





Methodological report Employment in the national economy

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Metadata

Title of the methodological report	Methodological report. Employment in the national economy
Author	Statistical Office in Bydgoszcz
Statistical units in the survey	Employed persons insured with the Social Insurance Institution (ZUS) or the Agricultural Social Insurance Fund (KRUS).
Scope of data in the survey	The number and characteristics of employed persons in the national economy: sex, age, place of residence, employment status and their structure in terms of the characteristics of an employer (an entity that is a contribution payer): business line (by kind of PKD/NACE activity), sector (by ownership form), size (in terms of the number of employed persons), location (by seat of an employer's entity).
Type and method of the survey	Register survey, administrative data collection
Data collection tools/data sources	<p>Administrative data sources:</p> <ul style="list-style-type: none"> • The Central Register of Contribution Payers of the Social Insurance Institution (ZUS), • The Central Register of Insured Persons of the Social Insurance Institution (ZUS), • The Register of the Agricultural Social Insurance Fund (KRUS), • The Central Register of Entities of the National Records of Taxpayers, • The Ministry of the Interior and Administration, the Ministry of National Defence – aggregated data on employed persons in budgetary units conducting activity within the scope of national defence and public safety. <p>Statistical data sources:</p> <ul style="list-style-type: none"> • The Statistical Business Register (SBR) <p>Data collection procedure – datasets are transferred by the Social Insurance Institution (ZUS), the Agricultural Social Insurance Fund (KRUS), the Ministry of Finance, the Ministry of the Interior and Administration and the Ministry of National Defence. The legal basis for the transfer of data by the above-mentioned administrators is the Statistical survey programme of official statistics (PBSSP).</p>
Presentation of the survey results	Publications, result tables, and studies in accordance with the Statistical survey programme of official statistics (PBSSP) for a given year
Classifications used	<p>The Polish Classification of Activities PKD 2025 – coherent with NACE Rev. 2.1: https://stat.gov.pl/Klasyfikacje/doc/pkd_nowelizacja/pkd_nowelizacja.htm</p> <p>The Polish Classification of Activities PKD 2007 – coherent with NACE Rev. 2: https://stat.gov.pl/Klasyfikacje/doc/pkd_07/pkd_07.htm</p> <p>The National Official Register of the Territorial Division of the Country: https://eteryt.stat.gov.pl/eTeryt/english.aspx?contrast=default</p> <p>The Nomenclature of Territorial Units for Statistics (the NUTS classification): https://stat.gov.pl/en/regional-statistics/classification-of-territorial-units/classification-of-territorial-units-for-statistics-nuts/</p> <p>The Coding System for Territorial and Statistical Units (KTS): https://stat.gov.pl/en/regional-statistics/classification-of-territorial-units/the-coding-system-for-territorial-and-statistical-units-kts/</p>
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Contents

Metadata	3
Main abbreviations	5
Introduction	6
History of the survey	7
1. Type of the survey, statistical units and scope of data in the survey	8
1.1. Statistical units	8
1.2. Scope of data	8
2. Data sources	8
3. Terms and variables in the survey	11
3.1. Definitions of basic terms	11
3.2. List of basic variables	12
4. Methodology of the survey	13
4.1. Identification of employed persons in the national economy	13
4.2. Methodology of determining the main job	14
4.3. Methodology of determining employment status	17
5. Organisation and management of the survey	18
6. Presentation of the survey results	19
7. Quality assessment of the survey	19
7.1. Data imputation methods used	20
7.2. Scale of imputation	21
Bibliography	23
Appendix 1. List of insurance title codes used by the Social Insurance Institution (ZUS)	24
Appendix 2. List of source variables	29
Appendix 3. List of benefit/break codes used by the Social Insurance Institution (ZUS)	32
Appendix 4. Changes in the methodological report	34

Main abbreviations

Abbreviation	Full name
SBR	the Statistical Business Register
CRP KEP	the Central Register of Entities of the National Records of Taxpayers
KRUS	the Agricultural Social Insurance Fund
PESEL	the Universal Electronic System for Registration of the Population
PKD	the Polish Classification of Activities
TERYT	the National Official Register of the Territorial Division of the Country
ZUS	the Social Insurance Institution

Introduction

The report describes the methodology for the 'Survey on Employment in the National Economy', the main objective of which is to provide statistics on the size and structure of the employed population. The survey is based on administrative data from the registers of the Social Insurance Institution (ZUS), the Agricultural Social Insurance Fund (KRUS), the Ministry of the Interior and Administration, the Ministry of National Defence, the Ministry of Finance and data from the Statistical Business Register (SBR) of Statistics Poland.

The methodological report consists of seven chapters. Chapter 1 defines type of the survey as well as statistical units and scope of data in the survey. Chapter 2 describes the data sources used. Chapter 3 provides definitions of basic terms and identifies variables included in the survey. The next chapter describes the methodology of the survey. Chapter 5 presents the organisation and management of the survey, Chapter 6 deals with the forms of presentation of the results including possible breakdowns and aggregation of data. Chapter 7 assesses the quality of the survey.

The methodology for the surveys of the labour market and wages and salaries is described in the *Methodological report. Statistics on labour market, wages and salaries* [1]. The publication includes definitions of basic terms used in individual surveys (with commentary), describes the organisation and scope of the statistical surveys of the labour market and wages and salaries, and presents basic categories of figures and indicators.

History of the survey

Until 2000, data on employed persons were collected through the Report on the size of employment (form Z-01). In 2001, there was an incorporation of variables from form Z-01 into the Report on employed persons, wages and salaries and working time (form Z-06).

In 2009 the Statistical Office in Bydgoszcz began to carry out activities aimed at using data from administrative registers in the production of statistics on the labour market, including the 'Survey on Employment in the National Economy'.

In 2014, a research work was carried out under the Technical Assistance Operational Programme entitled *Development of methodology and estimation of data on workers in the national economy at the powiat level* [2].

The work allowed initial identification of data sources and an attempt to estimate the number of employed persons. However, the lack of access to data identifying individuals meant that it was not possible to develop a suitable methodology. It was only in 2016 that an amendment to the Act on Official Statistics resulted in Statistics Poland gaining the right to access identifiable microdata from administrative sources. Provisions were introduced into the Statistical survey programme of official statistics (PBSSP) that clarified the scope and timing of data submission to Statistics Poland.

In the years 2017-2018, within the framework of the Technical Assistance Operational Programme, another research work was carried out entitled *Development of a methodology and estimation of the number of employed persons in the national economy by place of residence and main workplace at NTS level 4, the registered unemployment rate at NTS level 5 and measures of gross wages and salaries at NTS level 4* [3]. One of its main objectives was to provide information on the number of employed persons in the national economy by main workplace and place of residence at the powiat level by sex and groups of PKD/NACE sections, using data from administrative sources. Achieving this objective required an analysis of data collected in public administration information systems from the point of view of their use in the production of labour market statistics and the development of a methodology for determining the number of employed persons based on these data. The work carried out showed that it was necessary to adapt the survey methodology to the data available in administrative sources. It was necessary to adopt a compromise on the comparability of the data obtained, limited by the needs and legal conditions of the administrators of administrative sources. Statistics Poland makes secondary use of data collected by the administrators for their own purposes, and the objectives of the operation of administrative registers differ from those of the official statistics system. Therefore, among other things, the terms used in the registers do not always coincide with the definitions used in the official statistics system.

In the following years, obtaining additional data from the administrators allowed the methodology for determining the number of employed persons and estimating wages and salaries to be improved. The first result of this work was the publication of the *Methodological report. Employment in the national economy according to administrative data sources* of 2021. In the following years, the results obtained were analysed, the methodology was revised, additional data necessary to improve the methodology were obtained from the administrators and its final form was established.

Until 2022 (until data for December 2021), the main sources of data on the size and structure of the employed population were the reports of national economy entities, the results of agricultural censuses conducted by Statistics Poland, administrative data on the number of employed persons in budgetary units conducting activity within the scope of national defence and public safety, and on those employed in membership organisations, foundations, associations, economic self-governments, employers' organisations, political parties, trade unions and other social organisations. From 2023 (starting with data for December 2022), the main data sources for statistics on employed persons are the registers and information systems of ZUS, KRUS and the Ministry of Finance. Data from ZUS and KRUS contain information on persons subject to social insurance and health insurance and their contribution payers, and data from the Ministry of Finance contain information on taxpayers. Due to the increased use of administrative sources, information on employed persons in the national economy is published on a monthly basis.

1. Type of the survey, statistical units and scope of data in the survey

The 'Survey on Employment in the National Economy' is a register survey conducted on a monthly basis. The survey results are available approximately five months after the end of the month to which the data relate.

1.1. Statistical units

Statistical units include employed persons insured with:

- ZUS, under an insurance title which indicates performing work,
- KRUS, with a status of being subject to insurance which indicates performing work.

A list of insurance title codes used by ZUS can be found in Appendix 2.

The units of statistical analysis and units of observation are insured persons and their payers of social insurance and health insurance contributions.

1.2. Scope of data

The scope of data in the survey covers the number and characteristics of employed persons in the national economy, including: sex, age, place of residence and employment status, as well as their structure in terms of the characteristics of an employer, i.e. an entity that is a contribution payer¹. The characteristics of an employer include classification by: business line (kind of activity according to PKD/NACE), sector (ownership form), size class (measured in terms of the number of employed persons) and location (seat of an employer).

2. Data sources

The source of data in the 'Survey on Employment in the National Economy' is public administration information systems.

The survey is based on data from administrative registers:

- The Central Register of Contribution Payers and the Central Register of Insured Persons kept by ZUS,
- The Insurance Information System kept by KRUS,
- The Central Register of Entities of the National Records of Taxpayers kept by the Ministry of Finance.

The survey also uses aggregated data from the Ministry of the Interior and Administration, the Ministry of National Defence and the Statistical Business Register (SBR) kept by Statistics Poland.

¹ A payer of contributions to social insurance and/or health insurance is a legal person, an organisational unit without legal personality, and a natural person who is obligated to pay contributions for insured persons and, in the case of a natural person, also for themselves. Therefore, payers are entities paying remuneration under the title of employment relationship, service, membership in agricultural production cooperatives, as well as contracts of mandate, contracts to perform a specified task, agency agreements, outwork contracts and other contracts resulting in the obligation to pay remuneration. Contribution payers also include, among others, the Social Insurance Institution (ZUS) – in relation to persons to whom it pays maternity allowances or allowances equal to a maternity allowance.

The Social Insurance Institution (ZUS) – the Comprehensive Information System (KSI ZUS), including the Central Register of Contribution Payers and the Central Register of Insured Persons

The main purpose of the system is to record contributions in individual accounts of insured persons, in addition to determining the right and amount of old-age pensions (retirement pensions), other pensions and allowances from social insurance, and handling sick notes. The data in the system are updated on the basis of insurance documents relating to insured persons sent in by contribution payers, documents relating to sick leave and state registers.

The following types of insurance are distinguished:

- social insurance (old-age pension insurance, disability pension insurance, sickness insurance, accident insurance),
- health insurance.

The rules of social insurance coverage are governed by the Act of 13 October 1998 on the Social Insurance System [4].

Old-age pension insurance (retirement insurance) and disability pension insurance (disability insurance) are obligatory for, among others:

- employees,
- outworkers,
- members of agricultural production cooperatives and agricultural circles cooperatives,
- persons who work under an agency agreement, a contract of mandate or any other contract for the provision of services and persons who cooperate with them,
- persons who conduct non-agricultural activity and those who cooperate with them,
- deputies and senators receiving a salary and members of the European Parliament,
- persons performing paid work on the basis of a referral to work, while serving a sentence of imprisonment or being in temporary detention,
- clergypersons,
- non-professional soldiers in active military service, except for soldiers in a period of service as a candidate,
- persons undergoing alternative military service,
- persons on childcare leave or receiving a maternity allowance or an allowance in the amount of a maternity allowance,
- members of supervisory boards remunerated for this function.

The rules of health insurance are governed by the Act of 27 August 2004 on Health Care Services Financed from Public Funds [5]. The obligation to be subject to health insurance applies, *inter alia*, to all persons meeting the conditions for social insurance coverage in accordance with the Act on the Social Insurance System [4], but also to persons who are covered by another pension security system, e.g. officers, judges, prosecutors.

An entity that is a contribution payer is obligated to report an insured person to social insurance, settle and pay the due contributions on a monthly basis in due time, and deregister him or her in the event of termination of an insurance title. The rules for insurance coverage are not uniform for all persons insured with ZUS and depend on an insurance title. Not everyone insured with ZUS is subject to compulsory social insurance. A person who is not subject to compulsory retirement insurance and disability insurance may join them voluntarily.

The primary, from the point of view of the survey, variables available in the ZUS register include sex, date of birth, PESEL number and address details of an insured person, effective date of insurance coverage, insurance title code, the contribution assessment basis for retirement insurance and disability insurance, the contribution assessment basis for health insurance and working time – percentage of full-time equivalent (FTE).

A detailed list of source variables is provided in Appendix 2.

The Agricultural Social Insurance Fund (KRUS) – the New Insurance Information System (nSIU)

The primary purpose of the system is to record persons covered by social insurance of farmers (contribution payers and insured persons) and contributions paid for insured persons. Data in the system are updated on the basis of documents submitted by contribution payers and on the basis of information from official records.

In social insurance, KRUS distinguishes between retirement insurance, disability insurance and accident, sickness and maternity insurance.

The rules of insurance coverage are regulated by the Act on Social Insurance of Farmers [6].

Social insurance of farmers is compulsory for:

- a farmer, residing and conducting in the territory of the Republic of Poland, personally and on his or her own account, agricultural activity on an agricultural holding which he or she owns, with an area exceeding 1 comparative fiscal hectare of agricultural land or a special branch of agricultural production, also within a group of agricultural producers,
- a farmer's spouse,
- a household member permanently working on that agricultural holding, if that farmer, his or her spouse, household member, is not subject to other social insurance, has no established right to a retirement pension or other pension or has no established right to social insurance benefits. A farmer running an agricultural holding is obligated to pay contributions for all persons subject to insurance on his or her agricultural holding.

The basic variables from the point of view of the survey, available in the KRUS register, are sex, date of birth, PESEL number, address details and the status of insured persons, in addition to information on being subject to retirement insurance and disability insurance and accident, sickness and maternity insurance, as well as the area of an agricultural holding and the date of commencement of agricultural activity by a payer.

A detailed list of source variables is provided in Appendix 2.

The Ministry of Finance – the Central Register of Entities of the National Records of Taxpayers

The purpose of the system is to meet the obligations arising from the provisions of law and the performance by the tax administration of tasks defined by law for the public benefit. The register collects data on natural persons, legal entities, organisational units without legal personality and other entities, if they are taxpayers on the basis of separate acts, and data on tax remitters and payers of insurance contributions. The data in the system are updated with information from the PESEL register and on the basis of documents and updating applications of taxpayers.

Pursuant to the Act of 13 October 1995 on the Principles of Registration and Identification of Taxpayers and Tax Remitters [7], taxpayers are required to submit an identification application to the head of a tax office or the competent authority on the basis of separate regulations. The identification application is made once, regardless of the type and number of taxes paid by a taxpayer, the form of taxation, the number and kinds of economic activities and the number of enterprises run. The identification application is not submitted by taxpayers who are natural persons included in the PESEL register, who do not conduct economic activity or who are not registered taxpayers of the Value Added Tax.

The basic variables, from the point of view of the survey, available in the register are the identification characteristics and address details of taxpayers and the address details and information on the PKD/NACE section of tax remitters. Data from the Central Register of Entities of the National Records of Taxpayers are used auxiliary, to supplement information obtained from ZUS and KRUS.

A detailed list of source variables is provided in Appendix 2.

The Ministry of Interior and Administration

The survey uses aggregated data on the number of employed persons in budgetary units conducting activity within the scope of national defence and public safety, in the Ministry of Interior and Administration and in formations subordinate to the minister in charge of internal affairs.

The Ministry of National Defence

The survey uses aggregated data on the number of employed persons in budgetary units conducting activity within the scope of national defence.

Statistics Poland – the Statistical Business Register (SBR)

The database acts as a register of entities that can be covered by statistical surveys. Its purpose is to provide the information necessary for the creation of sampling frames for statistical surveys conducted by the official statistics system on the activities of national economy entities. The main source of data for the SBR is the National Official Business Register REGON, data updating is performed on the basis of many sources, including datasets of Statistics Poland, the Ministry of Finance and ZUS. The characteristics of entities such as: legal and economic status, kind of activity (according to the PKD/NACE classification) or address details are updated on an ongoing basis in the SBR.

The basic characteristics of entities, used in the survey, are legal and organisational characteristics, ownership characteristics and their kind of activity (according to the PKD/NACE classification). Data from the SBR are used auxiliary, to supplement information obtained from ZUS, KRUS and the Ministry of Finance.

A detailed list of source variables is provided in Appendix 2.

3. Terms and variables in the survey

3.1. Definitions of basic terms

Definitions used in the survey:

Employed persons in the national economy – persons performing work which brings them earnings in the form of wages and salaries or income, on the basis of an employment relationship or any other legal relationship or legal act, irrespective of the place and duration of that work, and natural persons conducting agricultural or non-agricultural economic activity.

For each employed person in the national economy, the employment status is determined: employee, self-employed person, contributing family worker, member of a farming cooperative, outworker, clergyperson.

Employees (wage and salaried workers) – persons employed on the basis of an employment relationship (employment contract, appointment, nomination, election) or a service relationship for a definite or indefinite period of time, on a full-time or part-time basis².

Self-employed persons – owners, co-owners and leaseholders of individual agricultural holdings, owners and co-owners of national economic entities conducting non-agricultural economic activity and other self-employed persons, such as persons practising liberal professions.

Contributing family workers – spouse, household members and persons in a common household who help in conducting economic activity, which also includes running an individual agricultural holding.

Members of farming cooperatives – members of agricultural production cooperatives and the cooperatives with a different production profile established on their basis, for which the cooperative law is in force, as well as members of agricultural circles cooperatives.

Outworkers – persons under contract to perform specific activities for the contracting unit outside its premises.

Clergypersons – clergypersons not conducting economic activity paying contributions to retirement insurance, disability insurance and sickness insurance with ZUS.

Main job – the job that usually takes the most time; if two jobs (or more) take the same amount of time, the main job is the one with the higher earnings or income. The main job criterion is used to count persons who have several jobs once.

3.2. List of basic variables

The primary value in the survey is the number of employed persons in the national economy.

All data on employed persons in the national economy are presented in relation to their main job.

When presenting data on employed persons by employer's characteristics (address of an entity that is a contribution payer, PKD/NACE section of an entity that is a contribution payer), the characteristics of the payer of the main job are shown.

The survey includes both variables characterising employed persons and variables describing the national economy entities in which they work.

Variables describing employed persons:

- sex,
- age,
- citizenship,
- working time (FTE percentage),
- employment status,
- place of residence at the level of macroregions, regions, voivodships, subregions, powiats and cities with powiat status and gminas.

² Working time – percentage of full-time equivalent (FTE) is defined in the contract as full-time or part-time employment. In accordance with the Rules of social insurance and health insurance coverage and determining the contribution assessment basis, it should be recorded in insurance documents as a common fraction. An unspecified working time means that the information is missing or incorrect in the insurance documents.

Variables describing national economy entities:

- size (measured in terms of the number of employed persons),
- kind of activity (according to the PKD/NACE classification),
- ownership sector,
- place of a seat at the level of macroregions, regions, voivodships, subregions, powiats and cities with powiat status and gminas.

The source data of the survey are microdata, so there is the possibility to aggregate them freely by characteristics of employed persons, as well as by characteristics of an entity.

4. Methodology of the survey

4.1. Identification of employed persons in the national economy

Due to the significant differences in the structure of the datasets obtained from the different administrators and in the methodology they use, a two-stage approach is used to identify employed persons and their main job. In the first stage, employed persons and their main job are determined separately in the ZUS dataset and the KRUS dataset. This information is then combined, i.e. employed persons are identified according to the criterion of the main job (i.e. counting persons with several jobs only once) and their employment status is determined. In the second stage, the employment status of each employed person is determined.

Identification of employed persons in the ZUS dataset

Persons who simultaneously meet the following conditions are considered to be employed persons on the last day of a given month:

- are at least 15 years old on the last day of a given period,
- have a date of commencement of ZUS contributions equal to or earlier than the last day of a given period,
- are not on unpaid leave³ on the last day of a given period, or if they are, it lasts less than a full month,
- meet one of the following conditions:
 - are insured under an insurance title code which indicates performing work (i.e., among others, an employee, outworker, member of a cooperative, deputy, senator, clergyperson, soldier, officer, judge, prosecutor or juror of the court)⁴,
 - are insured under an insurance title code indicating that they are conducting economic activity and it is not a sole proprietorship that has been suspended⁵,
 - are insured under an insurance title code indicating a maternity allowance and the declaration code indicates that a payer other than ZUS is submitting the settlement documents,
 - are insured under an insurance title code indicating that they are on parental leave.

In addition, verification is made as to whether a person is simultaneously insured under other titles that exclude him or her from working – if this is the case, his or her status is determined by a date of commencement of ZUS contributions.

Lists of insurance title codes and benefit/break codes used by ZUS can be found in Appendices 1 and 3.

³ Benefit/break code: 111.

⁴ Insurance title code beginning from: 0110, 0111, 0120, 0125, 0126, 0200, 0310, 0320, 0511, 0543, 0545, 0581, 0610, 0800, 1010, 1011, 1012, 1110, 1111, 1114, 1120, 1130, 1131, 1132, 1133, 1134, 1135, 1140, 2010, 2020.

⁵ Insurance title code beginning from: 0510, 0512, 0513, 0514, 0520, 0530, 0540, 0544, 0570, 0572, 0574, 0580, 0590, 0592, 0594.

Identification of employed persons in the KRUS dataset

Persons who simultaneously meet the following conditions are considered to be employed persons on the last day of a given month:

- are at least 15 years old on the last day of a given period,
- are subject to insurance with KRUS on the last day of a given period or are payers who are not subject to insurance on the last day of a given period, but have a person registered in their account who is insured on the last day of a given period,
- if they are not payers, are subject to retirement insurance and disability insurance on the last day of a given period and are simultaneously subject to accident, sickness and maternity insurance on the last day of a given period,
- if they are payers, have at least one holding or at least one special branch of agricultural production; if they are not payers, have at least one holding or at least one special branch of agricultural production,
- if they are payers, the date of commencement of their agricultural activity is equal to or earlier than the last day of a given period; if they are not payers, the date of commencement of agricultural activity of their payers is equal to or earlier than the last day of a given period,
- do not receive a structural pension on the last day of a given period.

Persons who are considered to be employed persons in the national economy on the last day of a given month are those who have the status of an employed person in the ZUS dataset or the KRUS dataset on that day.

4.2. Methodology of determining the main job

Determination of the main job in the ZUS dataset

The main job is determined only for those persons appearing in the ZUS dataset who have been identified as employed persons (see subchapter 4.1.).

Method of determining the main job:

- if a person appears in the ZUS dataset once, this job is the main job for him or her,
- if a person is insured under more than one insurance title code which indicates performing work, the choice of the main job is based on the working time – the main job is the one that takes more time. Subsequently, the contribution assessment basis (depending on the insurance title, the contribution assessment basis for retirement insurance and disability insurance or health insurance is used), the type of insurance title and the date of commencement of ZUS contributions are taken into account. The type of insurance title makes it possible to resolve cases of equal working time and equal contribution assessment basis in different jobs for the same person. On the basis of this information, it is concluded that, for example, being an officer, a prosecutor or a judge takes precedence over a job under an employment contract when choosing the main job,
- if a person is insured under the title of conducting economic activity as well as for any other title which indicates providing work, working time (FTE percentage) is of key importance in choosing the main job.

It has been assumed that if a person is engaged in other full-time job in addition to his or her economic activity, the full-time job is the main job. If, on the other hand, a person's job, in addition to his or her economic activity, is part-time, it was assumed that the main job for that person is the economic activity.

Determination of the main job in the KRUS dataset

The main job is determined only for those persons appearing in the KRUS dataset who have been identified as employed persons (see subchapter 4.1.).

Method of determining the main job:

- if a person appears in the KRUS dataset once, this job is the main job for him or her,
- if a person appears in the KRUS dataset both as a payer and as an insured person, it is assumed that his or her main job should be selected among the observations indicating that he or she is a payer,
- if there is a person in the KRUS dataset who simultaneously works for an agricultural holding and for a special branch of agricultural production, it is assumed that work for the special branch of agricultural production takes more time than work for the holding. Therefore, if a person works both for the agricultural holding and for a special branch of agricultural production, his or her main job is considered to be work for the special branch of agricultural production,
- for the selection of the main job, the area of the holdings for a given payer is taken into account, on the assumption that the larger the holding, the more work is required and consequently the work takes more time. Hence, the main job is considered to be the work for the larger agricultural holding.

Determination of the main job – summary

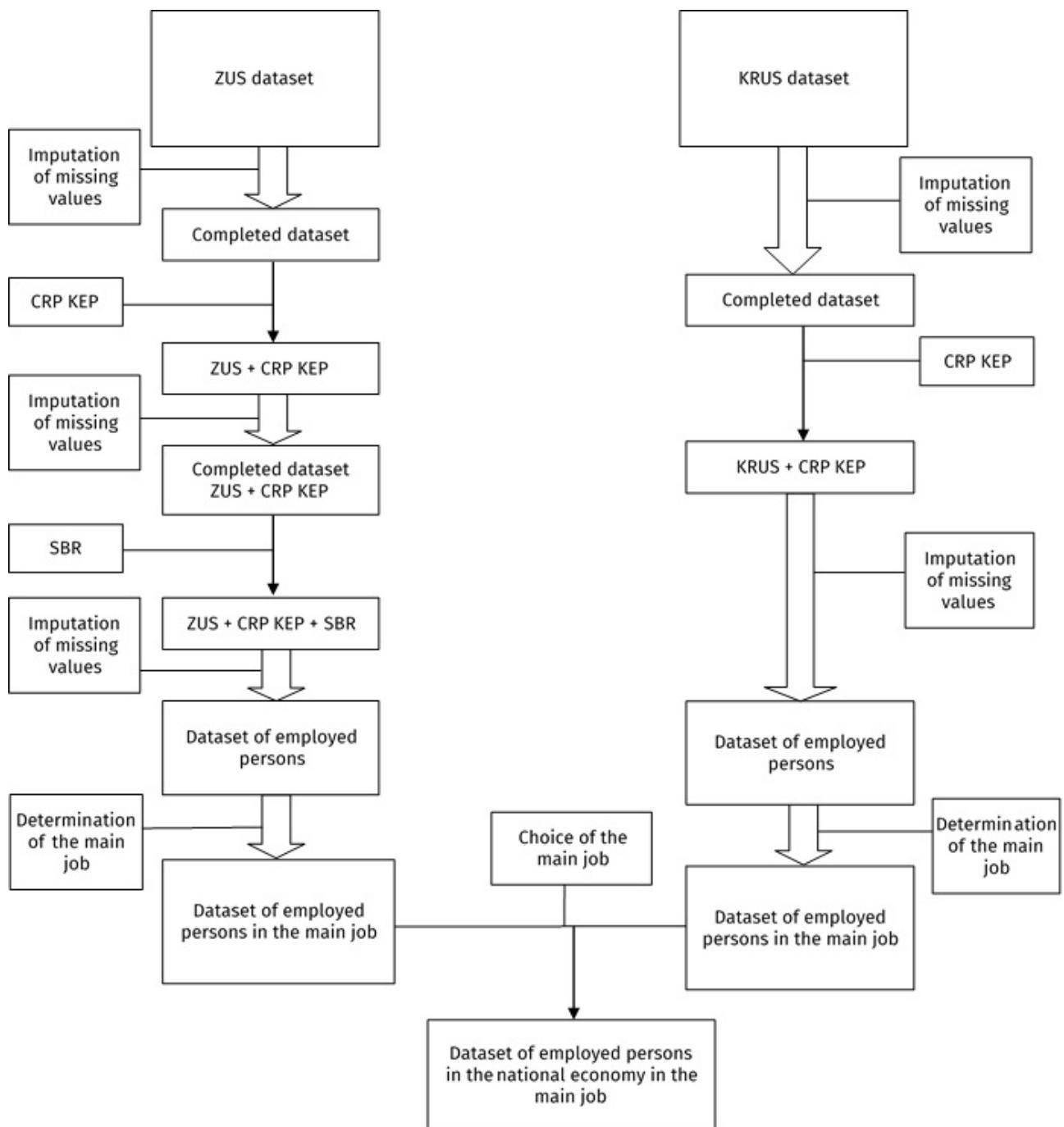
If a person is identified as an employed person only in the ZUS dataset or only in the KRUS dataset, the main job is his or her main job according to the dataset in which he or she occurred.

If a person has been identified as an employed person in both the ZUS and KRUS datasets, the information on working time in the ZUS dataset is decisive in determining the main job.

It has been assumed that if a person identified as an employed person in the ZUS dataset works full-time, this work is his or her main job.

If, on the other hand, a person identified as an employed person in the ZUS dataset works part-time, the main job for that person is his or her job according to the KRUS dataset.

The general pattern of identifying employed persons in the national economy is presented in Diagram 1.

Diagram 1. Identification of employed persons in the main job

Source: own work

4.3. Methodology of determining employment status

The employment status is determined only for those persons appearing in the ZUS dataset or the KRUS dataset who have been identified as employed persons (see subchapter 4.1.).

The attribution to particular categories of employment status is based on the insurance title code in the ZUS dataset or on having a payer status in the KRUS dataset⁶.

Employment status is determined for each employed person in the national economy:

- employee⁷,
- self-employed person⁸,
- contributing family worker⁹,
- member of a farming cooperative¹⁰,
- outworker¹¹,
- clergyperson¹².

The category of employees includes persons insured as employees, deputies, senators, soldiers, officers, judges, prosecutors, jurors, persons receiving a maternity allowance, persons on childcare leave, persons receiving rehabilitation benefits and persons performing paid work on the basis of a referral to work, while serving a sentence of imprisonment or being in temporary detention.

The category of self-employed persons include:

- for observations derived from the ZUS dataset – persons insured under the title of conducting economic activity,
- for observations derived from the KRUS dataset – persons with the status of a KRUS payer.

Among self employed-persons distinction is made between: self-employed persons with employees and self-employed persons without employees¹³.

The category of contributing family workers includes persons insured in the ZUS register as cooperating with a person conducting economic activity or persons who are not payers in the KRUS register.

The category of members of farming cooperatives includes persons insured as members of a production cooperative or as persons performing work in a cooperative or on an agricultural holding of a cooperative on a basis other than an employment relationship, who are not members of the cooperative and who are remunerated according to the rules applicable to members of a cooperative, including candidates for a member of a cooperative.

The category of outworkers include persons insured under the title of performing outwork.

The category of clergypersons performing pastoral duties includes persons insured as clergypersons not conducting non-agricultural economic activity.

⁶ Due to the nature of the KRUS register, there are two types of employment status: self-employed persons and contributing family workers.

⁷ Insurance title code beginning from: 0110, 0111, 0120, 0125, 0126, 0610, 0800, 1110, 1111, 1114, 1120, 1130, 1131, 1132, 1133, 1134, 1135, 1140, 1211, 1240, 2010, 2020.

⁸ Insurance title code beginning from: 0510, 0512, 0513, 0514, 0520, 0530, 0540, 0543, 0544, 0544, 0570, 0572, 0574, 0580, 0590, 0592, 0594.

⁹ Insurance title code beginning from: 0511, 0545, 0581.

¹⁰ Insurance title code beginning from: 0310, 0320.

¹¹ Insurance title code beginning from: 0200.

¹² Insurance title code beginning from: 1010, 1011, 1012.

¹³ When presenting data on self-employed persons, distinguishing between those with and without employees, self-employed persons on individual agricultural holdings are not included.

A person with more than one job may have more than one type of employment status.

In the 'Survey on Employment in the National Economy', the employment status of employed persons refers to their main job.

5. Organisation and management of the survey

The author unit of the survey is the Statistical Office in Bydgoszcz. The survey uses datasets provided by ZUS, KRUS, the Ministry of Finance, the Ministry of Interior and Administration, the Ministry of Defence as well as information from the SBR.

The datasets made available by ZUS contain microdata and are transmitted to Statistics Poland twelve times a year, within 50 days after the end of the month to which the data relate.

It should be noted that information submitted by payers to ZUS concerning a given month may be corrected even up to 5 years after the date on which the deadline for payment of contributions for that period expired – i.e. after the dataset has already been submitted to Statistics Poland. Analyses conducted by the Statistical Office in Bydgoszcz have shown that the deadline of 50 days after the end of the month is a compromise between providing data of the best possible quality and in the shortest possible time.

The datasets of insured persons made available by KRUS contain microdata and are submitted to Statistics Poland twice a year – by the end of July as at 30 June of a given year and by the end of January as at 31 December of the previous year.

The datasets may also include information entered in the first days of the following period – this is due to the data processing cycle in the KRUS IT system.

The datasets made available by the Ministry of Finance contain microdata and are reported once a year in February for the previous fiscal year.

The data provided by the Ministry of the Interior and Administration and the Ministry of Defence are aggregated and reported once a year (in May) as at 31 December of the previous year.

Microdatasets from administrative sources are transferred to the IT Storehouse of National Statistical Data run by the Statistical Computing Centre of Statistics Poland. The transferred datasets are controlled and processed by the employees of the Statistical Computing Centre and by the employees of the Data Engineering Division at the Department for Innovation of Statistics Poland. The completeness of the datasets and the compliance of the transferred data with the requirements of official statistics as well as dictionaries and classifications are checked. Then, the datasets are placed in the safe environment of the Operational Microdata Database and made available to author units, including the Statistical Office in Bydgoszcz. At each stage of work, access to the datasets is limited and only authorised employees can use them.

Employees of the Statistical Office in Bydgoszcz carry out multi-stage processing of the shared datasets in order to obtain information on employed persons in accordance with the adopted methodology. The scope of the work performed and the description of the methodology used are presented in detail in Chapter 5. In addition, the work includes a completeness check for variables used in the survey and imputation of missing values for key variables.

6. Presentation of the survey results

The result data obtained from the survey can only be published in an aggregated form. Microdata on employed persons are subject to statistical confidentiality and are not made available. The rules for publishing and making available statistical data are regulated by the Act on Official Statistics [8].

The result information presented is broken down by characteristics of employed persons and by characteristics of national economy entities:

- sex,
- age (single-year cohorts, age groups, mean age, median age),
- citizenship (total foreigners),
- employment status (employees, self-employed persons including contributing family workers),
- working time – FTE percentage (full-time, part-time, working time not determined),
- place of residence at the level of macroregions, regions, voivodships, subregions, powiats and cities with powiat status and gminas,
- entity size (measured in terms of the number of employed persons: 5 or fewer employed persons, 6-9 employed persons, 10-49 employed persons, 50-249 employed persons, 250-999 employed persons, 1000 or more employed persons),
- kind of activity of an entity (according to the PKD/NACE classification),
- ownership sector of an entity (public sector, private sector),
- place of the seat of the entity of the main job at the level of macroregions, regions, voivodships, subregions, powiats and cities with powiat status and gminas.

The survey results are available approximately five months after the end of the month to which the data relate.

The detailed forms of dissemination of the survey results are available in the Statistical survey programme of official statistics [9].

7. Quality assessment of the survey

When assessing the quality of a survey based on data from administrative sources, unlike in surveys based on statistical reports from entities, there are no errors referred to in the European Statistical System's definition of quality or random errors. In the Polish official statistics system, the assessment criteria are based on the definition of quality used in the European Statistical System and the assessment of survey quality is carried out on the basis of the following components:

- relevance,
- accuracy,
- timeliness and punctuality,
- accessibility and clarity,
- comparability,
- coherence.

The quality of the 'Survey on Employment in the National Economy' was assessed in reference to the above criteria. In addition, the following were taken into account:

- labour intensity and the burden on respondents,
- information on missing data and other non-random errors.

The survey responds to users' demand for monthly data on employed persons in the national economy. Based on previously diagnosed needs (users' queries), data are presented in the expected breakdowns – e.g. sex, age, place of residence down to the gmina level, entity size (including small entities).

Recipients of the survey results include government and local government offices, scientific and research institutions, higher education institutions (academic teachers and students), ministries and central offices, entrepreneurs and employers, individuals, national and local media. The data are also used by internal users, statisticians participating in the integration of surveys, conducting labour market analyses or secondary research.

The survey results are comparable in time (between individual months), spatially (data for all available territorial aggregations) and across domains (e.g. for all PKD/NACE sections). The comparability of the data is ensured through the use of standards for, *inter alia*, terms, classifications and statistical registers.

The data are provided by the administrators in accordance with the specified scope and within the deadlines specified in the Statistical survey programme of official statistics (PBSSP). The survey is based entirely on administrative sources and does not involve respondents.

Source datasets used in the survey are subject to double control. In the first place, they are controlled by data administrators to the extent necessary for their purposes. Then, after the data are transferred to Statistics Poland, the datasets are controlled to the extent necessary for the purposes of the survey, i.e. they are verified, standardised, deduplicated and completed. Employees of the Statistical Office in Bydgoszcz, after receiving the controlled datasets, analyse the correctness of the most important variables from the point of view of the survey. In the survey, a developed scheme of control, monitoring and error prevention activities is used – analysing data in order to identify missing records and potential erroneous records. Variables such as sex, age, place of residence, place of an entity's seat or PKD/NACE section are subject to imputation procedures.

7.1. Data imputation methods used

Simple imputation methods are used in the first instance to fill in missing values of the variables, and in cases that require more advanced action, probability-based imputation and multiple imputation techniques are used [3]. One of the factors limiting the choice of imputation methods is the size of the datasets and the capabilities of the programming environment (*inter alia* the software used) in which the data are processed.

Deductive method

In the first instance, a deductive method is used to fill in the gaps. This method is based on the possibility of retrieving the information contained in the remaining variables for a given observation, the remaining observations for a given person or other available datasets. An example would be to fill in a missing observation of the value for the variable determining the sex of an insured person based on the sex information from the tenth (penultimate) digit of the insured person's PESEL number.

Probability distribution-based method

The next step, after applying the deductive method, of filling in missing values for relevant variables is to use a method based on the analysis of the probability distribution of a given characteristic. As an example, the missing values of the TERYT code of the gmina of residence of an insured person with a determined voivodship

of residence are filled in using the distribution of the number of employed persons residing in the gminas of this voivodship. For each gmina of the voivodship, the probability of residing in the gmina is then calculated, understood as the ratio of the number of people residing in the gmina to the number of people residing in the voivodship. All observations with correctly indicated TERYT code of the gmina of residence are used to determine the probability. Then, for each person with a missing TERYT code of the gmina of residence, it is determined based on the voivodship of residence and the probability distribution determined. In addition to the gmina of residence of an insured person, the probability distribution-based imputation method is used to fill in the gmina of a payer's seat and a payer's PKD/NACE section. The imputation of sections takes into account the fact that individual PKD/NACE sections are unevenly distributed in the voivodships. Therefore, the ratio of the number of payers with a seat in a given gmina to the number of all payers with a seat in a given voivodship or the number of payers with a given PKD/NACE section in a given voivodship to the number of all payers with a seat in that voivodship, respectively, is used to determine the probability. The missing information is then determined for each payer based on the voivodship of the seat and the probability distribution determined.

Multiple imputation method

Another solution for filling in missing values in individual observations is the multiple imputation method, in which multiple imputation sets are created instead of generating a single imputation value. This approach reduces the randomness of the imputed value. A particular example of multiple imputation is the MICE method – Multivariate Imputation by Chained Equations. In this method, missing values of the variable are filled in in the first step, then the imputed values are again replaced by missing values. In this way, a regression model is created for the value of the variable for which the missing values are to be filled in, based on the values of other variables (which have the greatest influence on the values in the imputed variable). The missing values of the imputed variable are replaced by the results of the regression model. This procedure is performed for a certain number of repetitions, e.g. 10. In the final step, a choice is made as to which final imputed value should be taken, e.g. by selecting the most frequently repeated one. In this method, it is possible to use different regression models. In the case of imputation by this method of missing values of the variables mentioned in the methodological report, a logistic regression model was used for the variable determining the sex of an insured person, a Predictive Mean Matching (PMM) model for the variable determining the age of an insured person and a multinomial logistic regression model for the variable determining the voivodship of residence of an insured person.

Table 1. Imputation methods used in the survey

Variable to be imputed	Imputation		
	deductive	probability distribution-based	multiple
sex of an insured person	+		+
age of an insured person	+		+
gmina of residence of an insured person	+	+	+
PKD/NACE section of an entity that is a contribution payer	+	+	
gmina of the seat of an entity that is a contribution payer	+	+	

Source: own work

7.2. Scale of imputation

Most of the erroneous or missing values in the KRUS and ZUS datasets can be imputed thanks to the available individual identifiers – by means of deductive imputation. The process is mainly based on other variables in the same observation, other observations in the same dataset or observations from another dataset. After the deductive imputation step, the scale of missing data is small.

In the KRUS dataset, which, as at the end of June 2024, counted more than 1.6 million insured persons (including almost 1.2 million payers), using the deductive method, incorrect values were corrected and missing values were filled in for all observations in the variables subject to imputation, i.e. sex, age, address of residence of insured persons and address of payers' seats. For none of the variables did the number of observations requiring imputation exceed 0.1%.

In the ZUS dataset for the available months of 2024, where the dataset averaged 20.1 million insured persons and the number of payers of contributions to social insurance or health insurance averaged 2.9 million, the imputation proceeded in multiple steps. Of the average 0.002% of missing values in the variable defining sex of an insured person, from the aforementioned 20.1 million observations, as many as 95.4% of them were filled in through the deductive imputation method. For the remainder, the MICE multiple imputation method was used.

The variable relating to the age of an insured person is derived from that person's date of birth. Imputation of missing values of the variable had to be carried out for only 0.0002% of all observations on average. The deductive method and the MICE multiple imputation were used for this purpose. The values of the variable describing the address of residence for insured persons were filled in, wherever possible, on the basis of other addresses available in the KRUS and ZUS datasets (e.g. a person registered for permanent residence and residing in the same place only fills in the address of permanent residence in the settlement documents to ZUS, hence it is known that his or her permanent address can be taken as the address of residence) or with the help of information available in the CRP KEP register, which is used auxiliary. Observations with missing data, for which the deductive imputation method could not be used, accounted for an average of 0.14% of all observations. The probability distribution-based imputation method and the MICE multiple imputation method were used to fill in them. The MICE multiple imputation method was used to impute the voivodship of residence. The gmina of residence for missing observations within the voivodship was completed using the probability distribution-based method, where the share of the number of observations completed in a given gmina in the total number of observations completed in the whole voivodship was taken as the probability.

Many erroneous and missing values for the address of a payer's seat were able to be imputed through the deductive method, as was the case for the imputation of the address of residence for insured persons. On average, for 0.13% of all payers, imputation had to be carried out using other methods. For this purpose, the probability distribution-based method was used, where the share of the number of payers from a given gmina for whom information on the gmina of the entity's seat was completed in the total number of payers in the voivodship was taken as the probability.

Information on the PKD/NACE section of a payer's economic activity was obtained from the Ministry of Finance and the SBR. On average, for 2.5% of all payers, a process of imputation of missing data had to be carried out. For this purpose, the probability distribution-based method was used. For each section and each voivodship, a vector of probabilities was created for the attribution of a particular PKD/NACE section to a payer, depending on the voivodship.

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Appendix 1. List of insurance title codes used by the Social Insurance Institution (ZUS)

As of January 2025 [10, 11]

Insurance title codes ¹	Insurance title
0110	an employee subject to social insurance and health insurance
0111	an employee subject to social insurance and, under special provisions, not subject to health insurance
0112	a person receiving a training benefit paid after termination of employment
0113	an employee in respect of whom the contribution payer benefited from co-financing of social insurance contributions from the state budget and the State Fund for Rehabilitation of Disabled People pursuant to Article 25, paragraph 2, 3 or 3a of the Act of 27 August 1997 on Vocational and Social Rehabilitation and Employment of Persons with Disabilities, in the version in force until 1 January 2008, and currently is obligated to pay additional contributions and after 30 June 2008 submits corrective settlement documents for the period until December 2007
0120	an adolescent worker
0124	a former nominated employee or former civil servant with whom employment was terminated, receiving a monetary benefit after the termination of employment
0125	an employee subject to social insurance and health insurance, paying contributions for his or her own insurance in the case specified in Article 109 of Regulation (EEC) No 574/72 of the Council of 21 March 1972 fixing the procedure for implementing Regulation (EEC) No 1408/71 on the application of social security schemes to employed persons and their families moving within the Community (OJ L 74, 27.3.1972, p.1, as amended, OJ L Special edition in Polish Chapter 05 Volume 001, p. 83), hereinafter referred to as Council Regulation (EEC) No 574/72 or in Article 21, paragraph 2 of Regulation (EC) No 987/2009 of the European Parliament and of the Council of 16 September 2009 laying down the procedure for implementing Regulation (EC) No 883/2004 on the coordination of social security systems (OJ L 284, 30.10.2009, p. 1, as amended), hereinafter referred to as Regulation (EC) No 987/2009
0126	an employee subject to social insurance and, under special provisions, not subject to health insurance, paying contributions for his or her own insurance in the case specified in Article 109 of Council Regulation (EEC) No 574/72 or in Article 21, paragraph 2 of Regulation (EC) No 987/2009
0200	an outworker
0213	an outworker in respect of whom the contribution payer benefited from co-financing of social security contributions from the state budget and the State Fund for Rehabilitation of Disabled People pursuant to Article 25, paragraph 2, 3 or 3a of the Act of 27 August 1997 on Vocational and Social Rehabilitation and Employment of Persons with Disabilities, in the version in force until 1 January 2008, and currently is obligated to pay additional contributions and after 30 June 2008 submits corrective settlement documents for the period until December 2007
0310	a member of an agricultural production cooperative, agricultural circles cooperative or other cooperative engaged in agricultural production
0320	a person performing work in a cooperative or on an agricultural holding of a cooperative on a basis other than an employment relationship, who is not a member of the cooperative and who is remunerated in accordance with the rules applicable to members of cooperative, including a candidate for a member of a cooperative
0411	a person performing an agency agreement, contract of mandate or service contract
0417	a person performing an agency agreement, contract of mandate or service contract, under special provisions not subject to health insurance
0421	a person cooperating with a person performing an agency agreement, contract of mandate or service contract
0424	a person cooperating with a person performing an agency agreement, contract of mandate or service contract, under special provisions not subject to health insurance
0426	a person performing an agency agreement, contract of mandate or service contract paying contributions to his or her own insurance in the case specified in Article 109 of Council Regulation (EEC) No 574/72 or in Article 21, paragraph 2 of Regulation (EC) No 987/2009

¹ A basic subject with extension (4 digits).

Insurance title codes ¹	Insurance title
0428	a person performing an agency agreement, contract of mandate or service contract, under special provisions not subject to health insurance, paying contributions to his or her own insurance in the case specified in Article 109 of Council Regulation (EEC) No 574/72 or in Article 21, paragraph 2 of Regulation (EC) No 987/2009
0430	a person caring for children up to 3 years of age on the basis of a nanny agreement, whose contributions are financed by the state budget
0431	a person caring for children up to 3 years of age on the basis of a nanny agreement, for whom the contribution assessment basis for insurance is a surplus over the amount financed by the state budget
0510	a person conducting non-agricultural economic activity under the provisions on economic activity or other special provisions, who does not have an established right to a disability pension, for whom the contribution assessment basis for social insurance is a declared amount not lower than 60% of the average monthly wage and salary, a person running a non-public or public school, establishment, school complex pursuant to the provisions of law on the education system and a person conducting non-agricultural activity as well as a person conducting non-agricultural activity in the scope of a liberal profession
0511	a person cooperating with a person conducting non-agricultural activity as well as with a natural person referred to in Article 18, paragraph 1 of the Act of 6 March 2018 – the Entrepreneurs' Law
0512	a person conducting non-agricultural activity under the provisions on economic activity or other special provisions, who does not have an established right to a disability pension, for whom the contribution assessment basis for social insurance is a declared amount not lower than 60% of the average monthly wage and salary
0513	a disabled person who for the first time started conducting non-agricultural economic activity and benefited from co-financing of social insurance contributions from the state budget and the State Fund for Rehabilitation of Disabled People pursuant to Article 25, paragraph 3b of the Act of 27 August 1997 on Vocational and Social Rehabilitation and Employment of Persons with Disabilities, in the version in force until 1 January 2008, and currently is obligated to pay additional contributions and after 30 June 2008 submits corrective settlement documents for the period until December 2007
0514	a person conducting non-agricultural economic activity exempt from the payment of contributions, for whom the contribution assessment basis for social insurance is 60% of the amount of the projected average monthly wage and salary
0520	an author
0530	an artist
0540	a person not subject to social insurance and subject to health insurance, in accordance with Article 18, paragraph 1 of the Act of 6 March 2018 – the Entrepreneurs' Law
0543	a shareholder in a single-shareholder limited liability company and partners of a general partnership, limited partnership or professional partnership and a shareholder of a simple joint-stock company contributing the provision of work or services
0544	a person conducting non-agricultural activity, under special provisions not subject to health insurance
0545	a person cooperating with a person conducting non-agricultural activity, under special provisions not subject to health insurance
0570	a person conducting non-agricultural economic activity who does not have an established right to a disability pension, for whom the contribution assessment basis for social insurance is a declared amount not lower than 30% of the minimum salary
0572	a person conducting non-agricultural economic activity who has an established right to a disability pension, for whom the contribution assessment basis for social insurance is a declared amount not lower than 30% of the minimum salary
0574	a person conducting non-agricultural economic activity exempt from the payment of contributions, for whom the contribution assessment basis for social insurance is 30% of the minimum salary
0580	a person conducting non-agricultural activity whose maternity allowance does not exceed the amount of a parental benefit
0581	a person cooperating with a person conducting non-agricultural activity whose maternity allowance does not exceed the amount of a parental benefit
0590	a person conducting non-agricultural economic activity who does not have an established right to a disability pension, for whom the contribution assessment basis for social insurance depends on income
0592	a person conducting non-agricultural economic activity who has an established right to a disability pension, for whom the contribution assessment basis for social insurance depends on income
0594	a person conducting non-agricultural economic activity exempt from the payment of contributions, for whom the contribution assessment basis for social insurance depends on income

Insurance title codes ¹	Insurance title
0610	a deputy or senator receiving salary
0710	a sport scholar receiving a scholarship and under this title being subject to social insurance and health insurance or only to health insurance
0720	a sport scholar receiving a scholarship and under this title being subject only to social insurance
0800	a person performing paid work on the basis of a referral to work, while serving a sentence of imprisonment or being in temporary detention
0900	a person receiving a solidarity allowance
0910	an unemployed person receiving an unemployment benefit, a person receiving an integration benefit
0911	an unemployed person who does not receive an unemployment benefit or a scholarship
0920	a person receiving a scholarship during a training course, internship or vocational preparation for adults, for which was referred by a powiat labour office or a managing entity other than a powiat labour office, and a person receiving a scholarship during postgraduate studies
0940	a person residing in the Republic of Poland receiving a pre-retirement allowance or a pre-retirement benefit
0941	a person receiving a pre-retirement allowance or a pre-retirement benefit, residing in a Member State of the European Union other than the Republic of Poland, a Member State of the European Free Trade Association (EFTA) or in the United Kingdom of Great Britain and Northern Ireland
0942	a person not receiving a pre-retirement allowance or a pre-retirement benefit due to the reasons referred to in Article 27, paragraph 1, subparagraphs 3-6 and paragraph 2 of the Act of 14 December 1994 on Employment and Counteracting Unemployment, not subject to health insurance under another title, not obligated to pay health insurance contributions
1010	a clergyperson who does not conduct non-agricultural economic activity, paying a contribution from the minimum contribution assessment basis
1011	a clergyperson who does not conduct non-agricultural economic activity, paying a contribution from the minimum contribution assessment basis and from a declared surplus over the minimum contribution assessment basis, due for the period until 31 March 2004
1012	a clergyperson who does not conduct non-agricultural economic activity, paying a contribution from a declared surplus over the minimum contribution assessment basis
1020	a clergyperson who does not conduct non-agricultural economic activity, being a member of an enclosed contemplative order, paying a contribution from the minimum contribution assessment basis
1050	a seminarian, novice, postulant and junior brother or sister, subject to health insurance
1110	a non-professional soldier in active military service and soldier in professional military service in training
1111	a person undergoing alternative military service
1114	an officer in a period of service as a candidate and a candidate for a professional soldier
1120	a professional soldier
1130	an officer of the Police
1131	an officer of the Internal Security Agency and the Foreign Intelligence Agency
1132	an officer of the Polish Border Guard
1133	an officer of the State Fire Service of Poland
1134	an officer of the Tax and Customs Service
1135	an officer of the Central Anti-Corruption Bureau, the Military Counterintelligence Service, the Military Intelligence Service, the State Protection Service or the Marshal's Guard
1140	an officer of the Prison Service
1150	a retired person receiving an emolument
1151	a person receiving a family emolument
1152	a person receiving an emolument on discharge from the service or benefits of the same nature
1153	a soldier or an officer in respect of whom it is obligatory to pay contributions to retirement insurance and disability insurance in connection with discharge from service or loss of the right to a retirement pension or a disability pension
1211	a person on childcare leave
1240	a person receiving a maternity allowance

Insurance title codes ¹	Insurance title
1250	a person providing a personal care for a child, and who immediately before taking up the care was subject to retirement insurance and disability insurance as a person conducting non-agricultural activity
1260	a person providing a personal care for a child, and who immediately before providing the care was subject to retirement insurance as a contractor
1270	a person providing a personal care for a child, and who immediately before taking up the care was subject to retirement insurance and disability insurance as a person cooperating with a person conducting non-agricultural activity or with a contractor
1280	a person providing a personal care for a child, and who immediately before taking up the care was subject to retirement insurance and disability insurance as a clergyperson
1290	a person providing a personal care for a child, subject only to retirement insurance
1310	a person who, on the basis of separate provisions of law or collective labour agreements, receives a social benefit paid during leave other than railway leave
1320	a person receiving a social benefit for the period of professional retraining and seeking new employment
1321	a person who, on the basis of separate provisions of law or collective labour agreements, receives a social benefit paid during railway leave
1322	a person receiving a social benefit during the period of release from the obligation to provide work
1422	a beneficiary in respect of whom an organisational unit of social assistance or a village mayor or mayor is obligated to pay contributions
1430	a person receiving a support allowance
1431	a person not taking up employment or other paid work because of the need to support a person receiving a support allowance, under this title subject to social insurance and health insurance
1432	a person not taking up employment or other paid work because of the need to support a person receiving a support allowance, under this title subject to social insurance, and not subject to health insurance
1433	a person not taking up employment or other paid work because of the need to support a person receiving a support allowance, under this title subject to health insurance, and not subject to social insurance
1811	a student or a doctoral student, not obligated to pay contribution to health insurance, excluding persons referred to in Article 3, paragraph 1, subparagraph 3a of the Act of 27 August 2004 on Healthcare Services Financed from Public Funds
1812	a doctoral student, under this title subject to social insurance and health insurance, not obligated to pay contribution to health insurance
1813	a doctoral student, under this title subject to social insurance and not subject to health insurance
1823	a student or a doctoral student who is undergoing education in the Republic of Poland, a graduate who is undergoing an obligatory internship in the Republic of Poland, as well as those who are undergoing Polish language courses or preparatory courses for taking up education in the Polish language referred to in Article 3, paragraph 1, subparagraph 3a of the Act of 27 August 2004 on Healthcare Services Financed from Public Funds
1830	a student of Lech Kaczyński National School of Public Administration
1900	a person who is subject to voluntary retirement insurance and disability insurance, pursuant to Article 7 of the Act of 13 October 1998 on the Social Insurance System
1910	a person who is subject to voluntary retirement insurance and disability insurance during the period of suspension of economic activity
2010	a judge
2020	a prosecutor, juror, applicant of the National School of Judiciary and Public Prosecution
2030	a judge or prosecutor, in respect of whom it is obligatory to pay social insurance contributions in connection with the termination or expiry of a service relationship
2110	a child, a pupil, a graduate undergoing an obligatory internship in the Republic of Poland and a person undergoing a Polish language course or a preparatory course for taking up education in the Polish language, not subject to compulsory health insurance under another title, excluding persons referred to in Article 3, paragraph 1, subparagraph 3a of the Act of 27 August 2004 on Healthcare Services Financed from Public Funds
2210	a war veteran or a victim of oppression as well as an anti-communist opposition member or a victim of oppression due to political reasons who are not obligated to pay health insurance contributions
2230	a person subject to health insurance under the title of entitlement to maintenance on the basis of a court settlement or a legally binding court decision

Insurance title codes ¹	Insurance title
2240	a member of a supervisory board, subject only to health insurance
2241	a member of a supervisory board, under this title subject to retirement insurance and disability insurance as well as to health insurance
2242	a member of a supervisory board, under this title subject to retirement insurance and disability insurance and not subject to health insurance
2250	a person appointed to perform a function under an act of appointment and a proxy referred to in Article 66, paragraph 1, subparagraph 35a of the Act of 27 August 2004 on Healthcare Services Financed from Public Funds
2330	spouse of the President of the Republic of Poland
2410	a person covered by voluntary health insurance or a volunteer who is not subject to health insurance under another title, in respect of whom a health insurance contribution is voluntarily financed by the beneficiary referred to in the provisions on public benefit and volunteer work
2500	an old-age pensioner or disability pensioner, or a person receiving a supplementary parental benefit, residing in the Republic of Poland, whose health insurance contribution is financed by the beneficiary
2501	an old-age pensioner or a disability pensioner residing in a Member State of the European Union other than the Republic of Poland, a Member State of the European Free Trade Association (EFTA) or in the United Kingdom of Great Britain and Northern Ireland, whose health insurance contribution is financed by the beneficiary
2510	an old-age pensioner or a disability pensioner residing in the Republic of Poland who is not obligated to pay health insurance contributions pursuant to Article 67, paragraph 1, subparagraph 2 of the Act of 27 August 2004 on Healthcare Services Financed from Public Funds
2511	an old-age pensioner or a disability pensioner residing in a Member State of the European Union other than the Republic of Poland, a Member State of the European Free Trade Association (EFTA) or in the United Kingdom of Great Britain and Northern Ireland, who is not subject to the obligation to pay a health insurance contribution under the Article 67, paragraph 1, subparagraph 2 of the Act of 27 August 2004 on Healthcare Services Financed from Public Funds
2600	a person receiving a teachers' compensatory benefit, residing in the Republic of Poland
2601	a person receiving a teachers' compensatory benefit, residing in a Member State of the European Union other than the Republic of Poland, a Member State of the European Free Trade Association (EFTA) or in the United Kingdom of Great Britain and Northern Ireland
2700	a person receiving a bridge pension, residing in the Republic of Poland
2701	a person receiving a bridge pension, residing in a Member State of the European Union other than the Republic of Poland, a Member State of the European Free Trade Association (EFTA) or in the United Kingdom of Great Britain and Northern Ireland
3000	a person in respect of whom contributions or due benefits should be settled and paid in settlement documents submitted not earlier than for the next month after the end of the insurance title
5000	other insurance title

Appendix 2. List of source variables

KRUS microdataset on insured persons and contribution payers

Variable	Variable description
PESEL_KRUS	PESEL number of the insured person
NIP_KRUS	Tax Identification Number of the payer
nkp_KRUS	Account number of the payer (payer identification number)
plec_KRUS	Sex of the payer
data_ur_KRUS	Date of birth of the insured person
wsk_uber_KRUS	Indicator of retirement insurance and disability insurance
status_KRUS	Status of the insured person (indication of being insured on the reference day)
wsk_gosp_rol_KRUS	Indicator informing whether the payer has an agricultural holding
wsk_dzial_spec_KRUS	Indicator informing whether the payer has a special branch of agricultural production
liczba_gosp_rol_KRUS	Number of holdings in the payer's account on the date indicated
liczba_dzial_spec_KRUS	Number of special branches of agricultural production in the payer's account on the date indicated
rodzaj_dzial_KRUS	Kind of activity conducted
wsk_platnik_KRUS	Indication of the insured person being a payer
pow_ha_przelicz_gosp_rol_KRUS	Total area of the agricultural holding in comparative fiscal hectares
data_rozp_dzial_rol_KRUS	Date of commencement of agricultural activity
wsk_podl_uber_KRUS	Indicator informing about being covered by retirement insurance and disability insurance on the date indicated
wsk_podl_ubwcm_KRUS	Indicator informing about being covered by accident, sickness and maternity insurance on the date indicated
adr_zam_kod_gmn_KRUS	7-digit TERYT code of the gmina of the insured person's place of residence
adr_mpd_kod_gmn_KRUS	7-digit TERYT code of the gmina of the place of conducting agricultural activity

ZUS microdataset on insured persons and contribution payers

Variable	Variable description
ubezp_PESEL_ZUS	PESEL number of the insured person
ubezp_plec_ZUS	Sex of the insured person
ubezp_data_ur_ZUS	Date of birth of the insured person
ubezp_kod_tytul_ubez_ZUS	Insurance title code
ubezp_wymiar_czas_praca_ZUS	Working time (FTE percentge)
ubezp_kod_obyw_ZUS	Citizenship code of the insured person
ubezp_zawod_kod_ZUS	Occupational code of the insured person
ubezp_rodzaj_ubez_ZUS	Type of insurance (social insurance, health insurance, social and health insurance)
ubezp_data_skladki_ZUS	Date of commencement of contributions
ubezp_kod_sw_ZUS	Code of a benefit or a break in paying contributions
ubezp_data_od_sw_ZUS	The date from which the payment of a benefit or a break in paying the contribution took place
ubezp_data_do_sw_ZUS	The date to which the payment of a benefit or a break in paying the contribution took place
ubezp_podst_skladki_uber_ZUS	Contribution assessment basis for retirement insurance and disability insurance
ubezp_kod_przekr_podst_uber_ZUS	Code of information on exceeding the annual contribution assessment basis for retirement insurance and disability insurance
ubezp_kod_kraj_ZUS	Code of the country of the insured person
ubezp_adr_zam_kod_gmn_ZUS	7-digit TERYT code of the gmina of the residence address of the insured person
ubezp_podst_skladki_ubz_ZUS	Contribution assessment basis for health insurance
ubezp_kwota_skladki_ube_ZUS	Amount of retirement insurance contribution (financed by the insured person)
ubezp_kwota_skladki_ubr_ZUS	Amount of disability insurance contribution (financed by the insured person)
ubezp_kwota_skladki_ubc_ZUS	Amount of sickness insurance contribution (financed by the insured person)
ubezp_kwota_skladki_ubw_ZUS	Amount of accident insurance contribution (financed by the insured person)
platnik_kod_deklar_ZUS	Insurance declaration code
platnik_NIP_ZUS	Tax Identification Number of the payer
platnik_REGON_ZUS	REGON identification number of the payer
platnik_nazwa_ZUS	Full name of the payer/firm
platnik_data_skladki_ZUS	Date of commencement of contributions
platnik_adr_zam_kod_kraj_ZUS	Code of the payer's country of residence
platnik_adr_zam_kod_gmn_ZUS	7-digit TERYT code of the gmina of the payer's place of residence
platnik_adr_s_kod_kraj_ZUS	Code of the country of the payer's seat
platnik_adr_s_kod_gmn_ZUS	7-digit TERYT code of the gmina of the payer's seat

CRP KEP microdataset on natural persons

Variable	Variable description
PESEL_KEP	PESEL number of the taxpayer
plec_KEP	Sex of the taxpayer
data_ur_KEP	Date of birth of the taxpayer
adr_zam_kod_kraj_KEP	Code of the country of the taxpayer's address of residence
adr_zam_kod_gmn_KEP	7-digit TERYT code of the gmina of the taxpayer's place of residence

CRP KEP microdataset on natural persons conducting independently economic activity (sole proprietors)

Variable	Variable description
NIP_KEP	Tax Identification Number of the taxpayer
REGON_KEP	REGON identification number of the taxpayer
pkd_KEP	PKD/NACE code of the kind of activity of the taxpayer
adr_zam_kod_gmn_KEP	7-digit TERYT code of the gmina of the taxpayer's place of residence

CRP KEP microdataset on legal persons and organisational units without legal personality

Variable	Variable description
NIP_KEP	Tax Identification Number of the taxpayer
REGON_KEP	REGON identification number of the taxpayer
pkd_KEP	PKD/NACE code of the kind of activity of the taxpayer
adr_s_kod_gmn_KEP	7-digit TERYT code of the gmina of the seat and correspondence address

SBR microdataset on statistical units

Variable	Variable description
REGON_BJS	REGON identification number of the unit
NIP_BJS	Tax Identification Number of the unit
PKD_BJS	PKD/NACE code of the kind of activity of the unit
SEKC_PKD_BJS	PKD/NACE section of the kind of activity of the unit
FW_BJS	Ownership form of the unit
FWM_BJS	Ownership form of the parent unit
SEK_BJS	Ownership sector of the unit
SEKM_BJS	Ownership sector of the parent unit
FPN_BJS	New legal form of the unit

Appendix 3. List of benefit/break codes used by the Social Insurance Institution (ZUS)

As of January 2025 [10, 11]

Benefit/break codes	Description of benefit/break codes
Break in paying contributions	
111	unpaid leave
121	childcare leave granted pursuant to Article 186, paragraph 2 of the Act of 26 June 1974, – the Labour Code
122	childcare leave granted pursuant to Article 186, paragraph 3 of the Act of 26 June 1974, – the Labour Code
131	care leave within the meaning of Article 1731 of the Act of 26 June 1974, – the Labour Code
151	period of excused absence from work, without the right to remuneration or a benefit
152	period of unexcused absence from work
Type of benefit	
212	a compensatory allowance from sickness insurance
214	a compensatory allowance from accident insurance
215	compensation of a compensatory allowance from sickness insurance
216	compensation of a compensatory allowance from accident insurance
Type of benefit and break	
311	a maternity allowance from sickness insurance for the period determined as the period of maternity leave or leave on the terms of maternity leave
312	a care allowance from sickness insurance
313	a sickness allowance from sickness insurance
314	a sickness allowance from accident insurance
315	compensation of a maternity allowance from sickness insurance for the period determined as the period of maternity leave or leave on the terms of maternity leave
316	compensation of a care allowance from sickness insurance
317	compensation of a sickness allowance from sickness insurance
318	compensation of a sickness allowance from accident insurance
319	a maternity allowance from sickness insurance for the period determined as the period of parental leave
320	compensation of a maternity allowance from sickness insurance for the period determined as the period of parental leave
321	a rehabilitation benefit from sickness insurance
322	a rehabilitation benefit from accident insurance
323	compensation of a rehabilitation benefit from sickness insurance
324	compensation of a rehabilitation benefit from accident insurance
325	a maternity allowance from sickness insurance for the period determined as the period of additional maternity leave or additional leave on the terms of maternity leave
326	compensation of a maternity allowance from sickness insurance for the period determined as the period of additional maternity leave or additional leave on the terms of maternity leave
327	a maternity allowance from sickness insurance for the period determined as the period of paternity leave
328	compensation of a maternity allowance from sickness insurance for the period determined as the period of paternity leave
329	raising a maternity allowance to the amount of a parental benefit
331	a sick pay, financed from the funds of the employer
332	a sick pay, financed from the Fund of Guaranteed Employee Benefits

Benefit/break codes	Description of benefit/break codes
335	compensation of a sick pay, financed from the funds of the employer
336	compensation of a sick pay, financed from the Fund of Guaranteed Employee Benefits
337	a maternity allowance from sickness insurance for the period determined as the period of parental leave to care for a child holding a certificate referred to in Article 4, paragraph 3 of the Act of 4 November 2016 on the Support of Pregnant Women and Families 'For Life'
338	a maternity allowance from sickness insurance for the period determined as the period of parental leave of up to 9 weeks pursuant to Article 1821a, paragraph 4 or Article 183, paragraph 5 of the Act of 26 June 1974, – the Labour Code
339	compensation of a maternity allowance from sickness insurance for the period determined as the period of parental leave to care for a child holding a certificate referred to in Article 4, paragraph 3 of the Act of 4 November 2016 on the Support of Pregnant Women and Families 'For Life'
340	compensation of a maternity allowance from sickness insurance for the period determined as the period of parental leave of up to 9 weeks pursuant to Article 1821a, paragraph 4 or Article 183, paragraph 5 of the Act of 26 June 1974, – the Labour Code
350	other benefits / breaks

Appendix 4. Changes in the methodological report

Year	Description of the changes
2020	<p>The first edition of the <i>Methodological report. Employment in the national economy</i>, describing the survey methodology used for data for 2021, when the main source of data was reports from national economy entities. The results of the 'Survey on Employment in the National Economy' were compiled on the basis of several types of sources. The reports of national economy entities varied in terms of the selection of reporting entities and the frequency of data transmission. The data also came from the Agricultural Census (the latest data are for 2010) and, to a small extent, from administrative registers (data on employed persons in budgetary units conducting activity within the scope of national defence and public safety, and estimates of the number of employed persons in member organisations, foundations, associations, economic self-governments, employers' organisations, political parties, trade unions and other social organisations).</p>
2021	<p>Preparation of the <i>Methodological report. Employment in the national economy according to administrative data sources</i>, which summarises the results of work carried out since 2014 on the methodology for estimating the number of employed persons in the national economy using administrative sources. The preparation of the methodological report did not affect the design and organisation of the 'Survey on Employment in the National Economy', which was conducted in accordance with the methodology described in 2020.</p>
2025	<p>Preparation of a new methodological report for the 'Survey on Employment in the National Economy', which, starting with data for December 2022, is based entirely on administrative data from the Social Insurance Institution (ZUS) and the Agricultural Social Insurance Fund (KRUS) (data on insured persons and entities that are contribution payers) and from the Ministry of Finance (data on taxpayers). The description of the survey presented in the report takes into account the implementation of the methodology developed and described in the 2021 methodological report. The use of administrative data sources to identify employed persons in the national economy has resulted in changes in the coverage of statistical units and scope of data in the survey, updates to the methodology (including the type and method of the survey, data collection procedures and tools, and definitions of basic terms), and changes of the units responsible for managing the survey. The report also introduces new wording concerning the presentation of the results of the survey and the assessment of its quality.</p>