of the product in the country (GDP increased by imports and the volume of reduction of stocks and reserves by producers and state organisations) and the volume of needs not included in the population's consumption of the product (exports, non-food use, increase in stocks and reserves by producers and state organisations etc.). Consumption indicators are calculated for the calendar year. In calculating per capita food consumption, data on the average annual population size for the corresponding year are used.

**Meat (including edible offal), fat and meat products (converted to meat):** The indicator is determined by the slaughter weight of meat on bones and edible offal in a chilled state. All types of meat are considered, including poultry (after semi-evisceration and feather removal), rabbit meat and game meat.

**Fish and fish products (commodity):** This includes saltwater fish, freshwater fish, fish products (including caviar for consumption), and crabs.

**Milk and dairy products, including animal butter (converted to fresh milk):** All types of milk and dairy products consumed by the population for food purposes (butter, cheese and feta cheese, cream, sour cream, fat cottage cheese etc.). The conversion of milk litres to kilograms is done using coefficients corresponding to the conditions of each country.

**Eggs:** Chicken eggs, egg mélange and egg powder converted to the number of eggs in shells.

**Vegetable oil (produced in industry and agriculture):** This is accounted for in natural terms. The amount of oil used as raw material for margarine production is not included in the total consumption of vegetable oil.

**Sugar and sugar products (converted to white sugar):** In addition to the direct consumption of beet and cane sugar, its indirect consumption is also considered (i.e. the amount of sugar used in the production of confectionery, canned goods and other food products).

**Bread products (converted to flour):** Direct and indirect consumption of wheat, rye, soybean, millet, buckwheat and corn flour as well as groats, meal, oat flakes, other flakes, milled rice and flour products (converted to flour). Flour and rice for processing non-food products and rice for beer production are not included.

**Vegetables (converted to fresh):** Fresh vegetables (leafy, bulbous and root vegetables, cabbages, watermelons, melons, etc.) and canned vegetable products, including canned corn, juices, and salted and pickled vegetables. Spicy peppers (ground) are not included.

**Potatoes:** Consumer potatoes, early and late, and potato products converted to raw potatoes. Potatoes used for technical purposes (for alcohol, starch, etc.), as well as for fodder and planting material, are not included in the total consumption of potatoes.

**Availability of durable goods among the population:** Data on the availability of durable goods are generally developed based on current accounting of purchases by the population and an assessment of their disposal considering the service life.

**Passenger cars:** All types of passenger cars owned by individuals.

**Explanations of the indicators for refrigerators, washing machines, televisions, radio receivers and radiograms are similar to the explanations provided in the 'Industry' section.**

## Industry

**Gross industrial output:** Accounted for in value terms for each industrial enterprise as a whole using the plant method. Gross output by the plant method is considered the value of all industrial products produced in the reporting period minus the value of products of own production consumed for industrial production needs within the enterprise in the reporting period.

For enterprises with a long production cycle (e.g. machine-building enterprises, enterprises that repair machinery, enterprises that manufacture metal structures etc.), the gross output includes changes in the value of unfinished production (i.e. products not completed in manufacturing and assembly in individual workshops), according to the methodology adopted in each country. It also includes the output of industrial enterprises operating for less than a year (seasonal production, enterprises that were liquidated or resumed production within the year, new enterprises launched during the year).

Indexes of gross industrial output are calculated based on data on the volume of production accounted for at wholesale prices of enterprises (i.e. excluding turnover tax and other taxes), comparable by years.

**Gross industrial output by form of ownership:** The gross output of all industry is determined as the sum of the output of individual industrial enterprises of all social sectors of the country's economy.

**State industry:** Industrial enterprises of all ministries, departments and organisations (both state and public) that have independent balances (i.e. enterprises whose main activity is the production of industrial products, carrying out economic activities on the basis of economic accountability, having independent balances, fulfilling obligations and enjoying the rights of a legal entity) as well as auxiliary industrial enterprises on the balance sheets of non-industrial organisations, regardless of their departmental affiliation.

**Cooperative industry:** Industrial enterprises with independent balances, auxiliary industrial enterprises on the balance sheets of cooperative institutions and non-industrial enterprises of the system of artisanal cooperation, consumer cooperation and other types of cooperation.

**Private industry:** Private industrial enterprises producing products under state orders, delivering products to the disposal of the state and cooperatives; private industrial enterprises selling products through private trade or industrial products of 'uncooperated artisans' (i.e. craftsmen) produced under state orders, delivered to the disposal of the state or cooperatives, and also sold to private buyers or on the local market (for personal disposal by end consumers).

**Share of production of means of production and consumer goods in gross industrial output:** The size of industrial production of means of production (Group 'A') and production of consumer goods (Group 'B') is determined by dividing all types of industrial products into these two groups based on the predominant purpose of individual types of products. Given that some types of products are used for both industrial consumption and public consumption, adjustments are made to the distribution of industrial products into Group 'A' and Group 'B' products based on the actual use of the products.

### **Production of Major Types of Industrial Products**

**Electric power:** Electric power generated by all power plants (both stationary and mobile electric units), including the electricity consumed for the power plants' own production needs. The electric power is measured at the terminals of the electric generator.

- › **Electricity generated by thermal power plants:** This includes electricity produced by steam-turbine, diesel, mobile, gas-generator and other power plants (both stationary and mobile electric units) operating on solid, liquid or gaseous fuels. It also includes electricity produced by nuclear power plants for general use.
- › **Electricity generated by hydroelectric plants:** This encompasses electricity generated by river, lake, tidal and pumped-storage hydroelectric power plants through the conversion of water energy.

**Thermal energy:** Thermal energy supplied from the station (boiler house) for technological and domestic needs of thermal consumers using live or reduced steam, extracted or other exhausted steam, or hot water, minus the heat returned to the power plant (boiler house) with waste steam, condensate and return network water.

**Crude oil (including gas condensate):** Crude oil produced via all methods.

**Natural and associated gas:** Gas produced from pure gas wells and gas obtained as a byproduct with oil from oil wells. It is accounted for in cubic metres at a temperature of 0° C and a pressure of 760 mm Hg.

### **Coal:**

- › **Hard coal (including anthracite):** Includes coking coal, anthracite and energy coal. Net coal production is the total of all enriched and unenriched types of coal, determined by the amount of coal shipped to consumers and coal consumed for the own production-technical, economic and domestic needs of the mining enterprise. Briquettes made from hard coal and briquetting waste are not included.



- › **Coking coal:** All types and grades of coking coal and gas coals, whether directly used for coking or sent to coal-enrichment plants for coking needs.
- › **Lignite (including brown coal):** Production of lignite and brown coal. Briquettes made from lignite and brown coal and briquetting waste are not included.

**Coke (adjusted to 6% moisture content):** All types of coke from lignite and hard coal, semi-coke and peat coke.

**Dry metallurgical coke (adjusted to 4% moisture content):** Blast furnace and foundry coke from hard coal.

**Iron ore (raw extraction):** All extracted raw ore regardless of whether it is sent off-site, processed at the plant into concentrates, or consumed in blast furnaces and steel-making furnaces.

**Iron ore (including concentrate):** Raw (unprocessed and sorted) ore used without enrichment for sintering and pelletising or for direct use in blast furnaces, and the final concentrate from enrichment plants.

**Pig iron and blast furnace ferroalloys:**

- › **Pig iron:** Includes all types, such as foundry pig iron; liquid foundry pig iron consumed in the plant's own workshops; blast furnace ferroalloys like ferrosilicon, ferromanganese and mirror iron; and other blast furnace ferroalloys.
- › **Refined pig iron:** Liquid refined pig iron intended for steel production, poured into mixers or used in steel-making workshops; refined pig iron ingots intended for steel production, shipped off-site or for remelting in the plant's own steel and foundry workshops.

**Steel:** All types of steel (open-hearth, electric steel, oxygen-converter, Thomas steel, Bessemer steel etc.); steel in ingots for rolling, forging and stamping at the plant itself and shipped off-site; steel billets obtained by continuous casting; charge ingots for remelting (excluding steel for the duplex process at the plant itself). Includes the weight of liquid steel used in the production of steel castings. Data on steel production in ingots is shown by the weight of usable ingots.

**Finished rolled ferrous metals:** All types and sizes of finished rolled ferrous metals not subjected to secondary rolling within the country. Includes billets for pipes, forgings and billets for export. Does not include pipes and forgings made from ingots.

**Ordinary grade thick sheet steel:** Hot-rolled sheet steel 3 mm thick and more and 500 mm wide, as well as universal strips of all sizes, rolled on universal mills, supplied in sheets (strips) and coils.

**Ordinary grade thin sheet steel:** Hot- and cold-rolled sheet steel less than 3 mm thick and more than 500 mm wide, supplied in sheets and coils.

**Steel pipes:** Seamless and welded steel pipes; excludes pipes subjected to subsequent cold drawing or cold rolling.

**Seamless steel pipes:** Hot-rolled, cold-rolled and cold-drawn seamless pipes.

**Welded steel pipes:** Pipes welded by gas welding in butt and overlap methods as well as by furnace welding followed by drawing.

**Steam boilers with capacity over 10 tonnes of steam per hour:** Water-tube boilers of all types with a capacity over 10 tonnes of steam per hour, including marine boilers. Excludes heating boilers.

**Diesel engines and diesel generators (excluding automotive and tractor):** Stationary, marine and transport diesel engines.

**Blast furnace machinery and equipment:** Machinery and equipment for steel-making plants (excluding electric furnaces). Converters, mixers, charging devices, skip winches, balance cones, slag ladles, pig-iron ladles, steel-pouring ladles and other blast-furnace and steel-making equipment.

**Rolling mill equipment (including finishing shop equipment):** Rolling mills for hot and cold rolling of ferrous and non-ferrous metals, auxiliary adjusting and other machinery and mechanical equipment for thermal devices for rolling mills and shops. Excludes drawing machines, wire rope machines, accessories and spare parts.

**Electric overhead cranes (including special types):** Electric overhead cranes, electric overhead grab cranes, magnetic cranes, magnetic-grab cranes and others.

**Portal cranes:** Boom cranes supported by a portal (primarily for loading and unloading ships).

**Electric wire hoists (electric hoists):** Electric wire hoists of various lifting capacities.

**Mainline diesel locomotives:** Freight and passenger mainline diesel locomotives of all types. Excludes shunting and industrial diesel locomotives.

**Mainline freight cars:** All types of freight cars: open wagons, covered wagons, refrigerated wagons, self-unloading and tipping wagons, tank wagons etc. Excludes service railway cars and industrial wagons (dump cars etc.).

**Mainline passenger cars:** Passenger, mail, baggage and dining cars.

**AC electric motors with power from 0.25 to 100 kW:** Unified series AC electric motors, enclosed with slip rings, submersible, in marine design, for woodworking and textile machines, roller conveyors, potential regulators, phase regulators etc.

**AC electric motors with power over 100 kW:** Synchronous and asynchronous AC electric motors.

**Turbine generators:** Generators for steam and gas turbines (turbo generators), steam-turbine with air and hydrogen cooling of all types for power plants. Generators for hydraulic turbines (hydro generators), vertical and horizontal hydraulic turbines of all types.

**Electric cars and trucks:** Electric cars and trucks of all kinds, including electric cars and trucks with lifts.

**Power transformers:** Power transformers of all kinds over 0.25 kVA. Current and voltage transformers are not included.

**Mainline electric locomotives:** Mainline AC and DC electric locomotives for freight and passenger transport. Switching and industrial electric locomotives, as well as battery-powered locomotives, are not included.

**Pumps:** Horizontal and vertical water pumps, artesian and submersible pumps, feed pumps, condensate pumps, oil transfer pumps, sewage pumps, sand pumps, slurry pumps, propeller pumps, acid-resistant pumps, marine pumps, gasoline pumps, vortex oil pumps, special pumps, piston-driven pumps, including metering pumps, earth pumps, coal pumps etc. (excluding vacuum pumps).

**Metal cutting machines:** Machines designed for shaping products by removing chips with cutting tools. Includes all types of lathes, planers, drills, milling machines, grinding machines, broaching machines and other types of metal-cutting machines, including ultrasonic and electrical discharge machines, but excluding manually operated and portable metal-cutting machines.

**Automatic and semi-automatic lathes:** Single- and multi-spindle automatic lathes, multi-spindle chucking automatics, multi-tool semi-automatics, automatic copying lathes etc. (excluding special ones).

**Grinding machines:** Cylindrical, profile, gear, internal, surface, centreless, longitudinal etc. milling machines (excluding special ones).

**Milling machines:** Milling machines of all kinds, except gear milling machines (excluding special ones).

**Forged and press machines (excluding hand- and foot-operated machines):** Used for metal processing and plastic substitutes without chip removal, mechanical and hydraulic presses of all kinds, mechanical shears of all kinds, straightening machines (for iron sheets, profile materials, pipes etc.), edge bending and circular bending machines, forging, sedimentary and cold forming (forging presses and hammers, riveting machines etc.).

**Watches:** Men's and women's watches of all kinds, excluding chronographs.

**Cameras:** Cameras of all kinds (amateur, correspondent, children's etc.), including industrial cameras.

**Trucks:** Trucks and semi-trucks of all kinds (excluding special vehicles), including trucks manufactured on the basis of passenger car chassis.

**Cars:** Passenger cars of all kinds, excluding trucks manufactured on the basis of passenger car chassis.

**Buses:** Buses of all kinds, including small-capacity buses.

**Motorcycles and scooters:** Motorcycles and scooters with a cylinder capacity of 75 cc and above, with or without sidecar, including motorcycles with sidecars for cargo transport.

**Bicycles and motor bicycles:** Bicycles and motor bicycles of all kinds, including ones for teenagers. Excluding children's bicycles.

**Rolling bearings:** Ball and roller bearings of all kinds.

**Tractors (including self-propelled chassis):** Wheeled and tracked tractors of all kinds and self-propelled chassis (in physical units).

**Tractor ploughs:** Tractor ridge and reversible ploughs; swamp, disc, mounted, ridge and reversible ploughs.

**Tractor seeders:** Machines for sowing seeds of grains, corn, beets, cotton, vegetables and other crops.

**Grain harvesters:** Self-propelled grain harvesters, harvesters for installation on self-propelled chassis and trailers. Only combines fully equipped with necessary units are included.

**Silage harvesters:** Machines for mowing corn and other crops destined for silage, for obtaining green mass and for transferring it for transportation. Unlike corn harvesters, these harvesters do not separate ears or clean ears from husks.

**Excavators:** Single- and multi-bucket excavators (grab, cable, dragline and bucket-wheel excavators on wheels, universal walking and self-propelled excavators, dump excavators, excavators for coal mines).

**Cranes on truck and pneumatic drives:** Cranes of all kinds on truck and pneumatic drives.

**Technological equipment for the food industry:** Machines and equipment for the sugar, confectionery, starch, flour-milling and bakery industry, for the production of vegetable and animal fats; machines for processing milk, fruits and vegetables, meat and fish; machines for beverage production; machines and apparatus for the canning industry; machines for tobacco processing; equipment for breweries.

**Spinning machines:** Spinning machines for fibres of all kinds.

**Weaving machines:** Weaving machines of all kinds for the production of fabrics and ribbons from natural and synthetic fibres.

**Electric vacuum cleaners (household):** Household electric vacuum cleaners of all kinds. Excluding vacuum cleaners intended for industry, laboratories etc.

**Refrigerators (household):** Electric and gas household refrigerators, freezers and freezer cabinets, compressor and absorption ones and other technical solutions regardless of power. Refrigerated cabinets are not included.

**Washing machines (household):** Washing machines of all types with electric drive for household use, with or without centrifuge. Stand-alone centrifuges are not included.

**Sewing machines (household):** Sewing machines with manual, foot and electric drives. Industrial sewing machines are not included.

**Televisions (household):** Televisions of all types (network and portable, black & white and colour). All types of tabletop, floor-standing and combined televisions of all sizes.

**Radio receiving devices:** Radio receivers of all kinds: vacuum tube, semiconductor, radio receivers combined with tape recorders, radio cassette recorders, radio receivers powered by batteries. Also included are car receivers in private cars as well as radios with radio receivers and electroacoustic devices. Electroacoustic cabinets and radios equipped only with players or tape recorders, as well as separate players, are not included.

**Tape recorders and tape recorder attachments:** Tape recorders of all kinds, including tape recorder attachments.

**Automatic telephone exchanges:** Automatic telephone exchanges for urban, rural, institutional and special purpose and concentrators.

**Synthetic ammonia:** Ammonia obtained based on nitrogen and hydrogen synthesis, including ammonia from natural gas.

**Sulfuric acid in monohydrate:** Chamber, tower and contact sulfuric acid, including oleum, but excluding spent and regenerated sulfuric acid.

**Caustic soda (sodium hydroxide):** Sodium hydroxide in solution or solid form, obtained by electrolytic or chemical means (excluding regenerated).

**Calcined soda (including potash and soda potash mixture):** Sodium carbonate, including natural and heavy soda ash and soda solution, processed into caustic soda, and sodium bicarbonate (excluding finished sodium bicarbonate).

**Calcium carbide:** In terms of carbide with a yield of 280 litres of dry acetylene from 1 kg of carbide at a temperature of 20° C and a pressure of 760 mm Hg.

**Mineral fertilizers (in terms of nutrient):** Mineral fertilizers of all kinds containing bound nitrogen as well as all types of fertilizers containing phosphorus, potassium-boron or boron-magnesium.

**Nitrogen fertilizers:** All kinds of fertilizers containing nitrogen and used to replenish nitrogen in the soil, including ammonia water, liquid ammonia and urea for fertilizers, but excluding products for feed and technical purposes if there are special technical conditions for them. Conditionally included are all types of bound nitrogen in mineral fertilizers.

**Phosphate fertilizers:** Products containing phosphorus, including phosphate rock, ground Thomas slag and combined fertilizers. Excluded are products for technical purposes if there are specific technical conditions for them as well as bone meal.

**Potassium fertilizers:** These include potassium chloride, potassium sulphate, potassium nitrate, mixed potassium salts, enriched kainite and raw potassium salts. Excluded are products for technical purposes if there are specific technical conditions for them.

**Plastics and synthetic resins:** Synthetic and organic high-molecular-weight substances obtained from monomers by polymerisation or polycondensation, capable of undergoing plastic deformation (including cellulose ether plastics, protein plastics, cumarone resins, silicone oils, press powders in nature, and resins contained in adhesives). Polymers used for the production of fibres and elastomers, as well as plastic products, are not included.

**Polyethylene and ethylene copolymers:** Products of ethylene polymerisation and its copolymers with other olefins predominantly containing ethylene.

**Polyvinyl chloride resins and vinyl chloride copolymers:** Products of vinyl chloride polymerisation and copolymers of vinyl chloride with compounds of the vinyl type. Polyvinyl chloride resin is not included.

**Polystyrene and styrene copolymers:** The product of styrene polymerisation and copolymers of styrene with other chemical compounds.

**Phenol-formaldehyde resins (phenoplasts):** Products of phenol condensation with formaldehyde and their modifications with organic products. Excluded are masses spent on the production of press powders. The concept of 'phenoplasts' also includes phenolic resins and press powders based on them.

**Chemical plant protection products (calculated on the active substance):** Chemical agents used to combat plant pests and diseases, parasites of domestic animals, and pests of grain stocks and food products as well as to control weeds and remove and dry the leaves of some agricultural crops, including plant growth regulators.

**Synthetic tanning extracts:** Synthetic tanning substances with 100% tanning substance content. Excluded are vegetable and inorganic tanning substances.

**Synthetic dyes:** Dyes for the textile, leather and other industries (direct, vat, sulfuric, mordant, pigment, for acetate silk etc.) as well as optical brightening agents. Dyes are accounted for in net weight, except for vat dyes, which are recalculated to 100% dye content, and pastes, which are recalculated to 100% dry matter content.

**Tires:** Tires for automobiles, tractors, agricultural machinery, road-building machinery, motorcycles etc. Aircraft and bicycle tires are not included.

**Rubber footwear (including plastic):** Industrial rubber footwear, rubber overshoes, boots, sandals and other rubber footwear made from rubber and similar materials.

**Soap (calculated on 60% fatty acid content):** Soap of all kinds based on animal and vegetable fats.

**Refractory products:** Formed or pressed, fired and unfired chamotte, high-alumina, dinas, magnesite and chrome-magnesite products, as well as fired magnesite. The refractoriness of these products is not less than 1,580° C.

**Cement:** Cement of all types (Portland, pozzolanic and their varieties, slag Portland, grouting, hydrophobic, decorative, aluminous, expanding, acid-resistant etc.).

**Ordinary building bricks:** Fired clay bricks solid, hollow and lightweight, as well as silicate bricks in terms of 240 x 115 x 71 mm brick format. Wall blocks (concrete and silicate) are not included as being bricks.

**Export of timber (including firewood):** Finished wood products, all sawn and cut into assortments; wood exported to railway lines, to rafting paths and directly to consumption points.

**Lumber (without sleepers):** Boards, planks, beams, battens and other lumber of coniferous and deciduous tree species, without sleepers, including lumber from round timber.

**Glued plywood:** Sheets of various thicknesses formed by gluing several (an odd number of) sheets of technical plywood with fibre perpendicular to the outer surface.

**Particleboard:** Particleboard made from wood waste by pressing and extrusion using binding materials.

**Fibreboard:** Fibreboard of certain shapes, various hardnesses (semi-hard, hard, extremely hard) and various quality conditions made by gluing and pressing individual wood fibres and waste or other cellulose materials.

**Furniture:** Wooden furniture and furniture on metal frames for household and special purposes.

**Cellulose:** A semi-finished product produced by sulphite, sulphate, sodium and other methods from various types of plant fibrous raw materials, bleached and unbleached in liquid form.

**Paper (excluding corrugated paper):** Sheet material weighing up to 224 g/m<sup>2</sup>, consisting mainly of plant fibres. This includes printing paper, wrapping and packaging paper, drafting paper, writing and drawing paper, electrical paper, industrial-technical paper, base paper etc. Excludes corrugated paper.

**Newspaper:** Paper intended for printing newspapers, mainly made from white wood pulp with the addition of sulphite, sulphate, semi-bleached pulp, semi-cellulose and other semi-finished products.

**Cardboard (including corrugated paper):** Single- and multi-layer sheet or roll material consisting predominantly of plant fibres bonded together by surface adhesion forces, distinguished from paper by greater thickness and a mass exceeding 224 g/m<sup>2</sup>. Includes printing and binding cardboard, packaging cardboard, filter cardboard, construction cardboard, technical cardboard, cardboard for light industry etc. as well as corrugated paper.

**Window glass (in terms of two millimetres):** Glass of all thicknesses. Window glass is packaged in boxes.

**Cotton fibre:** Fibre cleaned of seeds and other impurities with a maximum defect and contamination rate of no more than 24%. Includes long and short fibres.

**Flax fibre (including tow):** Includes: long fibre – fibre obtained from the spreading and scutching of flax stems (flax straw) and from the scutching of crushed flax tow; short fibre – fibre obtained from processing the waste of scutched flax tow as well as from processing low-grade tow and scutched flax shives; tow – fibre obtained from the bark of flax stems that has not been subjected to spreading and scutching.

**Washed wool:** Natural wool obtained by shearing live animals (sheep, camels) and factory wool obtained during the processing of hides and skins. Bristles and hair are not included.

**Fabrics (excluding lace):** Silk (including staple) fabrics, cotton fabrics and fabrics similar to cotton, linen fabrics and other fabrics produced by the flax industry, fabrics similar to linen, woollen fabrics, and fabrics similar to woollen fabrics. Fabrics used for the production of industrial goods are not included.

**Finished silk fabrics (including staple, without lace):** Fabrics made from twisted and staple threads of natural, artificial and synthetic silk.

**Finished cotton fabrics and fabrics similar to cotton (without lace):** Fabrics made from pure cotton yarn, from mixed yarn made from a mixture of cotton fibre and other natural fibres, synthetic fibre, artificial fibres and staple yarn. Includes metred fabric (fabric pieces according to national standards). Weighted fabric pieces (pieces of fabric smaller than the national standard) are not included.

**Finished linen fabrics and other fabrics of the flax industry (without lace):** Fabrics made from pure linen yarn and yarn made from a mixture of linen fibre and other natural fibres, artificial fibres, synthetic fibres and staple yarn; fabrics made from two or three types of yarn with a predominance of linen yarn. Also includes canvas, tarpaulin, duck fabric, bagging fabric, packaging fabric for tents, bed and underwear fabrics, and fabrics for dresses and suits.

**Finished woollen fabrics and fabrics similar to woollen fabrics (without lace):** Fabrics made from pure wool, mixed wool and staple yarn as well as from wool yarn with the addition of cotton yarn, artificial silk, synthetic silk and staple yarn. Knitted woollen scarves and shawls, as well as carpets and carpet products, are not included.

**Non-woven fabric-like materials:** Materials made by stitching, gluing and other methods.

**Knitted underwear:** All types of men's, women's and children's underwear made of knitted fabric of all kinds of fibres. Includes sports underwear.

**Knitted outerwear:** Dresses, suits, jackets, sweaters, cardigans, pullovers, trousers, skirts, ski suits and training suits (for men, women and children) made of all kinds of fibres. Includes sports outerwear.

**Hosiery:** All types of stockings, socks, tights, and knee-highs of all sizes for men, women and children (both from cotton and circular-knitted machines) made of woollen and cotton yarn, synthetic fibre and viscose fibre.



**Cotton yarn and yarn similar to cotton:** Yarn made entirely of cotton fibre and from a mixture of cotton fibre and artificial and synthetic fibres as well as yarn similar to cotton (staple yarn) and roving yarn. Also includes yarn made from roving machines; this yarn is used in weaving and for other purposes in the form in which it is obtained from roving machines (i.e. it does not undergo further processing on spinning spindles).

**Linen yarn and yarn similar to linen:** Yarn made entirely from long and short linen fibre, yarn made from a mixture of linen fibre and artificial and synthetic fibres, and yarn similar to linen.

**Wool yarn and yarn similar to wool:** Yarn made entirely from wool and from a mixture of wool and artificial and synthetic fibres, as well as wool-like yarn (staple yarn). Includes worsted and woollen (machine-spun) yarn.

**Soft leather:** Chrome, sheepskin, chamois leather, patent leather, suede, velvet, lining and leather goods, suede leather and fish skins. Includes all types of chrome split leather and sheepskin leather. Metred patches (from 4 to 7 dm<sup>2</sup>) and weighted patches (up to 4 dm<sup>2</sup>) are not included.

**Hard leather:** Leather used for soles, welts, insoles and heels of shoes, for harness and saddle products, for making individual leather goods, and for technical purposes. Includes split leather from all types of hard leather. Metred patches (from 4 to 7 dm<sup>2</sup>) and weighted patches (up to 4 dm<sup>2</sup>) are not included.

**Leather footwear:** Includes men's, women's and children's footwear with uppers made of natural leather, textile uppers, uppers made of leather substitutes, and combined uppers on any sole (leather and substitutes). Includes footwear of all sole attachment methods — adhesive, welted, nailed, stitched and hot vulcanisation. Includes fashion, street, home, sports and orthopaedic footwear. Rubber footwear (boots, shoes and galoshes) and felt footwear are not included.

**Sugar (calculated on white):** White granulated sugar, standard regardless of whether it is used for further processing (for refining, powdered sugar, and other types of sugar), as well as in other industries (confectionery, canning), and for sale to the population. Calculated on white. Additionally, includes raw sugar calculated on white that is sold to other industries and for export.

**Unrefined vegetable oils:** Oil from all types of oilseeds (including coconut and palm oil) in raw, unrefined form regardless of its purpose (food and non-food).

**Margarine products:** All types of margarine (cream, fortified, chocolate, dietary etc.) as well as combined fats made from vegetable oils with the addition of animal fats and other components.

**Canned vegetables:** Canned vegetable products, sterilised or pasteurised, tomato paste and tomato puree regardless of the type and size of the container. Vegetable juices (carrot, tomato etc.). Pickled and salted vegetables packed in airtight containers with a short shelf life are not considered canned.

**Canned fruits and berries (fruit):** All types of preserves from fruits, berries and grapes, released in airtight containers, except for fruit puree, jam and preserves, which are considered fruit preserves regardless of the type of container. Fruit preserves include natural fruit and berry juices as well as

extracts from fruit and vegetable processing. Sulphurised and alcoholic juices and morsels are not considered canned food.

**Grape wines (excluding champagne):** All types of wines that meet the relevant standards regardless of their further use.

**Beer:** Regular, strong and other types of beer.

**Cigarettes and cigars:** Finely cut tobacco wrapped in specially prepared cigarette and cigar paper with or without mouthpieces as well as with or without filters.

**Meat:** Meat production at slaughterhouses (industrial production). Slaughtered and eviscerated cattle (carcasses) in paired weight without internal fat and by-products (without blood, skin, heads, legs and offal). Includes meat of cattle, pigs, goats, sheep, horses, domestic poultry, game, rabbits etc.

**Canned meat (including preserves):** All types of canned meat in hermetically sealed cans (tin and glass). Meat preserves from meat products (cooked sausages, sausage meat, meatballs and similar items) released in hermetic containers are included in canned meat. Meat pâtés are also considered canned meat. Meat products and sausages with a limited shelf life (ham, bacon, lard, smoked sausages etc.) released in non-hermetic containers are not considered canned meat.

**Animal fats:** Animal fat (industrial production) of various types: cow, sheep, from female buffaloes and other animals, both fresh and rendered.

**Fish catch (excluding whales, marine mammals, seafood and crustaceans):** Fish caught in seas, rivers, lakes and reservoirs in live weight. All fish species are accounted for regardless of their intended use (edible or non-edible).

**Canned and preserved fish:** Fish products in hermetically sealed packaging, sterilised or pasteurised, from fish, shellfish and crustaceans in their own juice, oil, wine sauce etc. Canned fish products in hermetically sealed packaging (fish products with a limited shelf life, made with special additives), in marinade, jelly, oil, sauce, fish pâtés, salads etc. Canned seafood (seaweed etc.) are not considered fish preserves.

**Production of key types of industrial products per capita:** Indicators are calculated based on the volume of production listed in Table 41 and the average annual population as listed in Table 3<sup>6</sup>.

**Installed capacity of power plants:** The installed capacity of all stationary and mobile power plant generators in the country is taken into account regardless of their capacity as of the end of the respective year. Power plants serving transportation means (on ships, trains etc.) are not included.

**Electrification of labour in state and cooperative industries:** Determined by dividing the amount of electricity consumed by industrial enterprises operating independently, including public utility power

<sup>6</sup> Please consult the (Russian) original for these tables.

plants (for technological needs, machinery operation, lighting of production premises, and power plants' own needs, including losses in internal networks) by the average annual number of industrial workers.

**Average annual number of industrial production personnel and industrial workers in the**

**industry:** The average annual number is calculated as the simple arithmetic average of the average number of industrial production personnel and workers for each month. Industrial production personnel include workers, engineering and technical workers, clerks, apprentices and other staff (junior service personnel and security personnel) engaged in the main production activities of industrial enterprises in primary, auxiliary and ancillary workshops as well as in the management of the enterprise (including supply, sales and storage of finished products and raw materials).

Industrial labour includes those directly involved in creating material values, as well as those involved in repairs, transportation, handling of goods, and other material services.

**Indices of labour productivity of industrial production personnel in state and cooperative**

**industries:** Labour productivity indices for the industry as a whole or for its individual sectors are calculated as the ratio of labour productivity levels in the reporting period to labour productivity levels in the base period. The level of labour productivity for the reporting and base periods is determined by dividing the gross industrial output (at comparable prices) by the average annual number of industrial production personnel.

## Capital investments and construction

Total volume of capital investments in the national economy. Capital investments include expenses for new construction or acquisition, replacement of used assets, and the expansion, reconstruction and improvement of technical equipment of existing fixed assets for both production and non-production purposes in all sectors of the national economy regardless of funding sources. Capital investments include expenses for construction works, equipment installation, equipment purchase, tools and inventory acquisition, and other works.

The following expenses are not included in the volume of capital investments:

- › Costs for drilling and geological exploration works in unexplored areas funded by the state budget or the enterprise's main activities.
- › Costs for manufacturing experimental samples of machines, equipment and installations for research, making trial samples of machines and equipment for industrial testing, and testing accepted inventions.
- › Costs for the elimination of fixed assets, except for expenses related to preparing the construction site for capital construction.
- › Costs for acquiring low-value and quickly worn-out items for existing enterprises and institutions.
- › Costs for major repairs of fixed assets, their maintenance and their upkeep.
- › Other expenses that, according to the practices of individual countries, are not considered capital investments.

Total volume of capital investments by sectors of the national economy and by industrial sectors. Capital investments are distributed by the main activities of enterprises. However, capital investments directed towards the construction of residential, communal, cultural and other non-production facilities, not directly related to the production complex, regardless of the main activity of the contracting organisation, are classified under non-production activities.

**Material and technical structure of capital investments in the national economy:** When considering the structure of capital investments, the following groups of works and expenses are distinguished:

**Construction and installation works:** The cost of works includes expenses for:

- › Erection, expansion, reconstruction and restoration of permanent and temporary buildings and structures and related assembly works for prefabricated reinforced concrete, metal, wooden and other building constructions.
- › Sanitary and technical arrangements, water supply and sanitation, construction of facilities for industrial wastewater treatment and gas purification plants, installation of lighting wiring, construction of heating and gas networks, oil pipelines, petroleum product pipelines, gas pipelines, power transmission lines, communication lines, construction of bridges and embankments, road construction works, underwater and diving efforts, and other types of special works in construction.
- › Preparation of sites, site levelling, site planning (including land reclamation and associated demolition of buildings, deforestation, stump removal, drainage), vertical planning etc.
- › Landscaping and improvement of the construction site, as well as settlements and cities.
- › Reclamation works (irrigation and drainage), construction of greenhouses, hothouses, dredging, coast reinforcement, and bog preparation works (excluding maintenance and dredging for maintaining river fairways, navigable canals, and reservoirs, as well as bog drainage at operating peat enterprises).
- › Mining works (excluding works performed at the expense of operating expenses of existing enterprises).
- › Geological and hydrological works, water pumping, and other works related to building construction, as well as works on drilling artesian wells and wells.
- › Road construction and facilities for transporting timber in logging areas.
- › Assembly and installation of technological, energy, lifting and transport, and other equipment, including work on individual and complex quality testing of assembly, carried out by construction and installation organisations.
- › Installation of wiring for mounted equipment (water, air, steam, cooling liquids supply, wiring, laying, threading, and installation of power and communication cables and wires).
- › Installation and installation of service platforms and stairs structurally related to the facility.
- › Insulation and painting of installed equipment and pipelines.
- › Additional expenses related to carrying out construction and installation works in winter.

The cost of equipment, tools and inventory includes expenses for:

- › Acquisition of technological, energy, lifting and transport, and other production equipment (installed and non-installed) provided for in estimates. Installed equipment refers to equipment that can be put into operation after installation on foundations or supports. It is included in the volume of capital investments in accordance with the existing practices in individual countries.
- › Purchase of tools, inventory and fixtures necessary for commissioning enterprises and structures as provided in estimates.
- › Acquisition of equipment, which, according to national methodologies, is not included in construction estimates (e.g. acquisition of railway vehicles, air transport vehicles, various vessels, tractors, equipment for forestry and agriculture, construction and road construction machines etc.).
- › Transport and loading and unloading works related to the delivery of equipment, tools and inventory to the construction site or to the on-site warehouse.
- › Equipping with equipment, tools and inventory of newly constructed educational institutions, boarding schools, children's homes, kindergartens and nurseries, hospitals, clinics, dormitories, clubs, libraries, and other cultural and domestic institutions funded by the state budget.
- › Improving the technical equipment with equipment of existing research organisations, educational institutions, boarding schools, hospitals, clinics and other similar organisations funded by the state budget, excluding expenses for the acquisition of low-value and quickly worn-out items not included in the fixed assets.

Other capital works and expenses include:

- › Costs for operational and deep exploratory drilling for oil, gas and thermal waters.
- › Costs for design and exploration work related to the construction of specific objects.
- › Costs for maintaining the management of under-construction enterprises, including technical supervision and author's supervision of design organisations.
- › Costs for research work provided for in projects and estimates of under-construction enterprises and structures.
- › Costs for training operational staff for the main activities of under-construction enterprises provided for in the construction estimates.
- › Costs for acquiring licenses for under-construction objects.
- › Costs for acquiring buildings from cooperative organisations and individuals.
- › Costs for measures to restore forests and create forest protection strips.
- › Costs for testing equipment during the commissioning of production facilities.
- › Expenses for allocating land plots and resettlement in connection with construction (excluding construction works related to resettlement).
- › Costs for forming the core herd and acquiring productive and working livestock.
- › Costs for planting and cultivating perennial crops (orchards, vineyards, plantations, nurseries, reserves).

- › Expenses related to the application of government privileges and benefits not included in unit prices for construction works and in prices for installation works to be paid on separate bills.
- › Other expenses not listed above that are included in the estimate of capital investments.

**New total (useful) area of housing:** The area is accounted for by the internal perimeter of residential rooms, auxiliary premises within apartments (kitchens, corridors, sanitary facilities, built-in closets etc.), and the area of enclosed summer premises (balconies, terraces).

**New apartments:** The number of apartments is accounted for physically or converted into equivalent units according to the practice of each country.

**New general education schools:** The number of student places in primary, seven-year, eight-year and secondary general education schools is given based on the number of classes in one shift.

**New hospitals and clinics:** The number of beds in medical institutions (hospitals, inpatient departments of clinics, maternity hospitals, dispensaries, sanatoriums) is included.

**New preschool institutions:** The number of places in kindergartens and nurseries is included.

**Average annual number of employees in construction organisations:** Employees engaged in both construction and installation works and in auxiliary and ancillary production and service facilities of subcontracting construction and installation organisations are included.

**Total volume of construction and installation works performed by subcontracting and economic methods:** This includes construction and installation works of a capital nature (new construction, reconstruction, expansion, and restoration – see the definition of the material and technical structure of capital investments), as well as capital and current repair works on buildings and structures carried out by construction and installation organisations via subcontracting as well as by industrial and other enterprises and organisations for their own purposes (economic method) and for other customers.

**Labour productivity index of workers employed in subcontracting construction and installation organisations:** The labour productivity index of workers engaged in construction and installation works and in auxiliary production of subcontracting construction and installation organisations is calculated by comparing the average annual output per worker for the reporting and base periods at comparable prices.

## Agriculture and forestry

In the **'Agriculture'** section, the following classification of farms is accepted: All categories of farms, including:

- › **state agricultural enterprises** – associations, complexes, farms, enterprises engaged in the production of agricultural products and the provision of agricultural production services as their main activity;
  - including state farms (kolkhozes or, in the USSR, sovkhozes) established for the production of commercial agricultural products. This group does not include educational, experimental and research farms or as any auxiliary agricultural enterprises;

- › **auxiliary farms** for the production of agricultural products of industrial, construction, scientific, educational, and other organisations and enterprises.

This group includes:

- › **agricultural enterprises** that are part of the consumer cooperation system, provided that individuals working on these enterprises receive wages for their work;
- › **agricultural production cooperatives** of all types, including fisheries and industrial cooperatives engaged in agriculture, if labour remuneration in these enterprises is carried out by distributing profits rather than paying wages;
- › **agro-industrial complexes** or inter-farm enterprises and associations, which are state or mixed state-cooperative property, engaged in the production and processing of agricultural products or providing agricultural production services;
- › **personal subsidiary farms** of members of agricultural production cooperatives;
- › **personal subsidiary farms** of workers and employees of state and cooperative enterprises and institutions;
- › **individual peasant farms** and farms of other population groups, based on private ownership of the means of production.

**Gross agricultural output.** Gross agricultural output includes the value of raw products obtained during the year as a result of growing plants and animals and their economic use.

Gross agricultural output consists of crop production and livestock production.

Gross agricultural output (crop production and animal husbandry) is calculated using the gross turnover method – that is, by including in the gross output the value of agricultural products consumed for production purposes in agriculture (seeds, feed, manure etc.).

Gross output is determined at comparable prices (to determine the dynamics of the physical volume of agricultural production) and at current prices (to determine the structure of production).

Fish catch raw products (except for fish grown on farms), hunting, collection of ready-made natural products (wild fruits, berries, mushrooms, nuts etc.), slaughter products (meat, hides and other products accounted for in livestock production), and products of processing raw agricultural products (flour, vegetable and animal oils, cheese etc.) are not included in agricultural output. The value of agricultural services (i.e. cash proceeds from specialised enterprises and organisations for performing agricultural work) is also not included in agricultural output.

Crop production includes:

- › the value of the gross harvest of all crops obtained from fields, vegetable and backyard plots, protected ground, hayfields, improved pastures, gardens, vineyards, berry gardens, nurseries and other perennial plantings, including ornamental plantings, as well as the value of by-products of crop production (straw, stubble etc.);

- › the cost of the increase (+) or decrease (-) in unfinished production (winter crops, fodder crops, fallow etc.);
- › the costs of planting and growing orchards and other perennial plantings up to and including fruiting (excluding forests).

Livestock production includes:

- › the value of livestock and poultry-farming products (i.e. the value of offspring, the increase and weight gain of livestock and poultry);
- › the value of raw animal products obtained in the process of using agricultural animals (milk, wool, eggs, honey, cocoons, greens, manure and other by-products);
- › the value of fur-farming products (fur farms), dog breeding and fish farming (in ponds and other bodies of water).

**Number of socialist agricultural enterprises:** An agricultural enterprise is understood as an economic unit engaged in agricultural production activities. Structural units of agricultural enterprises (farms, departments), even if they are large and have an independent balance but are part of an agricultural enterprise, are not considered separate enterprises.

This indicator takes into account only the number of state agricultural enterprises (kolkhozes, and, in the USSR, sovkhozes) established for the production of commercial agricultural products and the number of agricultural production cooperatives of all types.

#### **Types of agricultural land:**

**Arable land**, which consists of:

- › Ploughed lands used or prepared for the cultivation of agricultural crops, including perennial grasses and fallows (excluding the area of grass sowing produced on natural fodder lands for their improvement and sowings between rows of trees and other perennial plantings);
- › Fallow lands and fallows – areas of land previously used as arable land but not used (for more than a year, starting from autumn) as arable land according to the adopted farming system or for other reasons, yet formally not converted into other land uses;
- › Perennial plantings – areas of land occupied by perennial fruit, berry, grape, technical and other agricultural crops, the full biological cycle of which exceeds 12 months and from which several harvests are obtained from the time of planting until uprooting. Areas of perennial grasses and forest plantations are not included in the area of perennial plantings;
- › Natural grasslands – areas of land (dry, floodplain, marshy) with permanent natural grass cover mainly used for collecting grass for livestock feed;
- › Pastures (including cultivated pastures and grazing grounds) – areas of land (steppe, valley, mountainous) with permanent grass cover mainly used for livestock grazing but not used for haymaking and not considered fallow.

**Sown areas of major agricultural crops:** The sown area refers to the area planted by the time of the completion of spring planting (i.e. the so-called spring productive area).



The total spring productive area covers both winter and spring crops remaining by the end of spring planting, including the areas of perennial grass sowings from previous years. The sown area calculated according to this method does not include preliminary (before the main crop) and post-harvest sowings. In countries where two or three crops are usually grown on the same land during the calendar year, the sown area is calculated taking into account the multiple sowings (i.e. as the sum of the first, second and third sowings).

Land prepared for autumn sowing of the next year's crop but not cultivated with crops in the reporting year (fallow) is not included in the sown area for the reporting year. Additionally, individually sown, inter-row and repeat sowings are not included in the total spring productive area.

**Gross harvest of major agricultural crops:** This indicates the actual harvested crop used for economic purposes (i.e. without losses during harvesting, transport and threshing).

The gross harvest is accounted for from all sown areas of agricultural crops, including harvests from second and third inter-row, under sown and other additional sowings as well as from perennial plantations, including harvests from individually standing trees, greenhouses, nurseries and others.

When determining the gross harvest of individual crops, the additional specifications provided below should be considered.

For grain and legume crops as a whole, as well as for oilseeds as a whole, data are presented for the sum of all crops included in the respective group, not just for the sum of the specified major crops. Additionally, oilseed production does not include seeds obtained as by-products from fibre crops (cotton, hemp, flax etc.).

Corn for grain is reported in grain weight (i.e. without the weight of cob husks); corn yield is calculated taking into account the final utilisation of the corn area.

Rice is accounted for as raw material (uncleaned).

Legumes are accounted for as beans, cleaned of pods.

Cotton raw material is accounted for the collection of fibre with seeds.

Flax and hemp production is accounted for in two indicators: straw (without seeds) and converted to fibre.

Sugar beet (industrial) – indicates the harvest from all plantings harvested for sugar processing. Sugar beet used for livestock feed is not included in industrial sugar beet data and is reported under 'Fodder roots'. The harvest of sugar beet roots is accounted for in the weight of cleaned roots.

Tobacco – accounts for the collection of tobacco of all varieties in the form of dried leaves (after air drying). Tobacco leaves are not included in this indicator.

Vegetables – accounts for the collection of fruits, leaves, pods, stems etc. from open and protected soil.

Fodder crops – harvests are accounted for in dry form for coarse fodder and in green mass for succulent fodder, silage, haylage and green fodder. Roots are accounted for at the time of harvesting by the weight of cleaned roots and tubers, excluding tops.

Hay – accounts for the total hay harvest as well as mown and feed grass converted to hay (on a dry-weight basis). The total hay harvest does not include grass consumed by grazing animals.

The harvest of fruits, grapes and berries is accounted for in fresh form.

**Yield of major agricultural crops:** Yield is determined by dividing the gross harvest (barn yield) of the corresponding crop, excluding harvests from inter-row and repeat sowings, by the spring productive area of the crop. The yield of all types of corn is calculated based on the area actually harvested. Corn yield for silage and green fodder (weight of green mass with cobs) is reported with cobs at the milk-waxy ripeness stage. The yield of grapes and citrus fruits is determined per hectare of fruit-bearing area. The yield of agricultural crops is determined based on data on the gross harvest of individual crops.

**Livestock population:** The total population of cattle includes all types of cattle, including buffalo and yaks. Both adult animals (cows, bulls, oxen) and young stock are considered. Heifers, buffalo cows, and female yaks (yak cows) that have calved at least once are included in cows, buffalo cows and yak cows. Sows used for breeding purposes after the first farrowing for further reproduction are considered main breeding sows.

**Poultry population:** Accounts for the population of domestic poultry of all kinds, including young stock.

**Meat production:** Includes meat and fat obtained from the slaughter of cattle at meat processing plants and other slaughter points as well as from cattle and poultry slaughtered on agricultural enterprises themselves and in homes. Also included are cattle exported for slaughter to other countries (in terms of carcass weight). Carcass weight refers to the weight of meat, fat and edible offal obtained after slaughter in a chilled state.

**Milk production:** Includes all milk actually milked from all cows, buffalo cows, female sheep and goats, and mares; it also includes the amount of milked milk that is fed to animals (calves, piglets etc.). Milk sucked by offspring (calves, lambs etc.) is not included in the production.

**Egg production:** Includes eggs used for poultry reproduction (incubation etc.).

**Wool production:** The total amount of wool shorn in the current year includes wool used for on-farm needs. Wool obtained from skins during industrial processing for leather (greasy wool) is not included in production. Wool weight is reported as the physical weight immediately after sheep shearing. In regions where sheep are washed before shearing, resulting in wool from these sheep being to some extent washed (the so-called 'full' or 'semi-full' wash), the shorn wool is reported on an unwashed basis.

**Average milk yield per cow:** Determined by dividing the total amount of milk produced by cows by the average annual number of cows, including dry and barren cows. Cows transferred to fattening with cessation of milking, cows in meat herds, and cows allocated for group calf-rearing without milking throughout the year are not considered when determining the average annual number of cows.

**Wool clip per sheep:** Determined based on the sheep population at the beginning of the year and the total quantity of sheep wool shorn in the current year.

**Production of basic agricultural products per capita:** This indicator is calculated using data on the average annual population. When calculating per capita production, the total gross harvest of grain and legume crops is taken into account.

**Tractor and combine harvester fleet in agriculture:** Supply of tractors and combine harvesters to agriculture:

- › Tractors – includes all wheeled and tracked tractors, including self-propelled chassis;
- › Combine harvesters – self-propelled combine harvesters, combines for mounting on self-propelled chassis, and trailers. Fully equipped combines with necessary attachments are included.

**Supply of mineral fertilizers to agriculture:** Accounts for the supply of mineral fertilizers to agriculture from industry and wholesale warehouses as well as retail sales. The quantity of mineral fertilizers supplied to agriculture (excluding chemical feed additives) is accounted for during the calendar year in terms of the weight of nutrient substances.

**Forest resources:** The forest area includes areas completely covered with trees, including areas temporarily devoid of tree cover (clearings, glades, gaps) inside the forest, as well as non-forest areas located within the forest area (forest meadows, roads, unsuitable lands etc.). Forest areas also include forest protection strips and barriers, willow and poplar plantations, and other types of artificial forest plantations.

The forest resources cover national parks and forest reserves but does not include forest plantations in parks and squares within the boundaries of settlements.

**State forest plantations and forest planting:** Includes forest planting and afforestation, including the establishment of protective forest belts. This includes both areas newly afforested and the improvement and supplementation of forests in terms of the area of complete afforestation.

## Transport and communication

**Freight turnover of all types of public transport:** Calculated as the sum of the freight turnover of railway, river, sea, road, air and pipeline types of transport.

**Passenger turnover of all types of public transport:** Calculated as the sum of the passenger turnover of railway, river, sea, road (buses) and air types of transport.

**Operational length of public railway lines:** Determined as the sum of the operational length of individual railway lines and sections of public use as of the end of the year.

**Freight transportation and freight turnover of public railways:** The indicator of freight transportation is calculated as the sum of all goods transported by the country's railways in domestic and international traffic (export, import, transit) by all types of trains in freight cars of the working fleet, including

commercial shipments. The indicator is calculated as the sum of the weight of all shipments (including the weight of packaging) accepted for transportation by the railways within the country.

**Freight turnover of public railways:** Calculated as the sum of multiplying the weight of individual shipments accepted for transportation in the reporting period within the country in domestic and international traffic by the tariff distance of their transportation.

**Passenger transportation and passenger turnover of public railways:** Passenger transportation is calculated as the sum of all passengers transported within the country and in international traffic during the reporting period. The number of transported passengers is recorded at the moment of ticket sale (free distribution) or ticket composting, giving the right to travel during the reporting period.

**Passenger turnover of public railways:** Calculated as the sum of multiplying the number of passengers transported during the reporting period by the tariff distance of their transportation.

**Length of operated navigable waterways:** The length of all sections of natural and artificial waterways (rivers, lakes, reservoirs and canals) of the country used for the transportation of passengers and goods by ships as well as for the towing of barges. Sections used solely for transporting timber by floating are not included. Sections passing through lakes and reservoirs are measured along the navigable route planned through the lake or reservoir.

**Freight transportation and freight turnover of public river transport:** All goods transported by the country's river transport enterprises on cargo and cargo-passenger fleet ships owned by these enterprises or leased from other shipowners are considered. Also included are goods transported by river transport enterprises in barges under tow. The indicator is calculated as the sum of the weight of all individual shipments of goods transported within the country or to other countries. Goods whose transportation was completed in the reporting period are considered.

**Freight turnover of public river transport:** Calculated as the sum of multiplying the weights of all individual shipments of goods, the transportation of which was completed in the reporting period, by the tariff distance of transportation.

**Passenger transportation and passenger turnover of public river transport:** All passengers transported by the country's river transport enterprises on ships owned by these enterprises or leased from other shipowners, in domestic and international traffic, are considered. The record is made at the moment of ticket sale (free distribution) or sending tourists on a single voyage.

**Passenger turnover of public river transport:** Calculated as the sum of multiplying the number of passengers transported by the country's river transport enterprises in domestic and international traffic during the reporting period by the tariff distance of their transportation.

**Freight transportation and freight turnover of public sea transport:** All goods transported in voyages completed in the reporting period by the country's maritime transport enterprises on all types of voyages by all maritime vessels owned by these enterprises or leased from other shipowners are considered.

**Freight turnover of public sea transport:** Calculated as the sum of multiplying the weights of all individual shipments of goods transported by own ships of maritime transport enterprises and ships leased from other shipowners during voyages completed in the reporting period by the actual distance of goods transportation.

**Passenger transportation and passenger turnover of public sea transport:** All passengers transported by the country's maritime transport enterprises on all types of voyages by all maritime vessels owned by these enterprises or leased from other shipowners during voyages completed in the reporting period, in domestic and international traffic, are considered regardless of the tariff applied (normal, preferential or special).

**Passenger turnover of public sea transport:** Calculated as the sum of multiplying the number of passengers transported during the reporting period by the country's maritime transport enterprises and ships leased from other shipowners during voyages completed in the reporting period by the distance of their transportation.

**Length of main oil and oil product pipelines:** All pipelines for the transportation of oil and oil products located within the country.

Average annual number of workers and employees of public transport: The number of employees engaged in transportation includes:

- › railway transport – employees of all operational services involved in operational work related to the transportation of goods and passengers by rail;
- › river transport – all employees engaged in ship operations; not included are persons engaged in loading, unloading, auxiliary and other upkeep activities;
- › sea transport – all employees of the floating fleet working on ships of the maritime transport fleet during their operation, as well as those left as guard crews on ships during their repair, standstill or reserve status during the reporting period, registered with the enterprises of maritime transport of the country and paid from the funds of these enterprises;
- › road transport – all employees registered with the enterprises of public road transport of the country and related to the personnel of the main activity of these enterprises, as well as personnel of motor transport trusts and motor administrations, employees of automobile repair, tire repair, and other enterprises (not having independent inventory accounting and included in the composition of public road transport enterprises) involved in keeping the vehicle fleet in working condition and supplying it with operating materials.

**Number of postal, telegraph and telephone enterprises:** Include post offices, postal departments, agencies, intercity telephone stations, communication nodes and mobile communication units conducting postal, telegraph or telephone operations within the country.

**Number of outgoing written postal shipments:** Written shipments (regular and registered) include all letters, postcards, printed matter, valuable letters, parcels, phonopost items and postal items requiring a signature. Excluded are money orders.

**Number of sent newspapers and magazines:** All newspapers and magazines delivered to subscribers and received in the retail distribution network.

**Number of outgoing telegrams:** All sent telegrams, including those transmitted by telephone or teletype or submitted at the operational windows of postal enterprises, as well as those sent through pneumatic mail, to addressees within the country and abroad.

**Number of installed telephone sets:** Main and extension telephone sets installed in apartments, automatic machines, institutional apparatus, organisations and enterprises (direct lines, paired lines of collective use, parallel devices) that can be connected to subscribers of the public network.

**Number of intercity telephone conversations:** Outgoing intercity telephone conversations (domestic and international) that have occurred. Includes intercity calls when subscriber connections are made manually, semi-automatically and automatically, paid and free (service).

## Retail trade

**Retail trade** enterprises include stores, including department stores, pavilions, tents, kiosks, stalls, pharmacies, specialised shops of industrial enterprises, shops at wholesale trade enterprises and public organisations, and warehouse shops selling building materials, fuel etc.

**According to ownership forms**, retail trade enterprises (as well as catering establishments) are divided into state-owned, cooperative and private.

**State-owned retail trade enterprises** are those included in the state sector according to national practice.

**Cooperative retail trade enterprises** are those included in the cooperative sector according to national practice as well as retail enterprises of industrial cooperatives.

**Private retail trade enterprises** are retail outlets owned by private individuals.

**By types**, retail trade enterprises are divided into stores and other retail trade enterprises.

**Stores** (the main link in retail trade) are units with a sales floor for customers. Branches of stores are accounted for as separate units if they are located in different buildings.

**Stores** are subdivided into food, non-food and related.

**Food stores** include stores where the share of food sales accounts for at least 75% of the annual turnover. This category also includes supermarkets.

**Non-food stores** generally do not sell food products, or if they do, it is in small quantities and of a limited range. This category also includes department stores.

**Mixed stores** are stores in which both food and non-food products are sold, but where the share of food sales is less than 75% of the annual turnover.

**Other retail trade enterprises** include pavilions, tents, kiosks, stalls (i.e. small trading units with a special space for the seller but without a sales floor for customers) as well as pharmacies selling medicines directly to the population.

Retail trade enterprises do not include: hotels, central warehouses of enterprises, and complexes of household services for the population, including rental points for industrial goods, production units of trading enterprises etc.

**Catering establishments** include restaurants, cafeterias, confectioneries, cafes, buffets, bistros, canteens at enterprises and institutions, pavilions, tents, kiosks (in cases where the turnover of pavilions, tents, kiosks is included in the turnover of restaurants, cafeterias, confectioneries etc., they are not counted as units of the catering network).

**Retail turnover**, including catering, represents the value of goods sold to the population by an organised retail trade network as well as finished products regularly sold by state and cooperative industrial enterprises, state agricultural enterprises, forestry enterprises and industrial cooperatives outside the trading network. Retail turnover also includes the sale of goods from the retail trade network and the catering network to institutions, organisations and enterprises for their current non-production needs.

- › The volume of turnover is determined by the actual value of goods paid for by the population regardless of whether the goods were sold for cash or on credit. The turnover is recorded at the moment of sale to the population, not at the time of payment. The turnover includes the value of deposits for various types of packaging material, but the cost of returned packaging material is excluded from the sales volume.
- › The retail turnover also includes: the value of goods made to individual orders of the population (excluding the cost of the customer's material); turnover of pharmacies; sale of goods on trains, ships, airplanes and buses, excluding the cost of the ticket; sale of gasoline, fuel oil and other petroleum products to the population by gas stations and other specialised facilities; sale of liquefied gas in cylinders (propane, butane etc.); subscription costs and sales of newspapers, magazines and books to the population; sales of goods to the population for foreign currency; and turnover of consignment stores at the full selling price.
- › The retail turnover does not include: revenue from hotels, houses for the provision of accommodation services to business travellers and tourists, and dormitories separate from the turnover of restaurants, cafeterias, buffets etc. located in them; payment by the population for home delivery of goods, the cost of which is not included in the price; payment for developing photographs and film; entrance fees, cloakroom charges etc.; free issuance of goods by enterprises to their employees, except free food provided to employees of catering establishments; payment for postal and telegraph services; the value of goods transferred for further sale to another trade; sale of goods by agricultural producers at agricultural markets and directly at home, apart from the turnover of state and cooperative enterprises and private shops at agricultural markets; direct sales of goods by wholesale trade, industrial enterprises and artisan cooperatives to institutions, organisations and enterprises; the cost of food produced in hospitals, kindergartens and other medical and medical-preventive institutions; free provision of workers and employees with work clothes and uniforms; the cost of any type of industrial,

construction, finishing, and communal and domestic services; amounts paid by the population for rented (for temporary use) items and things (e.g. televisions, bicycles, passenger cars, washing machines etc.); the cost of interest for goods sold to the population on credit (instalment).

- › Retail turnover consists of the turnover of the retail trade network and the turnover of the catering network.

**Food products** include all consumer goods intended for human consumption and circulating in raw or processed form (e.g. flour, flour and pasta products, bakery and confectionery products, fats, meat and meat products, poultry, eggs, fish and fish products, milk and dairy products, sugar, potatoes, herbs and vegetables, canned food, fruits, spices etc.). Alcoholic beverages, non-alcoholic beverages, coffee and tea are also included.

**Non-food items** include all goods not considered food items. Tobacco and tobacco products are also considered non-food items.

## Foreign trade

The volume of foreign trade includes the value of all goods exported from the country (i.e. passing through the state border of the selling country) and respectively imported into the country (i.e. passing through the state border of the buying country) on a commercial basis as well as re-export trade turnover. The export and import of goods not of a commercial nature are not included in the trade turnover but are accounted for separately.

The country's exports include domestically produced goods, re-exported goods and transactions (services) of a material nature. Domestic production goods also include foreign-origin goods imported into the country and subjected to processing. Sorting, packaging of goods, and other operations that do not change the quality of goods are not considered processing.

The country's imports include imported goods intended for consumption in the national economy and for re-export as well as transactions (services) of a material nature.

Re-export goods include goods imported into the country and then re-exported without processing as well as goods purchased by foreign trade organisations of the country and sent directly to third countries.

Exports and imports include the value and quantity of exported and imported goods (industrial and agricultural products) covered by contracts (or subject to prior agreements in other forms) with foreign counterparties, including:

- › the value of complete equipment and materials supplied to enterprises being constructed in one country with the assistance of another, including the cost of equipment installation and the cost of project documentation for these enterprises;
- › the cost of ship repair, aircraft repair and other repairs abroad as well as the cost of repairing foreign ships, aircraft and other items in the country;
- › the cost of bunker fuel, aircraft fuel, food and materials supplied to foreign ships and aircraft in the country's ports and respectively purchased by domestic ships and aircraft in foreign ports;



- › the value of exported and imported films, including licensing fees;
- › the actual sale and purchase of goods through consignees regardless of the time of their export and import across the country's border;
- › the actual sale and purchase of goods exported or imported to various fairs, exhibitions etc.;
- › the cost of goods purchased to supply organisations of the country abroad (supply of fishing fleets etc.) as well as the cost of goods sold to supply foreign organisations in the country;
- › foreign trade operations related to the import of batches for the processing of raw materials (counterparty's raw materials), in which all production from the processing is exported to the country which is the owner of the raw materials, must be included at the cost of processing in the export of the country carrying out the processing and in the import of the country which is the owner of the raw materials.

Not included in the volume of foreign trade:

- › export and import of goods provided free of charge;
- › export and import of goods intended for exhibitions, fairs and consignments in the unsold part; temporary export and import of animals for participation in races etc.; export of films for rent abroad and their return to the country; import from abroad of foreign films for rental and their return export; and export and import of goods serving as trade samples;
- › export and import of goods financed by contributions to the UN Technical Assistance Fund, and transit of foreign goods through the country's territory;
- › the cost of vehicles and equipment sent for repair and returned after repair; temporary export of returnable packaging, containers and vehicles as well as their return from abroad; import of temporarily admitted vehicles, containers and returnable packaging into the country as well as their export abroad;
- › personal luggage of passengers; postal parcels of consumer goods, household goods and livestock of migrants; luggage and items (official and personal) intended for embassies, diplomatic missions and consulates;
- › fish catch; export and import of gold as a means of payment; payments and receipts in foreign currency for technical assistance etc.;
- › export and import of checks of state banks, receipts of foreign tourism bureaus etc.;
- › operations of the so-called 'internal export'.

The turnover of foreign trade is strictly accounted for during the calendar period regardless of which trade agreement and plan period the export and import of goods were carried out under.

The accounting of exports and imports of goods is carried out: for exports – at free on board (FOB) prices at the border of the selling country; for imports – at free on board (FOB) prices at the border of the selling country.

The geographical distribution of trade turnover is carried out by countries according to the feature of the origin and consumption of goods.

When distributing trade turnover by country groups, the following grouping is applied:

- › socialist countries;
- › developed capitalist countries;
- › developing countries.

Socialist countries: People's Republic of Albania, People's Republic of Bulgaria, Hungarian People's Republic, Socialist Republic of Vietnam, German Democratic Republic, People's Republic of China, Korean People's Democratic Republic, Republic of Cuba, Lao People's Democratic Republic, Mongolian People's Republic, Polish People's Republic, Socialist Republic of Romania, Union of Soviet Socialist Republics, Czechoslovak Socialist Republic and Socialist Federal Republic of Yugoslavia.

Developed capitalist countries: Australia, Austria, Belgium, the United Kingdom, Greece, Denmark, Israel, Ireland, Iceland, Spain, Italy, Canada, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, the United States of America, the Federal Republic of Germany, Finland, France, Switzerland, Sweden, the Republic of South Africa and Japan.

Developing countries: countries of Asia, Africa, Central and South America not listed above.

The **commodity structure of exports and imports** is provided for the following five aggregated commodity sections of the 'Unified Commodity Nomenclature of Foreign Trade of the Member Countries of the Council for Mutual Economic Assistance' (4th edition, supplemented and revised, Moscow, 1984), introduced into force on January 1, 1985:

1. **Machinery, equipment and transport vehicles:** Including metalworking, energy, electrical engineering, mining, metallurgical, petroleum, lifting and transport equipment, food, light, chemical, pulp and paper, construction, and other industrial sectors, buildings, engineering structures, communications, and public utility structures, instruments, laboratory and medical equipment, bearings, tools, abrasives, electronic and computer equipment, tractors, agricultural machinery and equipment, means of transport, and auxiliary equipment for them.
2. **Fuels, minerals and metals:** Including solid fuel, crude oil, petroleum products, synthetic liquid fuel, fuel gas, electric power, steam and water, metallic ores and concentrates, non-metallic minerals, clays, soils, ferrous metals, non-ferrous metals, precious metals and products made from them.
3. **Raw materials and products of its processing (non-food), raw materials for the production of food products, and food products:** Including timber and wood products, textile raw materials and semi-finished products, fur and fur raw materials (except finished fur products), leather raw materials and leather, seeds and planting material, essential oils, exotic resins, medical and pharmaceutical raw materials, technical fats and oils, concentrated and bulk feeds, other raw materials and materials, grain (including coarse), live animals intended for slaughter, oilseeds and fruits, tobacco (raw material), other food raw materials, meat and dairy products, animal fats, eggs, fish and fish products, flour products and legumes, vegetables, fruits and berries, sugar, vegetable oils, food and flavouring products other, beverages and tobacco products.
4. **Industrial goods for domestic consumption:** Including cotton, wool and other fabrics (except technical ones), clothing, textiles, leather goods, rubber and other footwear, household utensils, tableware, furniture, medical supplies, sanitary and hygiene items, perfumery and cosmetics,

vitamins, cultural and household goods, and industrial consumer goods not included in the previous groups.

5. **Chemical products, fertilizers, rubber, building materials and other goods:** Including chemical products, dyes, paints and varnishes, adhesive and sealing materials, explosives and pyrotechnic products, polymers and plastic materials, fertilizers and pest control preparations, rubber, rubber-asbestos products, isotopes and chemicals, construction materials, prefabricated houses, barracks, construction parts, metal tanks, structures, tubing and other goods.

## Wages and salaries

**Distribution of the population engaged in the national economy by sectors:** Those considered engaged in the national economy include individuals working in both the working-age and the non-working-age populations. This includes the following categories of the population: workers and employees; cooperative peasants; cooperative artisans; those employed in personal subsidiary farms of workers and employees; cooperative peasants and cooperative artisans; non-cooperative peasants, artisans, craftsmen, private traders, religious cult servants, individuals in free professions etc.

**The average annual number of workers and employees in the national economy is calculated based on the average list of workers and employees during specific periods of the year:** The average list number of workers and employees overall and by sectors for each month is calculated as the ratio of the number of staff list members for all calendar days (including holidays and weekends) to the number of calendar days in the reporting month. The list number of workers and employees for weekends and holidays is considered equal to the list number of workers and employees for the preceding workday. The average list number of workers and employees for the year is determined as the simple arithmetic mean of the average list number of workers and employees for all months of the corresponding period.

**The list of employees of an enterprise, institution or organisation includes all employees hired for permanent, seasonal or temporary work for one day or more:** This includes employees who actually showed up for work, including those who did not work due to downtime caused by material shortages, power outages etc.; employees on official business trips if their wages are retained at this enterprise (institution, organisation), including employees on short-term business trips outside the country and on annual and additional leaves; employees who did not show up for work due to performing state and public duties, family circumstances and other valid reasons with the administration's permission; employees who have a day off according to the enterprise's (institution's, organisation's) work schedule and employees who received a day off for working on weekends and holidays; employees hired on probation and to replace absent employees (due to illness, maternity leave, unpaid leave); employees temporarily employed in agricultural, construction and other work if their wages are fully or partially retained at the main place of work; employees hired for permanent part-time work or for an incomplete workweek. In the average list, these employees are recalculated for full-time employment based on the duration of the working time specified in the employment contract; employees engaged in home production of goods from the enterprise's raw materials and materials (homeworkers); employees absent from work due to illness (for the entire period of illness until return to work according to sick leave certificates or until departure due to disability); and women on maternity leave as well as on additional unpaid leave until the child reaches a certain age, in accordance with the legislation of the

country. Women on additional unpaid leave are included in the list number of employees, but they are not included in the average list number of employees.

**The number of specialists with higher and secondary special education employed in the national economy:** Specialists with completed higher and secondary special education employed in the national economy include all individuals with a diploma (certificate, testimonial) of completion from a higher or secondary special educational institution and working in enterprises, institutions, organisations, and cooperative and collective farm enterprises regardless of the work performed or the position held.

**The average monthly wage of workers and employees is determined as the ratio of the total amount accrued for the year for the wage fund, including all types of bonuses, to the average list number of workers and employees, and by dividing the resulting amount by 12.**

## Education, culture and art

**Number of nurseries:** These are preventive units whose purpose is the care, medical service and upbringing of healthy children from 45 days old to 3 years old. Depending on their purpose, they can be classified as: permanent nurseries, intended to operate year-round (regardless of the number of months of actual operation), and seasonal nurseries, operating, for example, during agricultural seasons.

**Number of children in nurseries:** The number of children listed in nursery registers on the last day of the year regardless of the number of places in the nurseries. For seasonal nurseries, the number of children on the day of maximum deployment throughout the season is considered. This indicator also covers nursery departments in kindergartens (combined nurseries and kindergartens).

**Number of kindergartens:** Kindergartens (permanent and seasonal) are institutions for the upbringing of children aged 3 to the age of school enrolment (depending on the education structure in the respective country) as of the end of the year. Playgrounds for children's games operating in the summer are not included.

**Number of children in kindergartens:** The number of children between the age of 3 and the age of school enrolment (depending on the education structure in the respective country) listed in the registers of permanent kindergartens. For seasonal kindergartens, the number of children on the day of maximum deployment is considered.

**Number of general education schools:** This includes compulsory education schools with a duration of 7 to 10 years and secondary general education schools with a duration of 2 to 4 years as of the beginning of the school year. A school is considered as an educational unit with a director (head), not just as a place where the educational process takes place.

**Number of teaching staff in general education schools:** This includes individuals with secondary and higher education who perform the functions of teachers, instructors, workshop masters in school workshops, and those engaged in the education and upbringing of students listed in the school registers at the beginning of the school year.

**Number of students in general education schools:** This covers the total number of students listed in the school registers at the beginning of the school year, including those enrolled in day, evening and correspondence courses.

**Number of vocational schools and colleges:** This includes the number of institutions for the education and training of adolescents for professional qualifications in a specific trade operating at the beginning of the school year.

**Number of students in vocational schools and colleges:** This accounts for individuals listed in the school registers at the beginning of the school year.

**Number of technical colleges:** This includes pedagogical schools with a training cycle of 4 to 6 years, technical colleges for technical personnel, technical schools for workers' qualification enhancement, and technical schools for masters.

**Number of teaching staff in technical colleges:** This includes individuals with secondary or higher education engaged in the education and upbringing of students listed in the institution's registers at the beginning of the school year, including those with a primary job in production (engineers, technicians, masters etc.).

**Number of students in technical colleges:** This accounts for individuals listed in the registers of technical colleges at the beginning of the school year, encompassing day, evening and correspondence education.

**Number of universities:** Educational institutions consisting of one or more faculties (universities, polytechnic or specialised institutions) preparing students in specific specialties. A functioning educational unit at the beginning of the school year is considered, not just the premises where the educational process takes place.

**Number of teaching staff in universities:** This includes individuals with special training engaged in the education and upbringing of students, including those with a primary job in production (engineers, economists, doctors, art workers etc.), simultaneously performing teaching duties, as listed in the institute's registers at the beginning of the school year. The number of persons in teaching is considered, and not the number of teaching positions held.

**Number of students in universities:** This covers the number of students listed in faculty registers at the beginning of the school year, encompassing day, evening and correspondence education. Foreign students studying in the country are included. However, students of the country studying abroad are not included, nor are students of military faculties, higher party schools, trade union schools and people's universities.

**Graduates from vocational schools and universities:** The number of students graduating from educational institutions in:

- › Industry, construction, transportation and communications;
- › Agriculture (including forestry engineers and veterinary doctors);

- › Economics and law;
- › Health care, physical education and sports;
- › Education;
- › Arts and cinematography.

**Number of libraries:** A library is considered a systematic collection of books, periodicals, and other printed and audiovisual materials at state institutions and enterprises or at public organisations. Libraries acquire, preserve and distribute books, newspapers and magazines for reading in reading rooms or at home.

**Library stock:** This accounts for the total number of books, brochures, newspaper sets and magazine sets as well as other printed and audiovisual materials available in the library.

The indicator 'Number of available volumes in mass libraries per 10,000 population' is determined based on the population at the end of the year.

**Theatres:** These are theatrical groups consisting of professional actors performing artistic works for the public and having independent administration (management). In cases where two (or more) theatrical groups work continuously on two stages (simultaneously) but have one administration (management), they are counted as one unit. The same applies to groups performing plays of different genres or languages.

**Theater visitors** are individuals who attended a performance with a paid ticket within the territory of the respective country. Visitors also include individuals who attended performances by foreign theatrical groups during their tours within the country. Viewers who attended performances by national theatrical groups abroad are not included.

The indicator 'Number of theatre visits per 1,000 population' is determined based on the average annual population.

**Cinema visitors** are individuals who attended each movie screening with a paid ticket. Visitors also include individuals who attended screenings in summer and public (trade union) cinemas. For screenings of two-part films, where two tickets are sold for one visit, the number of visitors is counted based on the number of tickets sold (i.e. as the number of visitors for two cinema screenings).

**The indicator 'Number of cinema visits per person'** is determined based on the average annual population.

**Number of books and brochures (printed units):** A publication printed by typographic or non-typographic means, representing a single entity, regardless of whether the publication consists of one or more volumes. For example, an encyclopaedia published in four volumes during one year is considered one title (publication). If a title (publication) is issued over several years, it will be counted once each year it is published.

**Annual print run of books and brochures:** The total number of copies of all books and brochures published during the year.

**Number of magazines (titles):** The number of periodicals containing articles, essays, notes, information (on various sociopolitical, scientific and production issues), literary works and illustrations. The same magazine title published simultaneously in two languages is counted as two magazines. All periodical publications appearing 1 to 52 times a year, regardless of format and periodicity, are included. Internal bulletins of government agencies and people's councils are not included.

**Number of newspapers (titles):** Publications containing news, information and commentary on domestic and international political, social, economic, cultural, professional, sports etc. events as well as literary works, illustrations and advertisements, regardless of the format and frequency of their publication. The same newspaper title published simultaneously in two languages is counted as two newspapers. Publications issued four or more times a week are considered daily newspapers. Wall newspapers and photo newspapers are not included in the count.

**Annual print run of newspapers (copies):** The total number of copies of all newspapers published during the year regardless of the frequency of issue.

**Radio broadcast points:** This includes registered (accounted for) reproducing devices and points used by the population as well as in enterprises, institutions and organisations.

**Radios and televisions:** These indicators express the number of registered radios and televisions, which corresponds to the number of permits issued for their use.

In the absence of registration of radios and televisions, their presence is determined according to the method of accounting adopted in the individual countries.

## Health care and social welfare

**Number of beds in hospital-type institutions:** Beds in hospital-type institutions are effectively deployed beds equipped with necessary inventory and ready to admit patients regardless of whether they are occupied or temporarily vacant. The count of beds also includes beds in anti-tuberculosis sanatoriums.

The number of beds in hospital-type institutions per 10,000 population is determined taking into account the population size at the end of the year.

**Number of physicians of all specialties:** This includes all individuals with a medical degree at the end of the year. The total count of physicians also includes dentists with completed medical education. Dentists without completed medical education are not included in the count of physicians since they have secondary specialised education. Military doctors are also not included.

Physicians refer to individuals, not positions held by physicians. The number of positions held by physicians may not correspond to the number of individuals as the same person may work part-time. The count of individuals includes physicians based on their primary place of work.

The number of physicians per 10,000 population is determined based on the population size at the end of the year.

**Number of pharmacies:** Pharmacies are sanitary units preparing and dispensing medications based on prescriptions. This includes both specialised pharmacies typically operating within healthcare facilities and serving hospitalised or ambulatory patients as well as open-type (public) pharmacies providing medications to the general population.

Pharmacies do not include medicine warehouses, veterinary pharmacies, military pharmacies, optical shops or pharmaceutical points/kiosks where the population can obtain ready-made medications.

**Number of pharmacists:** Individuals with a higher pharmaceutical education working in open or specialised pharmacies, in medicine warehouses, and in regional departments and pharmaceutical administrations regardless of the position held. This also includes personnel from medical-pharmaceutical higher education institutions and research institutes with pharmaceutical training but occupying pedagogical or research positions as well as pharmacists in pharmaceutical factories. Military medical institution pharmacists are not included.

**Number of beds in sanatoriums:** This includes effectively deployed beds equipped with the necessary inventory in sanatoriums (i.e. beds ready to accommodate patients) regardless of whether they were occupied or not.

**Number of individuals admitted for treatment in sanatoriums:** This includes individuals who have arrived at sanatoriums for a period of no less than 18 days, who are provided with accommodation, meals and the necessary treatment by the sanatorium administration.

**Number of beds in holiday homes:** This includes effectively deployed beds (i.e. beds equipped with the necessary inventory).

**Number of individuals on holiday:** Individuals staying in holiday homes for a period of at least seven days who are provided with accommodation and meals or only accommodation are considered holidaymakers.

**Number of pensioners:** Individuals receiving a monthly sum necessary for their existence under conditions provided by law (maximum age, length of service, disability, loss of breadwinner, incapacity etc.). This includes both pensioners of state social insurance and pensioners of social insurance of industrial cooperatives and agricultural production cooperatives.



## LIST OF COMECON STATISTICAL YEARBOOKS

All Comecon yearbooks were published by McMillan, London, except the first yearbook, RGW in Zahlen / CMEA DATA, which was published by wiiw.

RGW in Zahlen / CMEA DATA 1978

COMECON DATA 1979

COMECON FOREIGN TRADE DATA 1980

COMECON DATA 1981

COMECON FOREIGN TRADE DATA 1982

COMECON DATA 1983

COMECON FOREIGN TRADE DATA 1984

COMECON DATA 1985

COMECON FOREIGN TRADE DATA 1986

COMECON DATA 1987

COMECON DATA 1988

COMECON DATA 1989

COMECON DATA 1990

FOREIGN TRADE DATA OF COUNTRIES IN TRANSITION 1980-1991

## VLABEL FIELD LOGIC

Series codes consist of six characters whereas the first position shows the country. Here are some examples for positions 2 to 6:

E211E: total population

E3-E: other demographic data, end of period figures

N111R: national income, produced total, constant prices

K113N: capital stocks, electricity, current prices

X412N: exports to EEC, fuels, raw materials, current prices

XZ2XN: exports to USA, total, current prices MZ2XN imports from USA, total, current prices

Y1-M: crop production and yields by products, physical units

P5Z1: S terms of trade, total, index

Series codes consist of six characters composed of number and letters and follow the rule listed below:

Character position

- 1: Country
- 2: Classification by basic kind of data (production, population exports etc.)
- 3: Type of classification used for specific data
- 4+5: Detailed classification for Position 3 (branches, products etc.)
- 6: Type of data (nominal, Index, average etc.)

Position 1:

- B Bulgaria
- C Czechoslovakia (CSSR)
- D German Democratic Republic (GDR)
- H Hungary
- P Poland
- R Romania
- S Soviet Union (USSR)
- T CMEA
- Y Yugoslavia

Position 2:

- A Production
- B Government incomes and outlays
- C Consumption
- E Employment and population
- G Gross domestic product
- I Investment
- K Capital stocks
- M Imports
- N National income (produced, consumed)
- P Prices, conversion factors, terms of trade, debt
- Q Productivity (labour, capital)
- R Retail trade turnover
- S State purchases (of agricultural products)
- W Wages and salaries, other private incomes

- X Exports
- Y Crop yields, animal production
- Z Miscellaneous data

Position 6:

- A Averages
- B Status at beginning of the period
- E Stock at end of period
- M Physical units
- N Current prices
- R Constant prices
- S Index
- U Unit prices
- Y Crop yields
- Z Specific data (classification, source etc.)

## IMPRESSUM

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