Occupational Barometer 2018

Summary Survey Report for Poland
The Report was prepared by the Regional Labour Office in Cracow within the framework of the national Occupational Barometer survey commissioned by the Minister of Family, Labour and Social Policy.

Editing:
Adam Biernat
Mirosław Furmanek
Olga Kałwa
Olga Łach
Monika Panecka-Niepsuj
Marlena Perczyk
Paulina Simonides

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Publisher:
Regional Labour Office in Cracow
pl. Na Stawach 1
30-107 Kraków
tel.: 12 428 78 70
tax: 12 422 97 85
kancelaria@wup-krakow.pl
www.wup-krakow.pl

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al. Piastów 42,
71-062 Szczecin
www.zapol.com.pl

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Dear Reader,

I would like to present our publication on the Occupational Barometer national survey. As a qualitative analysis based on the knowledge and experience of the national labour office personnel, the Barometer survey is a great source of information that complements labour market statistics.

For several years now, we have observed improvement on the Polish labour market - the unemployment rate has dropped to the lowest level since 1991 and employment rate has grown. As the enterprises grow and new businesses emerge, the need for more employees grows. Moreover, there are more and more occupations, with respect to which the local needs exceed the available resources. Some industries, where the demand for workforce is growing, are faced with the problem of insufficient competencies and professional experience of candidates. As the Occupational Barometer results show, in 2018 the number of deficit occupations will continue to increase, while the number of surplus occupations will decrease. In the upcoming year, we will continue to observe how the lack of human resources affects the construction, transport, health care and manufacturing industries. There will be a high demand for both specialists as well as skilled blue collar workers. Enterprises will continue to hire people from abroad, mainly from Ukraine, to be able to function and grow. In addition to activation of the unemployed and economically inactive, one of the solutions to increase domestic labour resources is to help people to adapt their skills to the changing conditions on the labour market. Since the Occupational Barometer provides the information on the demand for occupations and qualifications, it can and should be used to support training policy and career counselling. In view of the expected continuous decrease of the unemployment rate and increasing demand for labour, the labour offices will need to help the employers in seeking qualified personnel. One of the tools supporting continuous education is the National Training Fund (NTF), which supports continuous education for the economically active based on priorities set every year. In 2018, one of such priorities set by the fund is the continuous education provided in the most deficit occupations in selected counties or regions, based on the results of, among others, the current Occupational Barometer survey.

This Report consists of four parts. The first part describes the survey history and methodology, the second one characterizes labour market in Poland, while the third analyses the survey results in terms of changes observed over the past two years in specific occupation groups. It discusses the reasons for demand and oversupply on labour market, while focusing on local differences between larger and smaller cities as well as between regions. The last part of the report contains a list of deficit, surplus and balanced labour supply in each region.

It is also worthwhile to read the reports prepared by the personnel of regional labour offices, where you will find the information on the labour market situation in each region. Electronic versions of regional as well as national reports and full survey results, including forecasts for all counties and regions are available at: barometrzawodow.pl. The website is a user friendly tool addressed to a wider groups of users, both private as well as employment-related businesses.

As I do every year, I would like to thank all who have contributed to the Occupational Barometer survey - first of all the employees of county labour offices. It is their professional experience and knowledge of the local labour markets that has made the Occupational Barometer survey a success. I would also like to thank the employees of private employment agencies and other institutions participating in the county panels. Finally, I would like to thank regional coordinators for their help in conducting the survey in all counties as well as the employees of the Regional Labour Office in Krakow for the survey coordination at the national level. Without your help and involvement the Occupational Barometer survey would not be possible.

Stanislaw Szwed, Secretary of State,
Ministry of Family, Labour and Social Policy
I. Survey history and methodology

1.1. Reasons for conducting the survey

Pursuant to the Employment Promotion and Labour Market Institutions Act of 20 April 2004, Deficit and Surplus Occupation Monitoring survey (MZDiN) is conducted countrywide. The survey is conducted by the county and regional labour offices as well as the Ministry of Family, Labour and Social Policy.

The main source of information on the number of the registered unemployed as well as job offers broken down by occupations and specializations used in the national level monitoring are the data from IT systems used by the labour offices. Since such data represent merely a small part of the labour market information, the monitoring process also utilizes data from the survey of the Internet job offers conducted by the regional labour offices, data from the business surveys conducted by the county labour offices as well as the data from the forecast and information system www.prognozowaniezatrudnienia.pl.

The analysis covers main occupation groups in accordance with the Classification of Occupations and specializations for the Labour Market Needs (KZiS) that are important from the labour market point of view.

Occupational Barometer survey provides additional information to the MZDiN. Since the survey is conducted countrywide, it allows to prepare a short-term, professional forecast that includes the qualitative information of the local labour markets. Due the survey specifics, KZiS terminology is not used directly, while the list of occupations prepared for the survey contains the key words linking to KZiS.

1.2. Survey objective and methodology

The survey methodology was developed in Sweden in 1990’s, as a part of a broader system for forecasting changes in the labour market. In 2007, the Occupational Barometer was adapted by the public employment service in south-western Finland. Currently the survey is conducted in throughout Finland.

The Barometer was first used in Poland by the Regional Labour Office in Krakow. In 2009, the staff of the Labour Market and Education Observatory of Małopolska (which is a research project of the Regional Labour Office in Kraków) learnt about the concepts of the Barometer during a study visit to Turku, Finland. The same year, a pilot survey was conducted in six counties in małopolskie voivodeship, and then in the entire region. The survey has been conducted in all counties in Poland since 2015.
The Occupational Barometer is a short-term (one year) forecast of the situation in occupations. The survey is a qualitative one. It is developed during group discussion (expert panel), where the participants observing the labour market from different perspectives (the unemployed and employers) can share knowledge and opinions. The panel usually counts from four to eight people:

- employees of county labour offices: employment agencies, career counsellors, persons responsible for cooperation with businesses and for training as well as the EURES (The European Jobs Network) and employment club leaders;
- in larger cities the forecasts are developed in cooperation with the private employment agencies as well as other institutions with knowledge of the local labour market (e.g. employees of the special economic zone managers, voluntary labour corps, trade associations, non-government organizations and university career centres).

The experts analyse each occupation group separately. As a result, they are able to answer the following questions:

- In your opinion, how will the demand for [occupation] change in the upcoming year? Is it going to:
  - increase dynamically
  - increase
  - be balanced
  - decrease
  - decrease rapidly?
- In your opinion, what will the relationship between the available labour force and the demand for [occupation] in the upcoming year be? Will there be:
  - great deficit of job seekers
  - deficit of job seekers
  - balance between the demand and supply
  - surplus of job seekers
  - great surplus of job seekers?

Based on the answers, the jobs are classified into one of three categories:

- **deficit occupations** – those, in which it should not be difficult to find a job, as the demand from employers will be high, while the supply labour with the required skills will be low,
- **balanced occupations** – those, in which the number of jobs offered will be close to the number of people capable of taking up employment in a given occupation (supply and demand are balanced),
- **surplus occupations**, those, in which it might be more difficult to find a job due to the low demand and/or excess number of candidates that meet the employers’ requirements.

In their assessment, the experts use data on the numbers of job offers and people registered as unemployed in the particular occupation. It should be noted, however, that such data are of complementary nature (as they do not provide the basis for the analysis). The participants include the information, which is not provided in the statistics. Will a person who declares skills in a particular occupation be capable of doing the job to the required standard, and if so, on terms and conditions offered by the employer? Will the employer be willing to hire such a person and if not, why (problem with skills, professional experience, salary expectations, etc.)?

Panel members assess only those occupations that are present on the local labour market. If they have no knowledge of the situation in the occupation concerned, they should leave it out – that is why the list of occupations which are ultimately included in the forecast for the specific county may be shorter than maximum (167 items). After all the county expert panels end, the Occupational Barometer for the region is developed, based on the aggregated data from all the county panels.

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1 Only those occupations which have been evaluated in at least half the counties will be included in the regional survey results, which have been evaluated in at least half the counties.
1.3. List of occupations selected for the survey

The list of occupations used in the Barometer survey is based on the Classification of Occupations and Specializations for Labour Market Needs of 2014 (KZiS). The Barometer methodology was adapted to the Polish conditions in terms of its usefulness for the forecast providers as well as the users. First, the Classification of Occupations and Specializations was developed for 167 occupation groups (to assess all of them during a single panel). The main objective was to include occupation groups that function among employers, job seekers, employment agencies and other persons interested in the labour market. The proposed list of occupations contain the names of groups that function on the market and are recognizable to the users.

Names of classification categories defined for the Barometer survey are not fully consistent with the names of occupations and groups used in KZiS. The list developed for the Occupational Barometer has been based on KZiS and groups the occupations and specializations with 4-digit code (elementary groups) and 6-digit code (occupations and specializations) taken from KZiS. Names of elementary groups as well as occupations and specializations were specified in the transformation table attached to this survey.

The list of occupations assessed in the Barometer was developed with the focus on those occupations, that are numerously represented by the potential candidates as well as offered by employers, who recruit such candidates. Therefore, some of the occupations, for which the candidates must be appointed or elected, were omitted: parliament members, politicians, senior government officials, senior officials of special-interest organizations, university directors, etc. The list also does not include religion related occupations (clergy and consecrated persons or other religious professionals) or professionals practicing unconventional or complementary therapy. The list also omitted some arts and sports occupations, which involve artistic and sports professionals. On the other hand, the occupations involving work in the cultural, sports and recreation centres are included in the cultural associate professionals, event planners and fitness and recreation instructors groups. In addition, the occupations that require artistic talent have been classified into interior designers and decorators, product and garment designers and photographers groups.

The occupations were grouped in the Barometer list by similar professional areas or contents, based on the methodology used in the Scandinavian countries. The occupation groups were compiled taking into consideration candidates with partial qualifications or overqualified candidates (e.g. archivists and curators group consists of elementary groups KZiS 2621 archivists and curators and 4414 filing and similar clerks). Based on the observations of local and regional labour markets, this is how the candidates are actually selected for jobs. In situations, when a specific education level is a requirement on a local labour market, the panel members were asked to indicate that in comments. Comments included in the forecasts and published on the Barometer website give the interested parties (career counsellors, job seekers, who are more computer savvy) an opportunity to learn more about local conditions.

The Barometer survey includes teaching professions (i.e. vocational schools, technical secondary schools, colleges as well as professional training courses), which are assigned to the groups related with specific occupations that are popular on the market. As regards the occupations involving university education, only those occupations were omitted after the discussions with experts, regional coordinators and the survey team, that could not have been clearly assigned to the existing groups and with respect to which a consensus could not be reached to include them in a new group, as they were not represented in such numbers on the majority of local labour markets, that would justify doing so. That is why, the physicists group was not included in the Barometer survey, as a physicist without a teaching license, who is neither a research scientist at the university or a research institute, in terms of labour market, does not practice his learned profession.

The Classification of Occupations and Specializations for the Labour Market Needs also contains elementary groups, where occupations not elsewhere classified are included – the occupations that could not be assigned to any other group. As a result of combining certain occupations similar in terms of the required competencies and job description, the groups were formed, in which most of “not classified elsewhere” occupations could be included.
II. Labour market in Poland

In 2017, the labour market situation in Poland continued to improve, as confirmed by the changes in unemployment and other rates. As compared to 2016, there was an increase in the number of the employed, professional activity and average employment rate improved, unemployment rate decreased, while the salaries increased.

According to the Central Statistical Office, 16.5 million Poles were employed in Q3 2017. In Q3 2016 the number of the employed was lower by 244 thousand (i.e. by 1.5%). In Q3 2017, the professional activity ratio\(^2\) reached 56.7%, which was slightly higher as compared to Q3 2016 (by 0.4%). On the regional scale, the ratio of professionally active people was 53.1% (Śląsk region) to 60.5% (Mazowsze region). The ratio of the employed persons to the total population increased a little more. Employment ratio, which shows how many people in productive age are employed, increased during the year by 1pp and reached 54% in Q3 2017. The regions with the highest employment ratio were: Wielkopolska region (57.9%), Mazowsze region (57.5%) and Pomorze region (56.5%)\(^3\).

In Q3, the most people worked in services sector (9.5 million). 5.2 million were employed in industry and 1.7 million – in agriculture. According to GUS data for Q2 2017, specialists represented the highest share (19.4% - including over 26% of working women), followed by industrial blue collar workers and craftsmen (15.2%). Two groups placed third in terms of the size: services sector personnel and sales force as well as technicians and associate professionals (approx. 13% each)\(^4\).

Average employment rate in national economy continues to increase\(^5\). In the 1st semester of 2017, it reached 8.7 million, i.e. 3.1% higher as compared to the previous year (the increase in the same period in 2016 was 2.3%)\(^6\). In the enterprise sector, the average employment rate\(^7\) in the same period increased by 4.4% year to year, i.e. to 6 million people\(^8\).

Salaries increased slowly along with the employment growth. In the 1st semester of 2017, average gross monthly salary in the national economy\(^9\) was PLN 4 286, i.e. it was higher by 4.6% as compared to the same period of the previous year.

\(^2\) Professional activity ratio is the percentage of professionally active people to the total population over 15 years of age.
\(^3\) Local Data Bank.
\(^4\) Ibid.
\(^5\) Average employment in national economy is the average employment rate including people employed under specified and unspecified term employment contract, full or part time, hired farm labour as well as inactive teachers or teachers on sick leave.
\(^6\) Local Data Bank.
\(^7\) Average employment in enterprise sector means an average number of FTE’s in enterprise sector entities that employ over 9 people.
\(^8\) Local Data Bank.
\(^9\) Excluding enterprises that employ up to 9 people, where salaries are probably lower. At the end of Q3 2017, over 95% business entities entered in the National Official Business Register (REGON) employed up to 9 people.
II. Labour market in Poland

Chart 1. Average monthly salary in national economy sector by regions as compared to the national salary level in 1st semester of 2017

Source: Own analysis based on the Employment and salaries in national economy in 1st semester of 2017, GUS, Warsaw, 2017

In private sector salaries increased faster than in the public sector – by 5.7% and 3.4% respectively. The salaries increase due to legal regulations (e.g. base salary increase) as well as labour market conditions (due to high demand for labour in certain sectors / occupations, employers are more willing to increase salary level). Attention should be paid to differences in salary levels between regions as well as between counties within a region. The difference between gross monthly base salary in the first three quarters of 2017 in Warmia-Mazury region and Mazowsze region was over PLN 1 600 (chart 1). The values, which present salary level better than average salary rate are the median and modal value. According to GUS\(^\text{10}\), the most frequently paid monthly salary (modal value) in Poland at the end of October 2016 was PLN 2 074 (gross), while half of the labour force earned less than PLN 3 511 (gross) (median). In addition to the local differences, attention should also be paid to the differences in salary levels between industries (chart 2). Due to such differences in low paid jobs (e.g. sales assistants, unskilled labour) there are problems with employee recruitment and retention. Higher pressure on salaries, followed by the higher pay increase is more noticeable in those industries, where the employers have problems with finding employees. Due to the fact, that salaries are still much higher in Western Europe, economic migration is still high, in particular among young Poles.

\(^{10}\) Salary structure by occupations in October 2016, Information, GUS, Warsaw, 2017 (most current data).
Chart 2. Average gross monthly salary by sectors of national economy as compared to the national salary level in 1st semester of 2017

Source: Own analysis based on the Employment and salaries in national economy in 1st semester of 2017, GUS, Warsaw, 2017

In 2017, unemployment decreased at unprecedented scale – at the end of October there were 1.07 million unemployed registered in the county labour offices (decrease by 18.2% during the year), while the unemployment rate was 6.6%. Differences between regions in terms of the unemployment rate are significant - from 3.8% in wielkopolskie to 11.6% in warmińsko-mazurskie (chart 3).

Chart 3. Unemployment rate by regions in the end of October 2017

Source: Local Data Bank

The profile of the unemployed changes as the unemployment rate decreases. In such situation, most of the registered unemployed are long-term unemployed, with low skills or not ready to take up a job. At the end of October 2017, 582 thousand of such unemployed were registered (55% of all the unemployed). The reasons for long-term unemployment include poor health or obsolete skills or professional licenses. There is a large group of the unemployed over the age of 50 – there are 288 thousand registered. There are slightly more young unemployed under 30 years of age – 291.5 thousand. Young people are able to find jobs easier than the older ones, as they are more mobile and willing to learn new skills.

Despite the increased professional activity of Poles and significant decrease of the unemployment rate, the number of economically inactive people has decreased only slightly. In Q3, there were as many as 13.3 million of such people in
II. Labour market in Poland

Poland, only 152 thousand fewer than a year before and 245 thousand fewer than in Q3 2015. The most common reasons for economic inactivity among Poles include retirement and education, followed by family obligations, homemaking, illness or disability. Social welfare may also affect relatively low supply of labour; however the decision to stay professionally active made by people on welfare greatly depends on how attractive jobs are in terms of salary and employment conditions.

The number of job offers sent to the county labour markets and to open market is the best proof of the growing labour supply and the problems with balancing it. In Poland, 1.47 million of job offers were sent to the county labour offices between January and October 2017. It is 13% more as compared to the same period in 2016 and 32% more than two years before. In addition, there are more job offers for which no candidates were found. At the end of October 2017, there were nearly 111 thousand vacancies as compared to 89.5 thousand a year before and 82.6 thousand two years before11.

The demand for jobs will probably continue to grow. In Q2 2017 GDP increased by 3.8% as compared to Q2 of the previous year. Macroeconomic situation continues to improve. Domestic demand continues to grow at 4.3% level.

According to the forecasts provided by the Forecast and Business Analysis Institute, at the end of 2017, GDP will grow to 3.7% (1 pp higher as compared to the previous year). In 2018, the economic growth will slightly decrease to 3.6%. Along with the observed decrease in unemployment, the employment rate should grow by 2.8% in the entire 2017 and 2.5% in 201812.

Due to continuing deficit of labour resources and increasing demand for labour followed by decreased unemployment rate, the salaries will most likely continue to grow in the upcoming years.

Table 1. Forecast for average gross salary in national economy in 2018-2021

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average gross salary in national economy in PLN</td>
<td>4443</td>
<td>4669</td>
<td>4916</td>
<td>5185</td>
</tr>
<tr>
<td>Average gross salary in enterprise sector in PLN</td>
<td>4724</td>
<td>4989</td>
<td>5278</td>
<td>5593</td>
</tr>
<tr>
<td>Real dynamics</td>
<td>102,4</td>
<td>102,7</td>
<td>102,7</td>
<td>102,9</td>
</tr>
</tbody>
</table>

Source: Guidelines for the application of homogenous macroeconomic indicators, based on which financial impact of the bills will be estimated, Update – October 2017, the Ministry of Finance.

Poland is attractive for the foreign investors, thanks to its geographical location, relatively high share of the productive age population, stable conditions for business activity and growing purchasing power of its inhabitants. The advantages of the Polish labour market from the point of view of foreign investors also include relatively low salary level as well as the availability of well-educated workforce, who speak foreign languages and have high professional skills.

- The weaknesses of the Polish labour market include:
  - the increasing labour deficit, in particular in the case of lowly paid and unattractive jobs;
  - a large number of economically inactive people – such a group in Poland represents approx. 30% of the population age 15-64, and even though this value gradually decreases, it is still 3.6 pp higher than the average for EU member states;
  - candidates’ skills and experience not meeting the employers’ requirements;
  - inadequate education system, lack of career counselling and continuous education, even though there are more young people who decide to attend vocational schools;
  - still insufficient involvement of employers in the development of skills and qualifications of their own employees.

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11 Local Data Bank
12 Economic situation status and forecast no. 2/2017 (95), Forecast and Economic Analysis Institute, 2017.
Occupational Barometer 2018

www.barometrzawodow.pl

The situation in some professions may change depending on market conditions. The results for the voivodeship include professions assessed in at least half of the counties.

- Economists
- Educational counsellors
- Political scientists, historians, philosophers
- Nurses and midwives
- Printers
- Roofers and sheet metal workers in building trades
- Social work professionals caring for the elderly and disabled
- Stock clerks
- Tailors and clothing manufacturers
- Tolksmiths
- Truck drivers
- Webmasters

**Surplus**

- Bakers
- Bricklayers and plasterers
- Bus drivers
- Chefs
- Concrete and steel fixers
- Confectioners
- Construction installation assemblers
- Construction joiners and carpenters
- Construction workers

- Food and nutrition technology specialists
- Food processing workers
- Foreign language teachers
- Forest workers
- Funeral service workers
- Gardeners or landscapers
- Glaziers and window fitters
- Graphic and multimedia designers
- Handcraft workers in leather and related materials
- Housekeeping staff
- Human resources management and recruitment specialists
- Industrial ceramicists
- Insurance agents
- Internet sales staff
- IT technicians
- Journalists and editors
- Kitchen helpers
- Landscape architects
- Lawyers
- Librarians and related information professionals
- Logistics managers
- Machinery and mechanical engineers
- Manual workers in production and simple works
- Mechanical engineering technicians
- Medical doctors
- Medical imaging and therapeutic equipment technicians
- Metal processing workers
- Meteorologists, geologists, geographers
- Metal working machine tool setters and operators
- Motor vehicle mechanics and repairers

**Shortage**

- Accounting and bookkeeping clerks
- Acoustics and sound engineers
- Administration and office clerks
- Agricultural and gardening machines operators
- Air traffic controllers
- Analysts, testers and ICT system operators
- Animal services workers
- Architects and urban planners
- Archivists and curators
- Assistants in education
- Automotive diagnosis technicians
- Beauticians
- Biologists, biotechnologists, biochemists
- Business managers
- Butchers and fishmongers
- Car wash, laundry and ironing workers
- Carpenters, joiners, joiners and cabinetworkers
- Cement and stone machine operators
- Chemical engineers and chemists
- Chemical products plant and machine operators
- Childminders
- Cleaners and room service
- Clearing and forwarding agents
- Construction engineers
- Construction managers
- Construction supervision inspectors
- Construction technicians
- Contact centre agents, survey and market research interviewers
- Crane, hoist and related plant operators
- Database developers and administrators, programmers
- Deliverer and suppliers
- Dental technicians
- Dentists
- Driving instructors
- Educators in educational and care institutions
- Electrical and energetic engineers
- Electronic assemblers
- Electronics technology, automation and robotics specialists
- Environmental engineering engineers
- Events, cultural activities and animation organizers
- Farmers and animal producers
- Farming and forestry specialists
- Finance and accounting staff with knowledge of foreign languages
- Finance professionals
- Fishermen
- Florists

The "Occupational Barometer" is a forecast for the demand for employees in 2018. The study was conducted by experts at the turn of the third and fourth quarters of 2017. The situation in some professions may change depending on market conditions. The results for the voivodeship include professions assessed in at least half of the counties.

**Occupational Barometer 2018**

Poland
III. Results of Occupational Barometer 2018

The analysis of the national score is based on generalized data from forecasts provided by counties. The objective is to focus on the situation on labour market nationwide and to compare the results with the previous survey. The main deliverables are the county forecasts, as they specify the demand for given occupations on local labour markets.

3.1. Updated list of occupations

The list of occupations has changed as compared to the previous survey. Such change was caused by the list adaptation to the current Classification of Occupations and Specializations for the Labour Market Needs of 2014 as well as the feedback and suggestions provided by coordinators and survey users. The list was extended from 165 to 167 items. Some of the occupations were renamed (e.g. dental technologists instead of dental assistants and dental technicians, managers in social and cultural institutions, instead of managers in public/non-public institutions) and some of the groups were further divided into subcategories. Newly created occupation groups include audiologists and speech therapists (group consists of subcategories: occupational therapists and other education professionals) as well as undertakers and embalmers. The groups travel guides and travel consultants and tour organizers were combined. Moreover, this year’s list of occupations allows to compare data from previous years.

3.2. Increasing recruitment problems

Occupational Barometer survey provides the basis for the labour market forecasts for the subsequent 12 months by classifying each occupation group from the list to one of three categories – deficit occupations, where there is shortage of candidates, balanced occupations, where no problems are expected as regards matching the available workforce to the employers’ needs and surplus occupations, where finding a job might prove more difficult due to the small number of job offers or lack of required skills.

In terms of the economic growth, the situation where most occupations are balanced is the most optimal. It means a balanced labour market in terms of the number of job offers as well as competent employees. As compared to the last year’s survey results, continuous labour deficit is expected, followed by more recruitment problems. This status quo is also confirmed by the decreasing unemployment rate, which reached unprecedented low.

The survey participants from county labour offices as well as other labour market related institutions stress the fact that it is becoming increasingly hard to find candidates for job offers. Due to current labour market situation, the employers are willing to have a more flexible approach to recruitment. In some industries the salaries have been gradually increasing, while the number of civil law contracts has been decreasing in favour of employment contracts.

However, the quality of jobs offered is still unsatisfactory, which proves to be a great obstacle in the acquisition of new employees. As a result of unattractive employment conditions, unclear recruitment criteria or lack of information on the
expected salary level in the job ads, potential employees are reluctant to apply for the jobs being offered. Polish employers are trying to close the deficit gap by seeking labour force behind the eastern border. These people are usually willing to take up jobs for which no candidates can be found among the registered unemployed. However, the expectations of this group gradually grow.

3.3. The unemployed

The large group of the registered unemployed is represented by high school graduates as well as graduates of popular university specializations, people without professional licenses as well as people over 50, who are unable to work in their profession due to health problems.

As regards graduates, there is still a problem with making the wrong choices as far as education is concerned as well as the low quality of vocational education. As a result, such candidates fail to meet the employers’ requirements. Although there are many hairdressers, bakers or cooks registered in the county labour offices, neither their skills nor qualifications are sufficient to make them good candidates. One of the most common barriers in finding a job (mainly in hospitality sector) is the lack of knowledge of foreign languages.

Map 1. Comparison of available candidates and employers’ needs - hairdressers

Yet another problem is the oversupply of graduates without any training as well as the fact that often the education is too general to teach the skills expected by the employers that would allow such candidates to find a job right after graduation (e.g. economists, educationalists, philosophers, historians, political scientists and culture experts). Such candidates who are looking for jobs in their field must continue their education, e.g. by taking postgraduate courses.
III. Results of Occupational Barometer 2018

3.4. Growing share of deficit occupations

Based on the Occupational Barometer survey methodology as well as standardized data gathering process, the data can be analysed quantitatively, which allows to observe changes on the labour market. 27 deficit occupations are expected in 2017 based on the results aggregated from all 380 counties. They represent 16% of all occupation groups covered by the survey\(^3\). In 2017, the ratio was 14% and in 2016 – only 9%. There will be 137 balanced occupations in 2018 (82% of the entire occupation list - 81.8% a year before), while the occupations, which the experts expect to be oversupplied will only reach 3 (2%).

\(^3\) In this year’s national study, similarly to the last edition, all the occupations from the list were included (100%=167). The regional results still contain the algorithm that excludes the occupations, which have not been assessed in at least half of the counties.
Their share decreased more than twice as compared to the previous year, when the surplus occupation ratio was 4.2% (8.5% in 2016). Therefore, the trend from the last year, i.e. increasing share of deficit occupations and decreasing share of surplus occupations is continuing.

**Chart 4. Share of deficit and surplus occupations in three editions of Occupational Barometer - nationwide**

![Chart 4](chart-4.png)

Source: Own study.

In order for a given profession to be deemed deficit, it must be included in such a category in more than half of the counties. Deficit occupations include nearly all of those listed last year (except for sales representatives and financial and accounting clerks with knowledge of foreign languages). New deficit occupations (which were included in the balanced group last year) include concrete placers, bricklayers, pastry cooks, stock clerks and construction workers. There is also a new deficit category: building finishers (in previous editions, the group was divided into several different occupations, such as floor layers and building painters).

**Map 4. Comparison of available candidates and employers’ needs – pastry cook**

![Map 4](map-4.png)
The problem with finding job candidates in 2018 will affect several sectors. The most problems with finding suitable candidates may be expected in construction and manufacturing sectors (e.g. carpenters, bricklayers and plasterers, tailors and garment trade workers). Other industries include restaurants (chefs, cooks and pastry makers), health care (nurses and midwifery professionals, home-based personal care workers), transport (heavy truck and lorry drivers, bus drivers) and services (hairdressers, car mechanics). There is observable deficit of both skilled workers as well as professionals (e.g. certified accountants). The employers also experience problems with finding unskilled labour. The reasons behind such situation are the same as last year.

The main reasons given by the experts for such deficit:
- **Unattractive employment conditions** — not only due to salary level inadequate to the work performed but also in terms of low quality of job offers (e.g. unclear recruitment terms),
uneven salary levels, the risk of being laid off and lack of general work comfort (working hours, relations with the employer, long hours that affect private life).

- **Too low salary level** – it is one of the key reasons for the unemployed not to take up jobs. As a result, employers hire more workers from behind the eastern border and there are more problems encountered in such areas, as agriculture, forestry or food processing. There are also occupations, where even though the nominal salary is relatively high, due to the working conditions, the candidate perceive such salary as too low (e.g. heavy truck and lorry drivers).

- **Difficult or harmful working conditions** - it mainly applies to jobs involving shifts (night time), extremely low or high temperature (e.g. in a cooling tower or steel mill), work at heights, piecework (e.g. tailors and garment trade workers).

- **Need to commute** – many people are unwilling to accept jobs, which involve frequent business trips and working away from home. Another problem, in particular in smaller towns, is the lack of transportation infrastructure. It often happens that people simply cannot get to work or it proves to be too expensive.

- **Lack of required skills** – professional experience is still one of the main requirements in most industries. Employers are unwilling to entrust modern equipment and demanding tasks to people without proven experience. Lack of practical skills is also a problem, especially among graduates and people returning to work after a long break (e.g. lack of knowledge of the applicable laws, lack of knowledge of advanced technologies, machinery and equipment).

- **Lack of or expired license** – in many sectors there are professional licenses required. Since the training courses are often very expensive or time consuming and they do not guarantee finding a job, the interest in such training does not go hand in hand with the number of employers seeking skilled candidates. Furthermore, there are occupations, where after a longer break from work, the license expires (e.g. nurses), and it takes a long time to have the license renewed.

### 3.5. Decreasing number of surplus occupations

Current situation on the labour market clearly shows the deficit of people with required qualifications. That is why, there are few occupations and industries, where there is oversupply of job seekers. The surplus occupations in 2018 included those representing the large number of technical secondary school and university graduates. They include economists, educationalists and philosophers, historians, political scientists and culture experts.

According to the panel members, the main reason of such surplus is the fact that the education offer is ill matched to the labour market conditions as well as the decreasing demand for certain occupations.

Despite the growing deficit and recruitment problems, one should bear in mind that the Polish labour market is very diversified, in particular when comparing regional cities with smaller towns, which are not located near large industrial centres. In such places, the unemployment rate is still high, as the candidates have limited opportunities to continue education or retrain, while public transport infrastructure prevents mobility and working away from home.

### 3.6. Local differences

The analysis also covered the differences between labour markets in big and small cities. Typical for regional cities is the deficit of occupations evaluated as balanced on the national or regional scale. Such industries include IT as well as BPO/SSC (outsourcing). The high demand for IT professionals, i.e. software developers and programmers, database administrators as well as IT system operators is mainly present in large cities as well as within Special Economic Zones. People with the required skills will not have a problem with finding a well-paid job. In addition, the employers are now willing to hire candidates without completed education or training, as they often recruit students. In smaller cities, such demand for IT professionals is reported mainly by institutions and companies, hence the demand is much lower as is the salary level.
Maps 7, 8, 9. Differences in demand for IT professionals depending on specialization and education level - 2018

IT analysts, testers and IT system operators

database developers and administrators, programmers

IT technician

In most regional cities there will be a deficit of occupations in health care (medical doctors, nurses and midwifery professionals) and professionals (e.g. certified accountants). In addition, vocational school and technical school graduates will have great job opportunities in such occupations as hairdressers, bakers, pastry makers and construction workers of different trade. In cities there is also a high demand for unskilled labour: as last year, they include cleaners, room attendants, salespersons and cashiers.

3.7. Shortage and surplus occupations by region

Despite the fact that the labour market trends are similar countrywide (i.e. growing number of deficit occupations and decreasing number of surplus occupations), the situation differs from region to region. Such factors, as the education centres, transportation infrastructure, financing from the EU funds or geographical location, affect the employment structure on local labour markets.
In 2018, there are no surplus occupations expected in the entire dolnośląskie voivodeship (last year, the only surplus occupation was the economist). The share of shortage occupations in all categories assessed was 37.5%. Occupations from that group included drivers with B+ category driver’s license, nurses and midwifery professionals, medical doctors and many occupations from services sector.

In 2018, kujawsko-pomorskie voivodeship continues to observe further decrease in the surplus occupations. This group also includes such occupations, as economists, educationalists, food and nutrition engineering professionals, travel consultants and tour organizers, interior decorators, conservators, farmers and breeders. Most of problems are related to the mass education or limited demand from employers. The deficit sectors include transport, construction, metallurgy, restaurants and food processing, health care and IT.

In the forecast for lubelskie voivodeship, the increased demand is observed for such occupations, as nurses and midwifery professionals, vocational teachers, Internet salespersons, heavy truck and lorry drivers, physiotherapists and masseurs. Occupations, for which the demand might be slightly lower as compared to last year, include, but are not limited to teachers, agriculture and forestry professionals as well as postal workers.

There are no surplus occupations expected in 2018 in the entire lubuskie voivodeship. Based on the assessment, 46 occupations were classified into the deficit occupation group, while 114 – to the balanced occupation group. Deficit of labour may be observed in such occupations, are bookkeeping and accounting, chefs, car mechanics and medical doctors.

According to the 2018 forecast, in łódzkie voivodeship there will be a high demand for concrete placers and steel fixers, carpenters, bricklayers, plaster layers and construction workers. In restaurant business, there is demand for unskilled workers who can work as kitchen help or fast food workers.

In małopolskie voivodeship the trends observed in previous years are expected to continue. There was a significantly more deficit occupations identified (36) as compared to the surplus occupations (5). All the occupations identified as surplus in 2018 were also classified as such last year. The remaining occupations listed in the previous survey edition as surplus were classified into the balanced occupation group. Generally, occupations listed as deficit last year and this year are the same. They include such industries, as construction, transport, manufacturing, restaurants, health care and IT. The factors that contribute to problems with finding a job include: hard working conditions, lack of required skills, age and health condition of candidates, salary inadequate to the job/position.

In 2018, in mazowieckie voivodeship the number of deficit occupations is expected to increase. Only one occupation was categorized as surplus, namely - economists, which is often identified as the education direction and not occupation on the labour market. The reasons behind recruitment problems include, but are not limited to, lack of skills and experience required by the employers, large grey market, low quality of job offers, generation gap in education and unattractive employment terms. Since mazowieckie voivodeship is also one of the most diversified regions, the situation on individual labour markets may vary.

In opolskie voivodeship, the decrease in surplus occupations was observed. In the 2016 forecast, surplus occupations represented 8.5% of all assessed occupations, in 2017 – 4.9% and in 2018 – only 3%. There is still high demand for electronics, automation and robotics professionals (in particular automated production line operators), as well as for electricians, electromechanics and wiremen – the candidates sought must have valid professional license, while most of the registered unemployed obtained their licenses a long time ago and their skills are outdated.

The survey participants podkarpackie voivodeship stressed the fact that the companies, which had invested in their existing personnel, should not have problems with employment. On the other hand, those businesses that failed to notice changes on the labour market will be seeking to recruit more people, even by raising salaries or offering fringe benefits. The deficit occupations include bus drivers, heavy truck and lorry drivers, welders, nurses and midwifery professionals and chief accountants. The surplus group includes 13 occupations.

According to 2018 forecasts, there will be deficit in labour in podlaskie voivodeship in 20 groups of occupations. They include, but are not limited to: bakers, toolmakers, car diagnosticians, stock clerks, tailors and garment trade workers. The number of surplus occupations will drop – there should be problems with finding jobs in 8 occupation groups, such as: economists, educationalists, mechanical technicians, public administration professionals, food and nutrition engineering professionals, teachers, textile machine operators, farmers and breeders.

The survey results for pomorskie voivodeship confirm the conclusions from the last year’s forecast, according to which the current market is „an employee market”. As compared to the previous year, in 2018 the labour demand structure will slightly change. The number of deficit occupations will be nearly eight times higher than the surplus ones (last year it was six times higher). The deficit category included, but was not limited to: construction engineers, foreign language teachers and tutors, certified accountants and sales representatives.
In 2018, in all counties in śląskie voivodeship it is expected that the number of deficit occupations will outweigh the number of surplus ones. Two occupations were classified as deficit in all counties in the region, i.e. heavy truck and lorry drivers and welders. In two counties only single occupation was identified a surplus, while no such category was observed in 6 counties. Deficit occupation group included, but was not limited to: site managers, home based personal care workers and blue collar workers in manufacturing as well as unskilled labour.

According to the personnel of labour offices in świętokrzyskie voivodeship, the main reasons behind the surplus in labour is the fact that education curricula are not adapted to the local labour market needs. Schools produced large numbers of inexperienced graduates with low skills, who remain as registered unemployed for a long time after graduation. It is expected, that next year there will be deficit in 24 occupations (the highest number since the survey was first conducted in the region), while the surplus occupations will reach 11 (the lowest number since the survey was first conducted).

In warmińsko-mazurskie voivodeship there are 25 deficit occupations and one surplus occupation (economists) expected. The deficit in labour will be noticeable in the following industries: construction, transport, manufacturing, restaurants, services and health care. The problem with finding the right candidates arise mainly from low pay being offered, hard working conditions as well as work in the „shadow economy”.

In wielkopolskie voivodeship, the deficit group in 2018 will include unskilled labour as well as professionals in growing industries. In most counties in the region, there will be high demand for skilled pastry makers, hairdressers, cooks, car mechanics, tailors and garment trade workers (including seamstresses) as well as upholsterers. According to the experts, even though there are many representatives of the aforementioned occupations in many counties, they lack the required skills or qualifications to meet the current market requirements.

In zachodniopomorskie voivodeship, vacancy number is growing, while the unemployment rate is dropping. According to the experts who assessed the labour market in the region, there might be problems with finding candidates from 32 out of 167 assessed occupation groups. As compared to previous years, there is still high demand for construction workers. There is also high demand for bus drivers (D category driver’s license) as well as heavy truck and lorry drivers. The deficit occupations also include stock clerks, as the demand for such occupations increased due to new investments in resources management, goods distribution and transhipment.

3.8. Summary

Occupational Barometer results clearly show that the recruitment problems will be greater as compared to 2017. Such situation is advantageous for the job seekers, as the employers are more willing to adapt employment conditions to the employees’ expectations. However, in the long-term perspective, such situation is unfavourable, as it significantly affects general economy, causing downturn, which will also affect the labour market.

At present, the greatest challenge for the labour market institutions is to find solutions that would reduce the number of deficit occupations. It would be worthwhile to focus on using hidden resources, i.e. people who are economically inactive, for various reasons. It will not be easy to identify the employment barriers or to plan actions aimed at solving such problems, but it will be necessary, as there are fewer and fewer opportunities to hire labour force from the East.

If you are interested in learning more about situation on local labour markets, please visit our website at barometrzawodow.pl, where you fill find detailed information on labour demand in individual counties.
The “Occupational Barometer” is a forecast for the demand for employees in 2018. The study was conducted by experts at the turn of the third and fourth quarters of 2017.

The situation in some professions may change depending on market conditions. The results for the voivodeship include professions assessed in at least half of the counties.
III. Results of Occupational Barometer 2018

The situation in some professions may change depending on market conditions. The results for the voivodeship include professions assessed in at least half of the counties.

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www.barometrzawodow.pl

Occupational Barometer 2018
kujawsko-pomorskie voivodeship

www.barometrzawodow.pl

Automotive diagnosis technicians
Bricklayers and plasterers
Bus drivers
Chefs
Cleaning and forwarding agents
Concrete mixers and steel fixers
Confectioners
Construction engineers
Construction installation assemblers
Construction joiners and carpenters
Construction managers
Cooks
Cranes, hoist and related plant operators
Database designers and administrators, programmers
Earthmoving plant operators and mechanics
Electrical mechanics and electrical assemblers
Finishing work technologists in building trades
Graphical and multimedia designers
Handicraft workers in wood and joiners
Independent accountants
Medical doctors
Motor vehicle mechanics and repairers
Nurses and midwives
Pavers
Physiotherapists and masseurs
Psychologists and psychotherapists
Roofers and sheet metal workers in building trades
Sales representatives
Structural metal workers
Tailors and clothing manufacturers
Teachers for practical vocational training
Teachers of vocational subjects
Telecoms
Truck and tractor drivers
Upholsterers
Varnishers
Welders

Accounting and bookkeeping clerks
Administration and office clerks
Agricultural and gardening machines operators
Analysts, testers and ICT system operators
Architects and urban planners
Archivists and curators
Assistants in education
 Beauticians
Biologists, biotechnologists, biochemists
Butchers and fishmongers
Car wash, laundry and ironing workers
Caretakers, doorkeepers, janitors and custodians
Chemical engineers and chemists
Chemical products plant and machine operators
Childminders
Cleaners and room service
Construction supervision inspectors
Construction technicians
Construction workers
Contact centre agents, survey and market research
Interviewers
Deliverer and suppliers
Diagnostic and ultrasound technologists
Dentists
Driving instructors
Educators in educational and care institutions
Electronic assemblers
Electronics technology, automation and robotics specialists
Environmental engineers
Events, cultural activities and animation organizers
Farming and forestry specialists
Finance professionals
Florists
Food processing workers
Foreign language teachers
Forest workers
Funeral service workers
Gardeners and orchardists
Glaziers and window fitters
Human resources management and recruitment specialists
Industrial ceramics
Insurance agents
Internal sales staff
IT technicians
Journalists and editors
Kitchen helpers
Landscape architects
Lawyers
Librarians and related information professionals
Mechanical engineering technicians
Mechanical engineers
Metal processing workers
OHS specialists
Operators of medical equipment
Paper manufacturing and processing machine operators
Paramedical practitioners
Passenger car drivers
Pharmacists
Photographers
Physical protection services workers
Plant and machine operators and assemblers
Postal clerks
Postmen and package deliverers
Printers and lithographers
Pr., advertising, marketing and sales specialists
Pre-school teachers
Primary education teachers
Printing trades workers
Production managers
Production organisation professionals
Quality specialists
Railway traffic operators
Real estate professionals
Receptionists and strapped
Road construction workers
Rubber and plastic machine operators
Sales managers
Salespeople and cashiers
Secretaries and assistants
Service managers
Social institutions and culture managers
Social work professionals caring for the elderly and disabled
Social workers
Special school teachers
Speech therapists and audiophonologists
Sport and recreation instructors
Stonemasons
Stonemasons
Surveyors and cartographers
Teachers of general subjects
Textile and leather workers
Translators, interpreters and other linguists
Uniformed services workers
Veterinarians
Waiters and bartenders
Webmasters

Artists, interior decorators and conservators
Economists
Educational counsellors
Farmers and animal producers
Food and nutrition technology specialists
Political scientists, historians, philosophers
Public administration professionals
Sociologists and social/economic surveys professionals
Travel agency employees and tour operators

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# Occupational Barometer 2018

**lubelskie voivodeship**

**www.barometrzawodow.pl**

## Shortage

<table>
<thead>
<tr>
<th>Shortage</th>
<th>Construction managers</th>
<th>Speech therapists and audiology technicians</th>
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<td>Corks</td>
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## Balance

| Accounting and bookkeeping clerks | Forest workers | Product and garment designers |
| Administration and office clerks | Funeral service workers | Production managers |
| Agricultural and gardening machines operators | Grassers and window fitters | Production organisation professionals |
| Analysts, testers and ICT system operators | Graphic and multimedia designers | Psychologists and psychotherapists |
| Animal services workers | Handcraft workers in leather and related materials | Quality specialists |
| Architects and urban planners | Handcraft workers in wood and joiners | Railway traffic operators |
| Assistants in education | Household helps | Real estate professionals |
| Biologists, biotechnologists, biochemists | Human resources management and recruitment specialists | Receptionists |
| Bricklayers and plasterers | IT technicians | Road construction workers |
| Butchers and fishmongers | Journalists and editors | Roofers and sheet metal workers in building trades |
| Car wash, laundry and ironing workers | Kitchen helpers | Rubber and plastic machine operators |
| Caretakers, doorkeepers, janitors and custodians | Landscape architects | Sales managers |
| Cement and stone machine operators | Lawyers | Sales managers |
| Chemical engineers and chemists | Librarians and related information professionals | Salespeople and pos operators |
| Chemical products plant and machine operators | Logistics managers | Secretaries and assistants |
| Childminders | Management and business service managers | Service managers |
| Cleaners and room service | Manual workers in production and simple works | Shoemakers |
| Cleaning and forwarding agents | Mechanical engineers | Social institutions and culture managers |
| Concrete placers, concrete finishers and related workers | Medical imaging and therapeutic equipment technicians | Social work professionals caring for the elderly and disabled |
| Confectioners | Metal processing workers | Social workers |
| Construction engineers | Metal working machine tool setters and operators | Special school teachers |
| Construction installation assemblers | Meteorologists, geologists, geographers | Sport and recreation instructors |
| Construction joiners and carpenters | Motor vehicle mechanics and repairers | Stonemasons |
| Construction supervision inspectors | OHS specialists | Storekeepers |
| Construction technicians | Operators of medical equipment | Structural metal workers |
| Construction workers | Opticians and prosthetics workers | Surveyors and cartographers |
| Contact centre agents, survey and market research interviewers | Other education specialists | Tailors and clothing manufacturers |
| Crane, hoist and related plant operators | Paper manufacturing and processing machine operators | Telecommunications specialists |
| Database developers and administrators, programmers | Paramedical practitioners | Textile machine operators |
| Dental technicians | Passenger car drivers | Tinsmiths and laquerers |
| Dentists | Pharmacists | Toymakers |
| Driving instructors | Photographers | Trade representatives |
| Educators in educational and care institutions | Physical protection services workers | Uniformed services workers |
| Educational counselors | Physiotherapists and masseurs | Upholsters |
| Environmental engineers | Plant and machine operators and assemblers | Varnishers |
| Environmental engineering engineers | Postal clerks | Veterinarians |
| Events, cultural activities and animation organizers | Postmen and package deliverers | Visual artists and interior designers |
| Finance professionals | Potters and glaziers | Waiters and bartenders |
| Fishing work technologists in building trades | PR, advertising, marketing and sales specialists | Webmasters |
| Florists | Pre-school teachers |                                |
| Food processing workers | Primary education teachers |                                |
| Foreign language teachers | Printing trades workers |                                |

## Surplus

| Economists | Gardeners | Sociologists and social-economic surveys professionals |
| Educational counselors | | Teachers of general subjects |
| Farmers and animal producers | Mechanical engineering technicians | Translators, interpreters and other linguists |
| Farming and forestry specialists | Mechanical scientists, historians, philosophers and culture experts | Travel consultants and clerks |
| Food and nutrition technology specialists | Public administration professionals |                                |

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Balanced Demand:
- Agricultural and gardening machines operators
- Analysts, testers and ICT system operators
- Animal services workers
- Artisans, interior decorators and conservators
- Artists, interior decorators and conservators
- Bakers
- Bankers
- Booksellers and fishmongers
- Chefs
- Cooks
- Construction engineers
- Construction installation assemblers
- Construction joiners and carpenters
- Construction engineers
- Crane, hoist and related plant operators
- Craftsmen
- Database designers and administrators, programmers
- Delivery and suppliers
- Dental technicians
- Dentists
- Driving instructors
- Economists
- Educational counsellors
- Educators in educational and care institutions
- Electrical and energetic engineers
- Electrical engineers
- Electronic assemblers
- Electronics technology, automation and robotics specialists
- Environmental engineering engineers
- Event, cultural activities and animation organizers
- Farmers and animal producers
- Farming and forestry specialists
- Finance professionals
- Foresters
- Food and nutrition technology specialists
- Food processing workers
- Forest workers
- Forest management specialists
- Funeral service workers
- Gardeners and orchardists
- Glaziers and window fitters
- Graphic and multimedia designers
- Household help
- Human resources management and recruitment specialists
- Insurance agents
- Internet support staff
- IT technicians
- Journalists and editors
- Landscape architects
- Lawyers
- Librarians and related information professionals
- Mechanical engineers
- Mechanical engineering technicians
- Metrological service workers
- Meteorologists, geologists, geographers
- Metal processing workers
- Metalworking machine tool setters and operators
- Milliners
- Military services workers
- Motor vehicle mechanics and repairers
- Motor vehicle mechanics and repairers
- Motor vehicle mechanics and repairers
- Mountain rescue and lifesaving workers
- Navies
- Necromancers
- Net developers
- Nurses and midwives
- Office managers
- Office and professional clerks
- Opticians and prosthetics workers
- Operators of medical equipment
- Operators of medical equipment
- Painters
- Paramedic technicians
- Passenger car drivers
- Pharmacists
- Photographers
- Physical therapy and medical rehabilitation specialists
- Plumbers
- Postal clerks
- Printers
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- Production organisation professionals
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- Public administration professionals
- Public administration professionals
- Public administration professions
The “Occupational Barometer” is a forecast for the demand for employees in 2018. The study was conducted by experts at the turn of the third and fourth quarters of 2017. The situation in some professions may change depending on market conditions. The results for the voivodeship include professions assessed in at least half of the counties.

www.barometrzawodow.pl

Regional/Province coordinator

Institution ordering the study

The “Occupational Barometer” is a forecast for the demand for employees in 2018. The study was conducted by experts at the turn of the third and fourth quarters of 2017. The situation in some professions may change depending on market conditions. The results for the voivodeship include professions assessed in at least half of the counties.

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Regional/Province coordinator

Institution ordering the study
III. Results of Occupational Barometer 2018

The Occupational Barometer is a forecast for the demand for employees in 2018. The study was conducted by experts at the turn of the third and fourth quarters of 2017. The situation in some professions may change depending on market conditions. The results for the voivodeship include professions assessed in at least half of the counties.

**Occupational Barometer 2018**

małopolskie voivodeship

www.barometrzawodow.pl

**SHORTAGE**

- Bakers
- Bricklayers and plasterers
- Bus drivers
- Butchers and fishmongers
- Chefs
- Cleaning and forwarding agents
- Concrete and steel fitters
- Confectioners
- Construction installation assemblers
- Construction joiners and carpenters
- Construction managers
- Economists
- Administration and office clerks
- deliverers and suppliers
- Dentists
- Dental technicians
- Contact centre agents, survey and market research interviewers
- Crane, hoist and related plant operators
- Laundry and ironing workers
- Caretakers, doormen, janitors and porters
- Cement and stone machine operators
- Chemical engineers and chemists
- Chemical products plant and machine operators
- Childminders
- Cleaners and room service
- Construction engineers
- Construction supervision inspectors
- Construction technicians
- Contact centre agents, survey and market research interviewers
- Car, truck and related plant operators
- Drivers and suppliers
- Dental technicians
- Dentists
- Driving instructors
- Educational counsellors
- Educators in general education and care institutions
- Electronic and energy engineers
- Electronic assemblers
- Electronics technology, automation and robotics specialists
- Environmental engineering engineers
- Events, cultural activities and animation organizers
- Farmers and animal producers
- Farming and forestry specialists
- Financial and accounting staff with knowledge of foreign languages
- Financial professionals
- Florists
- Food and nutrition technology specialists
- Food processing workers
- Foreign language teachers
- Forest workers
- Funeral service workers
- Generators and power specialists
- Glaziers and window fitters
- Handcraft workers in leather and related materials
- Human resources management and recruitment specialists
- Industrial ceramists
- Insurance agents
- Internal sales staff
- IT technicians
- Journalists and editors
- Kitchen helpers
- Landscape architects
- Lawyers
- Librarians and related information professionals
- Logistics managers
- Machinists and mechanics and repairers
- Management and business service managers
- Manual workers in production and simple works
- Mechanical engineering technicians
- Mechanical engineers
- Metal processing workers
- Meteorologists, geologists, geographers
- Military and auxiliary residences
- Medical doctors
- Medical and health facility administrators
- Metal working machine tool setters and operators
- Motor vehicle mechanics and repairers
- Nurses and midwives
- Pavers
- Physiotherapists and massage therapists
- Plumbers and pipefitters in building trades
- Social work professionals caring for the elderly and disabled
- Tailors and clothing manufacturers
- Tinsmiths and ironmongers
- Toolmakers
- Truck and tractor drivers
- Waiters and bartenders

**BALANCE**

- Accounting and bookkeeping clerks
- Agricultural and gardening machines operators
- Analysts, testers and ICT system operators
- Animal services workers
- Architects and urban planners
- Archivists and curators
- Artists, interior decorators and conservators
- Assistants in education
- Automotive diagnosis technicians
- Biologists, biotechnologists, biochemists
- Car wash, laundry and ironing workers
- Caretakers, doormen, janitors and porters
- Cement and stone machine operators
- Chemical engineers and chemists
- Chemical products plant and machine operators
- Childminders
- Cleaners and room service
- Construction engineers
- Construction supervision inspectors
- Construction technicians
- Contact centre agents, survey and market research interviewers
- Crane, hoist and related plant operators
- Delivery and suppliers
- Dental technicians
- Dentists
- Driving instructors
- Educational counsellors
- Educators in general education and care institutions
- Electrical and energy engineers
- Electronic assemblers
- Electronics technology, automation and robotics specialists
- Environmental engineering engineers
- Events, cultural activities and animation organizers
- Farmers and animal producers
- Farming and forestry specialists
- Financial and accounting staff with knowledge of foreign languages
- Financial professionals
- Florists
- Food and nutrition technology specialists
- Foreign language teachers
- Forest workers
- Funeral service workers
- Generators and power specialists
- Glaziers and window fitters
- Handcraft workers in leather and related materials
- Human resources management and recruitment specialists
- Industrial ceramists
- Insurance agents
- Internal sales staff
- IT technicians
- Journalists and editors
- Kitchen helpers
- Landscape architects
- Lawyers
- Librarians and related information professionals
- Logistics managers
- Machinists and mechanics and repairers
- Management and business service managers
- Manual workers in production and simple works
- Mechanical engineering technicians
- Mechanical engineers
- Metal processing workers
- Meteorologists, geologists, geographers
- Military and auxiliary residences
- Medical doctors
- Medical and health facility administrators
- Metal working machine tool setters and operators
- Motor vehicle mechanics and repairers
- Nurses and midwives
- Pavers
- Physiotherapists and massage therapists
- Plumbers and pipefitters in building trades
- Social work professionals caring for the elderly and disabled
- Tailors and clothing manufacturers
- Tinsmiths and ironmongers
- Toolmakers
- Truck and tractor drivers
- Waiters and bartenders

**SURPLUS**

- Food processing workers
- Foreign language teachers
- Forest workers
- Funeral service workers
- Generators and power specialists
- Glaziers and window fitters
- Handcraft workers in leather and related materials
- Human resources management and recruitment specialists
- Industrial ceramists
- Insurance agents
- Internal sales staff
- IT technicians
- Journalists and editors
- Kitchen helpers
- Landscape architects
- Lawyers
- Librarians and related information professionals
- Logistics managers
- Machinists and mechanics and repairers
- Management and business service managers
- Manual workers in production and simple works
- Mechanical engineering technicians
- Mechanical engineers
- Metal processing workers
- Meteorologists, geologists, geographers
- OHS specialists
- Operators of medical equipment
- Opticians and prosthetics workers
- Other education specialists
- Paper manufacturing and processing machine operators
- Paramedical practitioners
- Passenger car drivers
- Pharmacists
- Photographers
- Physical protection services workers
- Plant and machine operators and assemblers
- Postal clerks
- Postmen and package deliverers
- Potters and plasterers
- PR, advertising, marketing and sales specialists
- Political scientists, historians, philosophers and culture experts
- Public administration professionals
- Travel agency employees and tour operators
- Pre-school teachers
- Primary education teachers
- Printing trades workers
- Production managers
- Production organisation professionals
- Psychologists and psychotherapists
- Quality specialists
- Railway traffic operators
- Real estate professionals
- Receptionists and assistant receptionists
- Road construction workers
- Rubber and plastic machine operators
- Sales managers
- Sales representatives
- Salespeople and cashiers
- Secretaries and assistants
- Service managers
- Shoemakers
- Social institutions and culture managers
- Social workers
- Sociologists and social/economic surveys professionals
- Special school teachers
- Speech therapists and audiophonologists
- Sport and recreation instructors
- Stonemasons
- Stonemasons
- Structural metal workers
- Surveyors and cartographers
- Teachers for practical vocational training
- Teachers of general subjects
- Teachers of vocational subjects
- Telecommunications specialists
- Textile machine operators
- Translators, interpreters and other linguists
- Uniformed services workers
- Upholsterers
- Varnishers
- Veterinarians
- Virologists
- Webmasters

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## Occupational Barometer 2018
### opolskie voivodeship

**www.barometrzawodow.pl**

### SHORTAGE

- Bakers
- Bricklayers and plasterers
- Bus drivers
- Chefs
- Clearing and forwarding agents
- Construction installation assemblers
- Construction joiners and carpenters
- Construction workers
- Cooks
- Deliverer and suppliers
- Earthmoving plant operators and mechanics
- Electrical mechanics and electrical assemblers
- Electronics technology, automation and robotics specialists
- Graphic and multimedia designers
- Handicrafts
- Handicraft workers in wood and joiners
- Independent accountants
- Kitchen helpers
- Medical doctors
- Metal processing workers
- Metal working machine tool setters and operators
- Motor vehicle mechanics and repairers
- Nurses and midwives
- Physical protection services workers
- Physiotherapists and masseurs
- PR, advertising, marketing and sales specialists
- Receptionists and registrars
- Rubber and plastic machine operators
- Sales representatives
- Social workers
- Social work professionals caring for the elderly and disabled
- Stonecutters
- Structural metal workers
- Tailors and clothing manufacturers
- Timbers and laquers
- Toolmakers
- Truck and tractor drivers
- Upholsterers
- Waiters and bartenders
- Welders

### BALANCE

- Accounting and bookkeeping clerks
- Acoustics and sound engineers
- Administration and office clerks
- Agricultural and gardening machine operators
- Analysts, testers and ICT system operators
- Animal services workers
- Architects and urban planners
- Archivists and curators
- Artists, interior decorators and conservators
- Assistants in education
- Automotive diagnosis technicians
- Beauticians
- Biologists, biotechnologists, biochemists
- Butchers and fishmongers
- Car wash, laundry and ironing workers
- Caretakers, doorkeepers, janitors and custodians
- Cement and stone machine operators
- Chemical engineers and chemists
- Chemical products plant and machine operators
- Childminders
- Cleaners and room service
- Concrete and steel fixers
- Confectioners
- Construction engineers
- Construction managers
- Construction supervision inspectors
- Construction technicians
- Contact centre agents, survey and market research interviewers
- Crane, hoist and related plant operators
- Database designers and administrators, programmers
- Dental technicians
- Dentists
- Driving instructors
- Educators in educational and care institutions
- Electrical and energetic engineers
- Electronic assemblers
- Environmental engineering engineers
- Events, cultural activities and animation organizers
- Farming and forestry specialists
- Finance professionals
- Finishing work technicians in building trades
- Florists
- Food processing workers
- Foreign language teachers
- Forest workers
- Funeral service workers
- Gardeners and orchardists
- Glaziers and window fitters
- Handicraft workers in leather and related materials
- Household help
- Human resources management and recruitment specialists
- Industrial ceramists
- Insurance agents
- Internet sales staff
- IT technicians
- Journalists and editors
- Landscape architects
- Lawyers
- Librarians and related information professionals
- Logistics managers
- Machinery mechanics and repairers
- Management and business service managers
- Managers in public/private institutions
- Manual workers in production and simple works
- Mechanical engineering technicians
- Mechanical engineers
- Meteorologists, geologists, geographers
- Miners and mining plant and machine operators
- OHS specialists
- Operators of medical equipment
- Opticians and prosthetics workers
- Other education specialists
- Paper manufacturing and processing machine operators
- Paramedical practitioners
- Passenger car drivers
- Poets
- Pharmacists
- Photographers
- Plant and machine operators and assemblers
- Postal clerks
- Postmen and package deliverers
- Potters and glaziers
- Pre-school teachers
- Primary education teachers
- Printing trades workers
- Product and pavement designers
- Production managers
- Production organisation professionals
- Psychologists and psychotherapists
- Public administration professionals
- Quality specialists
- Railway traffic operators
- Real estate professionals
- Road construction workers
- Roofers and sheet metal workers in building trades
- Sales managers
- Salespeople and cashiers
- Secretaries and assistants
- Service managers
- Shoemakers
- Social workers
- Sociologists and social/economic surveys professionals
- Special school teachers
- Speech therapists and audiophonologists
- Sport and recreation instructors
- Stonemasons
- Surveyors and cartographers
- Teachers for practical vocational training
- Teachers of general subjects
- Teachers of practical vocational training
- Surveyors and cartographers
- Teachers of practical vocational training
- Surveyors and cartographers
- Teachers of practical vocational training
- Surveyors and cartographers
- Teachers of practical vocational training
- Surveyors and cartographers
- Teachers of practical vocational training
- Surveyors and cartographers
- Teachers of practical vocational training
- Surveyors and cartographers
- Teachers of practical vocational training

### SURPLUS

- Economists
- Educational counsellors
- Farmers and animal producers
- Food and nutrition technology specialists
- Political scientists, historians, philosophers and culture experts

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The Regional/Province coordinator is [Opolski Urząd Pracy w Opolu](http://www.opolskipracovni.pl). The National coordinator is [Wojewódzki Urząd Pracy w Polskon](http://www.wupol.pl). The Institution ordering the study is [Ministerstwo Rodziny, Pracy i Polityki Społecznej](http://www.mps.pj.gov.pl).
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The situation in some professions may change depending on market conditions. The results for the voivodeship include professions assessed in at least half of the counties.

### Shortage
- Accountants and bookkeeping clerks
- Administration and office clerks
- Agricultural and gardening machines operators
- Analysts, testers and ICT system operators
- Archivists and curators
- Artists, interior decorators and conservators
- Assistants in education
- Beauticians
- Biologists, biotechnologists, biochemists
- Butchers and fishmongers
- Car wash, laundry and ironing workers
- Carpenters, doorkeepers, janitors and custodians
- Cement and stone machine operators
- Chemical engineers and chemists
- Chemical products plant and machine operators
- Childminders
- Cleaners and room service
- Cleaning and forwarding agents
- Confectioners
- Construction managers
- Construction supervision inspectors
- Construction technicians
- Construction workers
- Contact centre agents, survey and market research interviewers
- Crane, hoist and related plant operators
- Database designers and administrators, programmers
- Deliveries and suppliers
- Dental technicians
- Dentists
- Driving instructors
- Educators in educational and care institutions
- Electrical and energetic engineers
- Electronic assemblers
- Electronics technology, automation and robotics specialists
- Events, cultural activities and animation organizers, tourism professionals
- Farmers and animal products designers
- Farming and forestry specialists
- Finishing work technicians in building trades
- Florists
- Food processing workers
- Foreign language teachers
- Forest workers
- Funeral service workers
- Gardeners, landscape architects
- Gastronomy and window fitters
- Graphic and multimedia designers
- Human resources management and recruitment specialists
- Insurance agents
- Internet sales staff
- IT technicians
- Journalists and editors
- Kitchen helpers
- Librarians and related information professionals
- Logistics managers
- Machinery mechanics and repairers
- Management and business service managers
- Manual workers in production and simple works
- Mechanical engineering technicians
- Medical doctors
- Metal processing workers
- Meteorologists, geologists, geographers
- OHS specialists
- Operators of medical equipment
- Opticians and prosthetics workers
- Other education specialists
- Paper manufacturing and processing machine operators
- Paramedical practitioners
- Passenger car drivers
- Pharmacists
- Photographers
- Physical protection services workers
- Plant and machine operators and assemblers
- Postal clerks
- Postmen and package deliverers
- Psychologists and psychotherapists
- Production organisation professionals
- Psychological and psychotherapists
- Quality specialists
- Real estate professionals
- Receptionists and registrars
- Roof construction workers
- Rubber and plastic machine operators
- Sales managers
- Sales representatives
- Salespeople and cashiers
- Secretaries and assistants
- Service managers
- Shoemakers
- Social work professionals caring for the elderly and disabled
- Social workers
- Special school teachers
- Speech therapists and audiophonologists
- Sport and recreation instructors
- Stonemasons
- Storerooms
- Structural metal workers
- Surveyors and cartographers
- Teachers for practical vocational training
- Teachers of general subjects
- Teachers of vocational subjects
- Telecommunications specialists
- Uniformed services workers
- Upholsterers
- Varnishers
- Veterinarians
- Webmasters

### Balance
- Agricultural and gardening machines operators
- Analysts, testers and ICT system operators
- Archivists and curators
- Artists, interior decorators and conservators
- Assistants in education
- Beauticians
- Biologists, biotechnologists, biochemists
- Butchers and fishmongers
- Car wash, laundry and ironing workers
- Carpenters, doorkeepers, janitors and custodians
- Cement and stone machine operators
- Chemical engineers and chemists
- Chemical products plant and machine operators
- Childminders
- Cleaners and room service
- Cleaning and forwarding agents
- Confectioners
- Construction managers
- Construction supervision inspectors
- Construction technicians
- Construction workers
- Contact centre agents, survey and market research interviewers
- Crane, hoist and related plant operators
- Database designers and administrators, programmers
- Deliveries and suppliers
- Dental technicians
- Dentists
- Driving instructors
- Educators in educational and care institutions
- Electrical and energetic engineers
- Electronic assemblers
- Electronics technology, automation and robotics specialists
- Events, cultural activities and animation organizers, tourism professionals
- Farmers and animal products designers
- Farming and forestry specialists
- Finishing work technicians in building trades
- Florists
- Food processing workers
- Foreign language teachers
- Forest workers
- Funeral service workers
- Gardeners, landscape architects
- Gastronomy and window fitters
- Graphic and multimedia designers
- Human resources management and recruitment specialists
- Insurance agents
- Internet sales staff
- IT technicians
- Journalists and editors
- Kitchen helpers
- Librarians and related information professionals
- Logistics managers
- Machinery mechanics and repairers
- Management and business service managers
- Manual workers in production and simple works
- Mechanical engineering technicians
- Medical doctors
- Metal processing workers
- Meteorologists, geologists, geographers
- OHS specialists
- Operators of medical equipment
- Opticians and prosthetics workers
- Other education specialists
- Paper manufacturing and processing machine operators
- Paramedical practitioners
- Passenger car drivers
- Pharmacists
- Photographers
- Physical protection services workers
- Plant and machine operators and assemblers
- Postal clerks
- Postmen and package deliverers
- Psychologists and psychotherapists
- Production organisation professionals
- Psychological and psychotherapists
- Quality specialists
- Real estate professionals
- Receptionists and registrars
- Roof construction workers
- Rubber and plastic machine operators
- Sales managers
- Sales representatives
- Salespeople and cashiers
- Secretaries and assistants
- Service managers
- Shoemakers
- Social work professionals caring for the elderly and disabled
- Social workers
- Special school teachers
- Speech therapists and audiophonologists
- Sport and recreation instructors
- Stonemasons
- Storerooms
- Structural metal workers
- Surveyors and cartographers
- Teachers for practical vocational training
- Teachers of general subjects
- Teachers of vocational subjects
- Telecommunications specialists
- Uniformed services workers
- Upholsterers
- Varnishers
- Veterinarians
- Webmasters

### Surplus
- Accountants and bookkeeping clerks
- Administration and office clerks
- Agricultural and gardening machines operators
- Analysts, testers and ICT system operators
- Archivists and curators
- Artists, interior decorators and conservators
- Assistants in education
- Beauticians
- Biologists, biotechnologists, biochemists
- Butchers and fishmongers
- Car wash, laundry and ironing workers
- Carpenters, doorkeepers, janitors and custodians
- Cement and stone machine operators
- Chemical engineers and chemists
- Chemical products plant and machine operators
- Childminders
- Cleaners and room service
- Cleaning and forwarding agents
- Confectioners
- Construction managers
- Construction supervision inspectors
- Construction technicians
- Construction workers
- Contact centre agents, survey and market research interviewers
- Crane, hoist and related plant operators
- Database designers and administrators, programmers
- Deliveries and suppliers
- Dental technicians
- Dentists
- Driving instructors
- Educators in educational and care institutions
- Electrical and energetic engineers
- Electronic assemblers
- Electronics technology, automation and robotics specialists
- Events, cultural activities and animation organizers, tourism professionals
- Farmers and animal products designers
- Farming and forestry specialists
- Finishing work technicians in building trades
- Florists
- Food processing workers
- Foreign language teachers
- Forest workers
- Funeral service workers
- Gardeners, landscape architects
- Gastronomy and window fitters
- Graphic and multimedia designers
- Human resources management and recruitment specialists
- Insurance agents
- Internet sales staff
- IT technicians
- Journalists and editors
- Kitchen helpers
- Librarians and related information professionals
- Logistics managers
- Machinery mechanics and repairers
- Management and business service managers
- Manual workers in production and simple works
- Mechanical engineering technicians
- Medical doctors
- Metal processing workers
- Meteorologists, geologists, geographers
- OHS specialists
- Operators of medical equipment
- Opticians and prosthetics workers
- Other education specialists
- Paper manufacturing and processing machine operators
- Paramedical practitioners
- Passenger car drivers
- Pharmacists
- Photographers
- Physical protection services workers
- Plant and machine operators and assemblers
- Postal clerks
- Postmen and package deliverers
- Psychologists and psychotherapists
- Production organisation professionals
- Psychological and psychotherapists
- Quality specialists
- Real estate professionals
- Receptionists and registrars
- Roof construction workers
- Rubber and plastic machine operators
- Sales managers
- Sales representatives
- Salespeople and cashiers
- Secretaries and assistants
- Service managers
- Shoemakers
- Social work professionals caring for the elderly and disabled
- Social workers
- Special school teachers
- Speech therapists and audiophonologists
- Sport and recreation instructors
- Stonemasons
- Storerooms
- Structural metal workers
- Surveyors and cartographers
- Teachers for practical vocational training
- Teachers of general subjects
- Teachers of vocational subjects
- Telecommunications specialists
- Uniformed services workers
- Upholsterers
- Varnishers
- Veterinarians
- Webmasters

The results for the voivodeship include professions assessed in at least half of the counties.
### III. Results of Occupational Barometer 2018

The situation in some professions may change depending on market conditions. The results for the voivodeship include professions assessed in at least half of the counties.

#### SHORTAGE
- Farmers and animal producers
- Educational counsellors
- Finance professionals
- Construction installation assemblers
- Construction joiners and carpenters
- Cooks
- Accounting and bookkeeping clerks
- Administration and office clerks
- Agricultural and gardening machines operators
- Analysts, testers and lab system operators
- Animal services workers
- Architects and urban planners
- Archivists and curators
- Artists, interior decorators and conservators
- Assistants in education
- Beauticians
- Biologists, biotechnologists, biochemists
- Bricklayers and plasterers
- Bus drivers
- Butchers and fishmongers
- Car wash, laundry and ironing workers
- Caretakers, doorknobs, janitors and custodians
- Cement and stone machine operators
- Chemical engineers and chemists
- Chemical products plant and machine operators
- Childminders
- Cleaners and room service
- Clerical and forwarding agents
- Concrete and steel fixers
- Construction engineers
- Construction managers
- Construction supervision inspectors
- Construction technicians
- Construction workers
- Contact centre agents, survey and market research interviewers
- Crane, hoist and related plant operators
- Delivery and suppliers
- Dental technicians
- Dentists
- Driving instructors
- Educators in educational and care institutions
- Electrical and energetic engineers
- Electronic assemblers
- Electronics technology, automation and robotics specialists
- Environmental engineering engineers
- Events, cultural activities and animation organizers
- Farming and forestry specialists
- Farming and forestry specialists
- Financial professionals
- Finishing work technologists in building trades
- Florists
- Food processing workers
- Foreign language teachers
- Forest workers
- Funeral service workers
- Gardeners and orchardists
- Glaziers and window fitters
- Graphical and multimedia designers
- Household helps
- Human resources management and recruitment specialists
- Insurance agents
- Internet sales staff
- IT technicians
- Journalists and editors
- Kitchen helpers
- Landscape architects
- Lawyers
- Librarians and related information professionals
- Logistics managers
- Machinery mechanics and repairers
- Management and business service managers
- Manual workers in production and simple works
- Mechanical engineers
- Medical doctors
- Metal processing workers
- Miners and mining plant and machine operators
- Motor vehicle mechanics and repairers
- OHS specialists
- Operators of medical equipment
- Opticians and prosthetics workers
- Other education specialists
- Paper manufacturing and processing machine operators
- Paramedical practitioners
- Passenger car drivers
- Pavers
- Pharmacists
- Photographers
- Physical protection services workers
- Physiotherapists and masseurs
- Plant and machine operators and assemblers
- Political scientists, historians, philosophers and cultural experts
- Postal clerks
- Postmen and package deliverers
- PR, advertising, marketing and sales specialists
- Pre-school teachers
- Primary education teachers
- Printing trades workers
- Production managers
- Production organisation professionals
- Psychologists and psychotherapists
- Quality specialists
- Real estate professionals
- Receptionists and registrars
- Road construction workers
- Retailers and street metal workers in building trades
- Rubber and plastic machine operators
- Sales managers
- Sales representatives
- Salespeople and cashiers
- Secretaries and assistants
- Service managers
- Shoemakers
- Social institutions and culture managers
- Social work professionals caring for the elderly and disabled
- Social workers
- Sociologists and social/economic surveys professionals
- Special school teachers
- Speech therapists and audiophonologists
- Sport and recreation instructors
- Storerooms
- Structural metal workers
- Surveyors and cartographers
- Teachers for practical vocational training
- Teachers of vocational subjects
- Telecommunications specialists
- Tinners and laquers
- Translators, interpreters and other linguists
- Travel agency employees and tour operators
- Uniformed service workers
- Upholsterers
- Yarnishers
- Veterinarians
- Waiters and bartenders
- Webmasters

#### BALANCE
- Database designers and administrators, programmers
- Earthmoving plant operators and mechanics
- Electrical mechanics and electrical assemblers
- Handicraftsmen
- Handicraftsmen
- Independent accountants
- Metal working machine tool setters and operators
- Nurses and midwives
- Storekeepers
- Tailors and clothing manufacturers
- Toolmakers
- Tractor and tractor drivers
- Welders

#### SURPLUS
- Economists
- Educational counsellors
- Farmers and animal producers
- Food and nutrition technology specialists
- Mechanical engineering technicians
- Public administration professionals
- Teachers of general subjects
- Textile machine operators

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**SHORTAGE**
- Farmers and animal producers
- Educational counsellors
- Economists
- Fishermen
- Finance professionals
- Events, cultural activities and animation organizers
- Environmental engineering engineers
- Electronics technology, automation and robotics specialists
- Environmental engineering engineers
- Farming and forestry specialists
- Fishermen
- Electrical mechanics and electrical assemblers
- Finance and accounting staff with knowledge of foreign languages
- Finishing work technologists in building trades
- Foreign language teachers
- Hairdressers
- Handicraft workers in wood and joiners
- Independent accountants
- Kitchen helpers
- Manual workers in production and simple works
- Medical doctors
- Metal working machine tool setters and operators
- Motor vehicle mechanics and repairers
- Nurses and midwives
- Painters
- Physical protection services workers
- Physiotherapists and masseurs
- Postmen and parcel delivery

**BALANCE**
- Farmers and animal producers
- Educational counsellors
- Economists
- Fishermen
- Finance professionals
- Events, cultural activities and animation organizers
- Environmental engineering engineers
- Electronics technology, automation and robotics specialists
- Environmental engineering engineers
- Farming and forestry specialists
- Fishermen
- Electrical mechanics and electrical assemblers
- Finance and accounting staff with knowledge of foreign languages
- Finishing work technologists in building trades
- Foreign language teachers
- Hairdressers
- Handicraft workers in wood and joiners
- Independent accountants
- Kitchen helpers
- Manual workers in production and simple works
- Medical doctors
- Metal working machine tool setters and operators
- Motor vehicle mechanics and repairers
- Nurses and midwives
- Painters
- Physical protection services workers
- Physiotherapists and masseurs
- Postmen and parcel delivery

**SURPLUS**
- Farmers and animal producers
- Educational counsellors
- Farmers and animal producers
- Food and nutrition technology specialists
- Political scientists, historians, philosophers and culture experts
- Travel agency employees and tour operators
## III. Results of Occupational Barometer 2018

The “Occupational Barometer” is a forecast for the demand for employees in 2018. The study was conducted by experts at the turn of the third and fourth quarters of 2017. The situation in some professions may change depending on market conditions. The results for the voivodeship include professions assessed in at least half of the counties.

### Occupational Barometer 2018

#### śląskie voivodeship

<table>
<thead>
<tr>
<th>BAKALAGE</th>
<th>SHORTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bakers</td>
<td>Database designers and administrators, programmers</td>
</tr>
<tr>
<td>Butchers and plasters</td>
<td>Earthmoving plant operators and mechanics</td>
</tr>
<tr>
<td>Bus drivers</td>
<td>Electrical mechanics and electrical assemblers</td>
</tr>
<tr>
<td>Butchers and fishermen</td>
<td>Finishing work technologists in building trades</td>
</tr>
<tr>
<td>Chefs</td>
<td>Hairdressers</td>
</tr>
<tr>
<td>Concreters and steel fixers</td>
<td>Handicraft workers in wood and joiners</td>
</tr>
<tr>
<td>Confectioners</td>
<td>Independent accountants</td>
</tr>
<tr>
<td>Construction installation assemblers</td>
<td>Kitchen helpers</td>
</tr>
<tr>
<td>Construction joiners and carpenters</td>
<td>Manual workers in production and simple works</td>
</tr>
<tr>
<td>Construction managers</td>
<td>Medical doctors</td>
</tr>
<tr>
<td>Construction workers</td>
<td>Metal working machine tool setters and operators</td>
</tr>
<tr>
<td>Contact centre agents, survey and market research interviewers</td>
<td>Motor vehicle mechanics and repairers</td>
</tr>
<tr>
<td>Cooks</td>
<td>Nurses and midwives</td>
</tr>
<tr>
<td></td>
<td>Pavers</td>
</tr>
<tr>
<td></td>
<td>Roofers and sheet metal workers in building trades</td>
</tr>
<tr>
<td></td>
<td>Salespeople and cashiers</td>
</tr>
<tr>
<td></td>
<td>Social work professionals caring for the elderly and disabled</td>
</tr>
<tr>
<td></td>
<td>Storekeepers</td>
</tr>
<tr>
<td></td>
<td>Tailors and clothing manufacturers</td>
</tr>
<tr>
<td></td>
<td>Teachers for practical vocational training</td>
</tr>
<tr>
<td></td>
<td>Tinmiths and lapiners</td>
</tr>
<tr>
<td></td>
<td>Toolmakers</td>
</tr>
<tr>
<td></td>
<td>Trade representatives</td>
</tr>
<tr>
<td></td>
<td>Tuck and tractor drivers</td>
</tr>
<tr>
<td></td>
<td>Waiters and bartenders</td>
</tr>
<tr>
<td></td>
<td>Welders</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BALANCE</th>
<th>FOOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting and bookkeeping clerks</td>
<td>Food processing workers</td>
</tr>
<tr>
<td>Acoustics and sound engineers</td>
<td>Foreign language teachers</td>
</tr>
<tr>
<td>Administration and office clerks</td>
<td>Forest workers</td>
</tr>
<tr>
<td>Agricultural and gardening machines operators</td>
<td>Funeral service workers</td>
</tr>
<tr>
<td>Analysts, testers and ICT system operators</td>
<td>Gardeners and landscapers</td>
</tr>
<tr>
<td>Animal services workers</td>
<td>Glaziers and window fitters</td>
</tr>
<tr>
<td>Architects and urban planners</td>
<td>Graphic and multimedia designers</td>
</tr>
<tr>
<td>Archivists and curators</td>
<td>Handicraft workers in leather and related materials</td>
</tr>
<tr>
<td>Artists, interior decorators and conservators</td>
<td>Household helps</td>
</tr>
<tr>
<td>Assistants in education</td>
<td>Human resources management and recruitment specialists</td>
</tr>
<tr>
<td>Automotive diagnosis technicians</td>
<td>Insurance agents</td>
</tr>
<tr>
<td>Biologists, biotechnologists, biochemists</td>
<td>Internet sales staff</td>
</tr>
<tr>
<td>Car wash, laundry and ironing workers</td>
<td>IT technicians</td>
</tr>
<tr>
<td>Caretakers, doormen, janitors and custodians</td>
<td>Journalists and editors</td>
</tr>
<tr>
<td>Chemical engineers and chemists</td>
<td>Landscape architects</td>
</tr>
<tr>
<td>Chemical products plant and machine operators</td>
<td>Lawyers</td>
</tr>
<tr>
<td>Childminders</td>
<td>Librarians and related information professionals</td>
</tr>
<tr>
<td>Cleaners and room service</td>
<td>Logistics managers</td>
</tr>
<tr>
<td>Clearing and forwarding agents</td>
<td>Machinery mechanics and repairers</td>
</tr>
<tr>
<td>Construction engineers</td>
<td>Management and business service managers</td>
</tr>
<tr>
<td>Construction supervision inspectors</td>
<td>Mechanical engineering technicians</td>
</tr>
<tr>
<td>Construction technicians</td>
<td>Mechanical engineers</td>
</tr>
<tr>
<td>Crane, hoist and related plant operators</td>
<td>Metal processing workers</td>
</tr>
<tr>
<td>Deliverer and suppliers</td>
<td>Meteorologists, geologists, geographers</td>
</tr>
<tr>
<td>Dentists</td>
<td>Miners and mining plant and machine operators</td>
</tr>
<tr>
<td>Driving instructors</td>
<td>OHS specialists</td>
</tr>
<tr>
<td>Economists</td>
<td>Operators of medical equipment</td>
</tr>
<tr>
<td>Educational counsellors</td>
<td>Opticians and prosthetics workers</td>
</tr>
<tr>
<td>Educators in educational and care institutions</td>
<td>Other education specialists</td>
</tr>
<tr>
<td>Electrical and energetic engineers</td>
<td>Paper manufacturing and processing machine operators</td>
</tr>
<tr>
<td>Electronic assemblers</td>
<td>Paramedical practitioners</td>
</tr>
<tr>
<td>Electronics technology, automation and robotics specialists</td>
<td>Passenger car drivers</td>
</tr>
<tr>
<td>Environmental engineering engineers</td>
<td>Pharmacists</td>
</tr>
<tr>
<td>Events, cultural activities and animation organizers</td>
<td>Photographers</td>
</tr>
<tr>
<td>Farmers and animal producers</td>
<td>Physical protection services workers</td>
</tr>
<tr>
<td>Finance professionals</td>
<td>Physical therapists and masseurs</td>
</tr>
<tr>
<td>Florists</td>
<td>Plant and machine operators and assemblers</td>
</tr>
<tr>
<td>Food and nutrition technology specialists</td>
<td>Postal clerks</td>
</tr>
<tr>
<td></td>
<td>Postmen and package deliverers</td>
</tr>
</tbody>
</table>

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**Occupational Barometer 2018**

świętokrzyskie voivodeship

<table>
<thead>
<tr>
<th>SHORTAGE</th>
<th>BALANCE</th>
<th>SURPLUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bakers</td>
<td>Earthmoving plant operators and mechanics</td>
<td>Administration and office clerks</td>
</tr>
<tr>
<td>Bricklayers and plasterers</td>
<td>Electrical mechanics and electrical assemblers</td>
<td>Economists</td>
</tr>
<tr>
<td>Bus drivers</td>
<td>Hairdressers</td>
<td>Educational counselors</td>
</tr>
<tr>
<td>Concreters and steel fixers</td>
<td>Handicraft workers in wood and joiners</td>
<td>Food and nutrition technology professionals</td>
</tr>
<tr>
<td>Construction installation assemblers</td>
<td>Independent accountants</td>
<td>IT technicians</td>
</tr>
<tr>
<td>Construction joiners and carpenters</td>
<td>Medical doctors</td>
<td>Nurses and midwives</td>
</tr>
<tr>
<td>Construction workers</td>
<td>Metal working machine tool setters and operators</td>
<td>Public administration professionals</td>
</tr>
<tr>
<td>Cooks</td>
<td>Motor vehicle mechanics and repairers</td>
<td>Teachers of general subjects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teachers of vocational subjects</td>
</tr>
</tbody>
</table>

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### III. Results of Occupational Barometer 2018

The situation in some professions may change depending on market conditions. The results for the voivodeship include professions assessed in at least half of the counties.

#### Occupational Barometer 2018

**warmińsko-mazurskie voivodeship**

**www.barometrzawodow.pl**

<table>
<thead>
<tr>
<th>SHORTAGE</th>
<th>BALANCE</th>
<th>SURPLUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bakers</td>
<td>Earthmoving plant operators and mechanics</td>
<td>Roofers and sheet metal workers in building trades</td>
</tr>
<tr>
<td>Bricklayers and plasterers</td>
<td>Electrical mechanics and electrical assemblers</td>
<td>Stone masons</td>
</tr>
<tr>
<td>Bus drivers</td>
<td>Flushing work technologists in building trades</td>
<td>Tailors and clothing manufacturers</td>
</tr>
<tr>
<td>Chefs</td>
<td>Hairdressers</td>
<td>Toolmakers</td>
</tr>
<tr>
<td>Concrete and steel fixers</td>
<td>Independent accountants</td>
<td>Truck and tractor drivers</td>
</tr>
<tr>
<td>Construction installation assemblers</td>
<td>Machinery mechanics and repairers</td>
<td>Upholsterers</td>
</tr>
<tr>
<td>Construction joiners and carpenters</td>
<td>Metal working machine tool setters and operators</td>
<td>Weavers</td>
</tr>
<tr>
<td>Construction workers</td>
<td>Motor vehicle mechanics and repairers</td>
<td></td>
</tr>
</tbody>
</table>
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### Wielkopolskie Voivodeship

**Shortage**
- Bakers
- Beauticians
- Bricklayers and plasterers
- Bus drivers
- Butchers and fishmongers
- Chefs
- Cleaning and forwarding agents
- Concrete and steel fixers
- Confectioners
- Construction installation assemblers
- Construction joiners and carpenters
- Construction workers
- Cooks
- Database developers and administrators, programmers
- Earthmoving plant operators and mechanics
- Educational counsellors
- Family nurses
- Geneticists
- General practitioners
- Geologists
- Geomatics
- Geodesists
- Heliographers
- Hematologists
- High-voltage engineers
- Hoteliers and restaurantiers
- Housekeeping staff
- Hydrologists
- Hydrogeologists
- Hydrologists
- Industrial nurses
- Internal auditors
- Laboratory assistants
- Laboratory technicians
- Laboratory technologists
- Laboratory workers
- Landscape architects
- Lawyers
- Librarians
- Medical doctors
- Mental health professionals
- Midwives
- Military engineers
- Military pilots
- Motor vehicle mechanics and repairers
- Nurses and midwives
- Optometry specialists
- Osteopathic physicians
- Orthotists and prosthetists
- Owners
- Payroll professionals
- Personal care nurses
- Personal care workers
- Physical therapists
- Podiatrists
- Postal workers
- Psychologists
- Practice managers
- Production managers
- Public health workers
- Quality managers
- Quality assurance professionals
- Real estate appraisers
- Religious workers
- Respiratory therapists
- Retail managers
- Retailers
- Residential care workers
- Social work professionals caring for the elderly and disabled
- Special education teachers
- Supply chain managers
- Tax professionals
- Therapists
- Theater directors
- Thespians
- Tourism professionals
- Transportation supervisors
- Transportation workers
- Unitarian ministers
- Veterinary nurses
- Vocational counsellors
- Welders
- Welfare workers
- Wildlife biologists
- Zoologists

**Balance**
- Administration and office clerks
- Agricultural and gardening machines operators
- Analysts, testers and ICT system operators
- Animal services workers
- Architects and urban planners
- Archivists and curators
- Artists, aesthetic decorations and conservators
- Assistants in education
- Automotive diagnosis technicians
- Biologists, biotechnologists, biochemists
- Car wash, laundry and ironing workers
- Caretakers, doormen, janitors and custodians
- Chemical engineers and chemists
- Childminders
- Charniers and room service
- Construction engineers
- Construction managers
- Construction supervision inspectors
- Construction technicians
- Contact centre agents, survey and market research interviewers
- Crane, hoist and related plant operators
- Dairy farmers and suppliers
- Dental technicians
- Dentists
- Driving instructors
- Educational counsellors
- Educators in educational and care institutions
- Electrical and energetic engineers
- Electronic assemblers
- Environmental engineering engineers
- Events, cultural activities and animation organizers
- Farmers and animal producers
- Farming and forestry specialists
- Foresters
- Economists
- Food and nutrition technology specialists
- Food processing workers
- Forest workers
- Funeral service workers
- Gardeners and orchardists
- Glastiers and window fitters
- Human resources management and recruitment specialists
- Insurance agents
- Internet sales staff
- IT technicians
- Journalists and editors
- Landscape architects
- Lawyers
- Librarians and related information professionals
- Logistics managers
- Machinery mechanics and repairers
- Management and business service managers
- Mechanical engineering technicians
- Mechanical engineers
- Metal processing workers
- OHS specialists
- Operators of medical equipment
- Opticians and prosthetics workers
- Other education specialists
- Paper manufacturing and processing machine operators
- Paramedical practitioners
- Passenger car drivers
- Pharmacists
- Photographers
- Physical protection services workers
- Physiotherapists and masseurs
- Plant and machine operators and assemblers
- Postal clerks
- Postmen and package deliverers
- Potiers and glazers
- PR, advertising, marketing and sales specialists
- Pre-school teachers
- Primary education teachers
- Printing trades workers
- Product and garment designers
- Production managers
- Production organisation professionals
- Psychologists and psychotherapists
- Public administration professionals
- Quality specialists
- Real estate professionals
- Receptionists
- Real construction workers
- Rubber and plastic machine operators
- Sales managers
- Sales representatives
- Secretaries and assistants
- Service managers
- Shoemakers
- Social institutions and culture managers
- Social workers
- Sociologists and social/economic surveys professionals
- Special school teachers
- Speech therapists and audiophonologists
- Sport and recreation instructors
- Stonemasons
- Surveyors and cartographers
- Teachers for practical vocational training
- Teachers of general subjects
- Telecommunications specialists
- Translators and interpreters and other linguists
- Uniformed services workers
- Varnishers
- Veterinarians
- Webmasters

**Surplus**
- Accounting and bookkeeping clerks
- Electricians and electrical assemblers
- Electronics technology, automation and robotics specialists
- Finishing work technicians in building trades
- Foreign language teachers
- Graphic and multimedia designers
- Handicrafters
- Handicraft workers in wood and joiners
- Independent accountants
- Kitchen helpers
- Manual workers in production and simple works
- Medical doctors
- Metal working machine tool setters and operators
- Motor vehicle mechanics and repairers
- Nurses and midwives
- Pavers
- Pre-school teachers
- Primary education teachers
- Printing trades workers
- Product and garment designers
- Production managers
- Production organisation professionals
- Psychologists and psychotherapists
- Public administration professionals
- Quality specialists
- Real estate professionals
- Receptionists
- Real construction workers
- Rubber and plastic machine operators
- Sales managers
- Sales representatives
- Secretaries and assistants
- Service managers
- Shoemakers
- Social institutions and culture managers
- Social workers
- Sociologists and social/economic surveys professionals
- Special school teachers
- Speech therapists and audiophonologists
- Sport and recreation instructors
- Stonemasons
- Surveyors and cartographers
- Teachers for practical vocational training
- Teachers of general subjects
- Telecommunications specialists
- Translators and interpreters and other linguists
- Uniformed services workers
- Varnishers
- Veterinarians
- Webmasters

The situation in some professions may change depending on market conditions. The results for the voivodeship include professions assessed in at least half of the counties.

---

**Authors:**
- **Regional/Province coordinator:** Pracy i Polityki Społecznej
- **National coordinator:** Ministerstwo Rodziny
- **Institution ordering the study:** Wojewódzki Urząd Pracy

[www.barometrzawodow.pl](http://www.barometrzawodow.pl)
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### Classification of occupations to be covered by Occupational Barometer 2018 survey.

<table>
<thead>
<tr>
<th>No.</th>
<th>Occupational Barometer 2018 classification</th>
<th>OCCUPATION CODE AND NAME AS PER KZIS 2014</th>
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<tbody>
<tr>
<td>1</td>
<td>sales representatives</td>
<td>332203 sales representative</td>
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<tr>
<td></td>
<td></td>
<td>332209 other sales representatives</td>
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<tr>
<td></td>
<td></td>
<td>524006 medical sales professional</td>
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<tr>
<td></td>
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<td>5243 door to door salespersons</td>
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<tr>
<td>2</td>
<td>sales managers</td>
<td>1420 retail and wholesale trade managers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5222 shop supervisors</td>
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<td></td>
<td></td>
<td>122106 regional sales manager</td>
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<td></td>
<td>122102 sales manager</td>
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<td>3</td>
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<td></td>
<td></td>
<td>421190 other bank tellers and related clerks</td>
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<tr>
<td></td>
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<td>4213 pawnbrokers and money-lenders</td>
</tr>
<tr>
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<td>421401 money collector</td>
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<tr>
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<td></td>
<td>516903 hostess</td>
</tr>
<tr>
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<td></td>
<td>5211 stall and market salespersons</td>
</tr>
<tr>
<td></td>
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<td>5212 street food salespersons</td>
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<td></td>
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<td>522101 antique shop keeper</td>
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<tr>
<td></td>
<td></td>
<td>522102 kiosk shop keeper</td>
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<tr>
<td></td>
<td></td>
<td>5223 shop assistants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5230 cashiers and ticket clerks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5245 service station attendants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5246 account manager</td>
</tr>
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<td></td>
<td></td>
<td>524603 service assistant</td>
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<td></td>
<td>524605 car service assistant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>532901 pharmacy assistant</td>
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<tr>
<td></td>
<td></td>
<td>930003 cash counting clerk</td>
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<td></td>
<td></td>
<td>9520 street vendors (excluding food with short shelf life)</td>
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<tr>
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<td>online salespersons</td>
<td>524401 catalogue/Internet salesperson</td>
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<tr>
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<td>524402 Internet sales support</td>
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<tr>
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<td>242228 sales organization and development professional</td>
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<tr>
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<td>243101 cool hunter</td>
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<tr>
<td></td>
<td></td>
<td>243102 copywriter</td>
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<td>243103 product manager</td>
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<td>243104 brand manager</td>
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<td></td>
<td></td>
<td>243106 marketing and trade professional</td>
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<td></td>
<td>243107 advertising professional</td>
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<tr>
<td></td>
<td></td>
<td>243108 interactive media professional</td>
</tr>
<tr>
<td></td>
<td></td>
<td>243109 Internet sales professional</td>
</tr>
<tr>
<td></td>
<td></td>
<td>243190 other advertising and marketing professionals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2432 public relations professionals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2433 sales professionals, excluding information and communications technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2434 Information and communications technology sales professionals</td>
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<tr>
<td></td>
<td></td>
<td>332201 merchandiser</td>
</tr>
<tr>
<td></td>
<td></td>
<td>333901 artistic manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td>333903 trendsetter</td>
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<tr>
<td></td>
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<td>333904 Internet advertising salesperson</td>
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<td>333906 advertising organization technician</td>
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<tr>
<td></td>
<td></td>
<td>351405 e-mail campaign support clerk</td>
</tr>
<tr>
<td>6</td>
<td>architects and town planners</td>
<td>214907 spatial development engineer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>214927 sound engineer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>216101 architect</td>
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<tr>
<td></td>
<td></td>
<td>216190 other architects</td>
</tr>
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<td></td>
<td></td>
<td>216403 town planner</td>
</tr>
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532902 dental chairside assistant  
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| 25  | medical equipment operators             | 229911 radiopharmacy specialist  
229912 medical device engineering specialist  
229913 radiographer  
311409 medical electronics technician  
311907 medical device repair technician  
3211 medical device engineering operators  
3212 medical and pathology laboratory technicians  
532905 bainiomedical treatment worker |
| 26  | paramedical practitioners               | 2240 specialists for emergency medical services  
3256 paramedical practitioners  
532904 hospital porter  
229914 physiotherapists |
| 27  | physiotherapy technicians and assistants | 2292 physiotherapists  
3254 physiotherapy technicians and assistants  
2295 optometrists  
321401 audiology technician  
321403 prosthesis-orthotics technician  
3253 dispensing opticians  
325906 orthoptist  
731105 prosthesis-orthotics technician |
| 28  | opticians and medical prosthetic technicians design | 229912 medical device engineering specialist  
229913 radiographer  
311409 medical electronics technician  
311907 medical device repair technician  
3211 medical device engineering operators  
3212 medical and pathology laboratory technicians  
532905 bainiomedical treatment worker |
| 29  | speech therapists and audiologists       | 229402 speech and language therapist  
229403 neuro-speech therapist  
229404 speech and language therapist for the hearing impaired  
229409 other audiologist and speech therapists  
229401 audiologist  
235906 teacher speech therapist |
| 30  | psychologists and psychotherapists       | 228905 psychotherapist  
2634 psychologists and related workers  
229906 addiction psychotherapist  
229907 addiction therapist  
229909 psychoanalyst  
229910 psychotraumatologist  
263502 mediator  
263507 court mediator  
263510 specialist in social communication  
325907 occupational therapist  
325903 art therapist  
235908 teacher psychologist |
| 31  | generalist teachers                     | 230316 music teacher at junior high schools and high schools  
230317 teacher at junior high schools and high schools  
230318 entrepreneurship teacher at junior high schools and high schools  
230319 defense training teacher at junior high schools and high schools  
230320 religious education teacher at junior high schools and high schools  
230321 technical teacher at junior high schools and high schools  
230322 cultural knowledge teacher at junior high schools and high schools  
230323 social studies teacher at junior high schools and high schools  
230324 teacher of education for living in a family at junior high schools and high schools  
230325 physical education teacher at junior high schools and high schools  
230330 other physical education teacher at junior high schools and high schools (with the exception of vocational education teachers)  
234101 ethics teacher at primary school  
234102 history and society teacher at primary school  
234103 IT teacher at primary school  
234108 Polish language teacher at primary school  
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234112 music teacher at primary school  
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234116 religious education teacher at primary school  
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234190 teachers at primary schools |
| 32  | foreign language teachers                | 234104 other language teacher at primary school  
233008 other language teacher in junior high schools and high schools  
2353 other language teachers |
| 33  | vocational education teachers            | 235902 arts vocational teacher  
232003 economic vocational teacher  
232004 medical vocational teacher  
232005 agricultural and forestry vocational teacher  
232006 technical subjects vocational teacher  
232007 tourist subjects vocational teacher  
232009 other vocational education teachers |
| 34  | instructor of practical vocational training | 232001 teacher / instructor of practical vocational training |
| 35  | driving instructors                      | 235903 driving examiner  
5165 driving instructors |
| 36  | early years teachers                     | 234113 early years teachers |
| 37  | early childhood educators                | 234201 preschool educator  
234202 preschool educator  
513202 early years teaching assistant |
| 38  | special school teachers                  | 2352 special school teachers |
| 39  | tutors in educational and care establishments | 235694 tutor in institutions educational, daily support, parenting and care, and foster care institutions  
235916 community artist of free time of youth (youth worker) |
| 40  | pedagogues                               | 235101 adult education specialist  
235909 specialist teacher of pedagogical therapy  
235901 educational care officer  
235917 events and cultural teacher  
235912 education welfare officer  
235919 special educational needs pedagogue  
235921 pedagogue  
235922 media teacher |
| 41  | other education officers                 | 234290 other specialists for early childhood education  
235102 evaluator of education programs  
235103 distance education methodologies  
235104 information and communication technology methodologies  
235105 teacher methodological adviser  
235109 education inspector  
235919 other education inspectors and education methods specialists  
2354 other music teachers  
235503 other arts teachers  
235590 other arts teachers  
2356 information technology trainers  
235901 multimedia didactic  
235502 examiner on-line  
235905 educational counsellor  
235907 distance learning teacher  
235910 other teachers  
235913 specialist in education management  
235919 lecturer at courses (educator, coach)  
235917 répétiteur  
235918 home teacher  
235920 personal trainer (coach, mentor, tutor)  
235990 other teaching and education specialists not classified elsewhere |

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| 57  | production manager                      | 1311 Agricultural and forestry production managers  
1312 Production managers at aquaculture and fisheries plants  
1321 Industrial production managers  
132201 Head of the mining plant or plant operations department  
132204 Mining plant or plant manager  
132280 Other managers in mining  
132302 Manager of a small construction company  
132390 Other construction managers |
| 58  | service manager                         | 1330 Information and communications technology services managers  
134101 Manager of the entertainment centre for children  
1346 Managers in financial and insurance institutions  
134903 Security managers  
134904 Manager of the audit company  
134905 Head of the law office  
134906 Film / TV agency manager  
134907 Gallery manager  
134910 Other managers in specialized services institutions not classified elsewhere  
1411 Hotel managers  
1412 Gastronomy managers  
143101 Agency manager for sports services / tourist / cultural  
143107 Gambling manager  
143108 Cinema manager  
143109 Fitness club manager  
143110 Sport club manager  
143112 Manager of the amusement park / circus  
143114 Gym manager  
143115 Head of horse riding school  
143117 Dance school manager  
143180 Other sports, recreation and culture managers  
143801 Travel agency manager  
143902 Translation agency manager  
143903 Shopping centre manager  
143904 Conference centre manager  
143905 Manager of the call centre (call centre manager)  
143906 Debt collection manager  
143907 Manager of the cleaning company  
143908 Campsite manager  
143909 Other managers for other types of services not classified elsewhere  
342203 Sport discipline manager  
342204 Sports events manager |
| 59  | personnel and careers recruitment professionals | 241026 Specialist for organizational improvement  
242190 Other management and organizational specialists  
2423 Personnel and careers professionals  
2424 Training and staff development professionals  
3333 Employment agents and contractors  
4415 Employees of HR departments |
| 60  | personnel and careers recruitment professionals | 242106 Specialist for organizational improvement  
242190 Other management and organizational specialists  
2423 Personnel and careers professionals  
2424 Training and staff development professionals  
3333 Employment agents and contractors  
4415 Employees of HR departments |
| 61  | lawyers                                 | 242216 Patent attorney  
2611 Lawyers, legal advisors and prosecutors  
2612 Judges  
261901 Legal assistant  
261902 Prosecutor assistant  
261903 Court clerk  
261904 Court enforcement officer  
261905 Notary  
261906 Legislator  
261907 Counselor of the State Treasury’s General Prosecutor’s Office  
261908 Legal clerk  
261910 Intellectual property specialist  
261990 Other legal specialists not classified elsewhere |
| 62  | archivists and curators                 | 242501 Information and media reports analyst  
262201 Librarian  
262204 Information broker (researcher) of the librarian  
262206 Information science specialists, technical, economic and librarians  
262207 Information specialist science  
262208 Document management specialist specialists  
262290 Other librarians and information management specialists  
3433 Employees of libraries, galleries, museums, scientific information and related ones  
4411 Librarian technicians |
| 63  | librarians and information science specialists | 242224 International relations officer  
263201 Archaeologist  
263202 Ethnographer  
263203 Culture expert  
263205 Anthropologist  
263207 Religion scientific researcher  
263290 Other archaeologists, sociologists and specialists related fields  
2633 Philosophers, historians and political scientists |
| 64  | sociologists and specialists in socio-economic research | 242218 Specialist in socio-economic research  
243105 Market research and development specialist  
263204 Sociologist |
| 65  | philosophers, historians, political scientists and cultural experts | 242224 International relations officer  
263201 Archaeologist  
263202 Ethnographer  
263203 Culture expert  
263205 Anthropologist  
263207 Religion scientific researcher  
263290 Other archaeologists, sociologists and specialists related fields  
2633 Philosophers, historians and political scientists |
| 66  | artists, interior decorators and conservator of monuments | 2610 Interior architect  
261003 Illustrator  
263105 Conservator  
265107 Architectural monuments conservator  
343201 Stone decorator  
343202 Interior decorator  
343204 Artist  
343305 Stone decorator and artistic stonemasonry technician  
343390 Other visual artists , interior decorators and related |
| 67  | journalists and editors                 | 262205 Web content manager  
264104 Book editor  
2642 Journalists  
265850 Other radio, television and related presenters  
26902 Blogger/ vlogger |
| 68  | product designers                      | 2613 Product and garment designers  
311803 Computer-aided design operator  
311890 Other draughtpersons |
<p>| 69  | photographers                          | 3431 Photographers |
| 70  | travel agencies and tour operators employees | 242113 Employees of gastronomic, hotel and tourist services |</p>
<table>
<thead>
<tr>
<th>No.</th>
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<tr>
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<td>receptionists and registrars</td>
<td>422401 total receptionist 4226 receptionists (excluding hotel) 4221 consultants and other employees of travel agencies 422402 hospitality technician 4225 inquiry clerks 5113 travel guides</td>
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<td>call centre employees, survey and market research interviewers</td>
<td>332202 electronic customer service centre information clerk 333905 mystery shopper 421902 telecommunications services assistant 4222 call centre employees 4223 telephone switchboard operators 4227 survey and market research interviewers 532301 taxi controller 524403 call centre agent 524404 telemarketer 524490 other call centre/online consultants</td>
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<td>73</td>
<td>chefs</td>
<td>3434 chefs and organizers of catering services</td>
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<td>cooks</td>
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<td>kitchen helpers</td>
<td>5246 food service counter attendants 9411 fast food preparers 9412 kitchen helpers</td>
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<td>waiters and bartenders</td>
<td>5131 waiters 5132 bartenders</td>
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<td>farmers and breeders</td>
<td>314203 horse breeder technician 314204 animal breeding technician 314206 bee breeder technician 314207 agricultural technician 314290 other agricultural and related technicians 313402 agricultural business technician 6111 field crop growers 6114 mixed crop growers 6121 farm and domestic animals breeders 6122 poultry breeders 6123 apriators and sericulturists 6129 animal breeders not classified elsewhere 6130 mixed crop and animal producers 6130 mixed crop and animal producers working for their own needs 6230 livestock farmers working for their own needs 6300 subsidiary mixed crop and livestock farmers for their own needs 6402 picker of fruits, herbs and other plants 722104 farriers inspect 6211 workers doing simple field work 6212 workers performing simple works in animal husbandry 6213 workers doing simple work in the cultivation of plants and animal husbandry</td>
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<td>landscape gardeners and tree and shrub crop growers</td>
<td>314205 gardener technician 6113 landscape gardeners 7544 fumigators and other pest and weed controllers 9214 garden and horticultural labourers</td>
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<td>land-based and garden machinery operators</td>
<td>834101 tractor driver 834102 harvester driver 834103 agricultural equipment and vehicles technician 834107 agricultural equipment technician 834190 other mobile farm and forestry plant operators 834106 gardening machines operator</td>
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<td>forestry workers</td>
<td>6210 forestry and related workers 834104 operator of skidding tractors for logging Suspended 834105 forestry equipment operator 834108 operator of skidding tractors 834109 operator of technical equipment used in forestry 834110 operator of multi-operational self-propelled machines used in forestry 834111 automated cable vehicle controller 9215 workers doing simple work in forestry</td>
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<td>314206 inland fishing technician 315215 sea fish workers 6221 fish breeders 6222 inland fish workers 6223 sea fish workers 634001 fishery workers working for his own needs 9216 fishery and aquaculture labourers</td>
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<td>civil engineering technicians</td>
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<td>mechanical engineering technician</td>
<td>311004 mechanical engineering technician 311005 mechanical engineering technicians of transport equipment construction 311006 mechanical engineering technicians of using means of transport 311008 machinery mechanic and repairer 311009 mechanic machining technician 311010 precision mechanic 311011 production engineering technician 311012 agricultural equipment design technician 311015 agricultural equipment design and agrotechnics technician 313106 avionics technician 313107 aircraft maintenance engineer 311500 other mechanical engineering technicians 311931 crane technician 311940 lifting truck technician</td>
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<td>earthmoving and related plant operators and mechanics</td>
<td>8342 earthmoving and related plant operators</td>
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<td>311206 road technician 311207 road and railway bridge technician 311215 bridge supervisor 311216 road construction technician 311217 railway and engineering technician 313201 road construction supervisor 313202 rail construction supervisor 313213 road construction supervisor 317003 filter of the railway pavement 317006 pavement paver 317009 other road maintenance workers 317010 road maintenance worker 317012 bridge construction labourers</td>
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<td>86</td>
<td>stonemasons</td>
<td>7113 stonemasons, stone cutters, spitters and carvers</td>
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<td>concrete placers and concrete finishers</td>
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<td>carpenters and building carpenters</td>
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<td>bricklayers and plasterers</td>
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<tr>
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<td>742110 fitter of electronic control systems for industrial automation</td>
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712505 glass artist  
731402 ceramics for usable and decorative products  
7315 glass makers, cutters, grinders and finishers  
731603 glass gildor  
731604 glass engraver  
731605 glass beveler  
731606 gilder  
731607 glass sculptor  
731608 signboard maker  
731609 decorative ceramics painter  
731610 decorative glass painter  
731611 engraver  
731690 other signboard makers, engravers, decorative glass and ceramics painter and related workers |
| 110 | printing trades workers | 311911 digital graphic processes technician ²  
311918 polygraph technician  
311935 print production technician  ³  
311936 bookbinding technician  ⁴  
311943 graphic arts and digital printing technician  ⁵  
7321 pre-press technicians  
7322 printers  
7323 bookbinders and related workers |
| 111 | butchers, and fishmongers | 7511 butchers, and fishmongers and related workers |
| 112 | bakers | 751204 bakers  
932910 baker’s assistant |
| 113 | confectioners | 751201 confectioner ⁶  
751202 confectionery decorator  
751203 caramel maker  
932900 baker’s assistant |
| 114 | woodworking workers and carpenters | 311922 wood technology technician ⁷  
711504 sawwright ⁸  
7317 handcraft workers in wood, basketry and related materials  
7521 wood treaters and related workers  
7522 cabinet-makers and related workers  
7523 woodworking machine tool setters and operators  
8172 wood processing plant operators  
818903 operator of wickerwork machines and devices  
821902 furniture assembler  
821905 wood products assembler |
| 115 | tailors and garment related trades workers | 311904 clothing technology technician ⁹  
311941 fashion industry technician  ¹⁰  
311926 leather goods industrial engineer  ¹¹  
7531 tailors, dressmakers, fitters and hatters and related workers  
7532 garment and related patternmakers and cutters  
7533 sewing, embroidery and related workers  
7534 upholsterers and related workers  
81535 sewing machine operators  
815905 operator of devices for gluing clothing items  
815904 operator of punching and layering equipment  
815900 textile, fur and leather products machine operators not classified elsewhere  
932902 fabric spreader  
932900 tailor’s assistant  
731808 textile goods artisanal worker  ¹² |
| 116 | upholsterers | 815902 upholstery machine operators |
| 117 | leather production workers | 311912 tanner  ²  
731810 leather goods artisanal worker  
7535 pit dressers, tanners and fellmongers  
722103 vegetable  ³  
753703 saddler  
753790 other veal, saddler and related workers  
8155 fur and leather preparing machine operators  
815602 leather goods machine operator |
| 118 | shoemakers | 311916 footwear production technician  ²  
7536 shoemakers and related workers  
815601 footwear stitching machine operator  
815603 operator of shoe assembly devices  
815604 cutting machine operator  
815605 industrial shoemaker  
815690 other shoemaking and related machine operators |
| 119 | metal processing workers | 311704 steelwork technician  ⁴  
311705 foundry operative  ⁵  
7211 metal moulder and related workers  
722101 blacksmith  ⁶  
722102 blacksmith of decorative products  
722103 forging press worker  ⁷  
722190 other blacksmiths and forging press workers  
731602 electroplater  
731905 ornamental metal worker  
8121 metal processing and finishing plant operators  
8122 metal finishing, plating and coating machine operators |
| 120 | cement, and stone products machine operators | 731410 operator of brick and lime-sand machines  
811401 hardening agent for concrete and siliconates  
811402 cutler of building materials  
811405 cement and stone products machine operators and related workers |
| 121 | chemical products plant and machine operators | 815101 chemical products plant and machine operators  
815202 photographic products machine operators |
| 122 | rubber products and plastic products machine operators | 81411 rubber products machine operators  
81420 plastic products machine operators |
| 123 | papermaking plant operators | 81430 papermaking plant operators  
8171 pulp and papermaking plant operators |
| 124 | food processing employees | 7513 dairy products makers  
7514 fruit, vegetable and related preservers  
81600 operators of machines for the food production and related workers  
932909 dairy assistant |
| 125 | textile machine operators | 731802 knitter  
731805 yarn spinner  
731809 weaver  
8155 spinning machine operators and related workers  
8152 weaving and knitting machine operators  
8154 textile finishing machine operators  
815601 nonwoven machine operators |
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2291 environmental and occupational health and hygiene professionals  
24227 emergency response coordinators  
311214 fire inspectors  
313201 toxic waste treatment technicians  
313206 incinerator operators  
313207 air conditioning and dedusting equipment operator  
313208 wastewater treatment operator  
313209 water treatment system operator  
313210 worker cleaning the area of explosive and dangerous materials  
313290 other incinerator and water treatment plant, water treatment system operators and related workers  
325501 ecological educator  
325502 occupational health and safety inspector  
325503 radiation protection officer  
325504 countryside officer  
325505 hygiene instructor  
325507 environmental technician  
325508 environmental analysis and monitoring technician  
325509 health and safety officer S  
325510 dosimetrist technician  
325511 environmental protection technician S  
325515 waste management supervisor  
325590 other environmental and occupational health inspectors and associates  
723315 fire-fighting equipment repair technician |
| 143 | quality services employees | 214105 consultant of the technical committee  
214107 standardiser  
214108 security audit specialist  
214109 quality control specialist  
214110 expert of the goods  
24901 domestic energy assessor  
24902 inspector of technical supervision  
24921 verification officer  
24922 metrologist  
242204 auditor/ controller  
242208 pharmaceutical quality specialist  
311109 metrology technician  
311901 marking technician  
311902 quality control of welded joints  
311904 operator of flaw detection tests  
311937 industrial product quality control inspector  
3133 chemical processing plant controller  
3134 petroleum and natural gas refining plant operators  
3135 metal production process controller  
313901 industrial robot controller  
313902 paper production equipment controller  
313907 this unit group covers process control technicians not classified elsewhere  
325506 meat hygiene controller  
325512 veterinary healthcare controller  
325514 healthcare inspector |
| 144 | service employees uniformed | 132914 head of the police / police station  
134912 municipal / municipal guard commissioner  
134913 fire commissioner  
263506 educator in penal institutions  
311919 fire prevention and protection technician s  
3535 police officers  
3536 prison officers  
3537 special services officers  
5411 firefighters  
5412 juvenile correctional officer  
541301 officer of the government protection office  
541312 municipal / city guard  
541313 guard of the marshall’s guard  
541314 railway security guard  
541315 security guard technician s  
541316 security control operator  
541317 monitoring service employee  
541390 other security guard workers  
541906 life guard  
541909 protective services workers not classified elsewhere |
| 145 | security guard | 311920 technical security systems technician  
541307 security guard  
541315 security guard technician s  
541316 security control operator  
541317 monitoring service employee  
541390 other security guard workers  
541906 life guard  
541909 protective services workers not classified elsewhere |
| 146 | electronics, automation and robotics specialists | 214903 automation engineer  
2152 electronics engineers  
311402 security alarm technician  
311403 anti-theft security alarm technician  
311404 installer of CCTV systems  
311406 designer of alarm systems  
311408 electronics engineering technicians s  
311410 mechatronics  
311412 broadband electronic communication technician  
311490 other electronics technicians and related ones  
311909 automation engineering technician s  
313903 industrial robot controller  
313904 automated assembly line operator |
| 147 | electrical and electronics engineers | 214906 energy engineer  
214933 energy manager  
2151 electrical engineers |
| 148 | telecommunications specialists | 214926 specialist in monitoring security systems  
2153 telecommunications engineers  
311906 ATM service employee  
352122 recording studio technician s  
3522 telecommunication equipment operators |
| 149 | ICT system analysts, testers and operators | 231109 bioinformatics scientists  
2511 systems analysts  
251202 specialist in the development of information systems software  
251290 other specialist in the development of information systems software  
251901 medical computer specialist  
251902 specialist in IT applications  
251903 computer software tester |
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| 150 | database designers and administrators, programmers | 251201 specialist for application development  
2513 network application and multimedia designers  
2514 applications programmers  
251905 speech recognition systems specialist  
2521 database designers and administrators |
| 151 | website administrators | 351401 website administrator  
351403 search engine optimisation expert  
351404 webmaster  
262202 traffic analyst on websites |
| 152 | graphic designers | 216601 desktop publisher  
216602 graphic and multimedia designers  
216604 graphic designers  
216605 web graphics designer  
216606 specialist for multimedia animation  
216690 other graphic and multimedia designers |
| 153 | IT technicians | 311411 electronics and clinical informatics technician  
351103 ICT technician  
351190 other ICT equipment operators  
3512 IT and technical support technicians  
351490 web technicians  
742208 computer hardware repair technician |
| 154 | fitness and recreation instructors | 235501 instructor of amateur artistic movement  
235502 dance instructor  
342201 sport instructor  
342202 sport instructor for people with disabilities  
342207 sports coach  
342290 other sports coaches, instructors and officials  
3423 fitness and recreation instructors |
| 155 | other artistic and cultural associate professionals and event planners | 3332 conference and event planners  
343901 community artist  
342311 fitness and recreation instructors and program leaders |
| 156 | older and disability adult care workers | 341201 disability support worker  
341202 older adult care worker  
341203 residential care home worker  
341204 community care worker  
5162 companions and valets  
5321 health care assistants  
5322 home-based personal care workers |
| 157 | child care workers | 329505 babysitter  
5311 child care workers |
| 158 | florists | 342030 florist  
524901 flower and garden specialised seller |
| 159 | hairdressers | 5141 hairdressers |
| 160 | beauticians | 229903 cosmetologist  
323014 podologist  
343917 tattooist  
5142 beauticians and related workers |
| 161 | livestock workers | 342101 jockey  
5164 pet groomers and animal care workers |
| 162 | funeral attendants | 516302 funeral manager  
516303 embalmer |
| 163 | cleaners and room attendants | 9111 cleaners and helpers  
911201 bathroom attendant  
911203 room attendant  
911204 laboratory assistants  
911205 hotel service employee  
911206 ward maid  
911207 office cleaner  
911208 vehicle cleaner  
911290 other office, hotel and similar aids and cleaners  
9123 window cleaners  
912901 swimming pools cleaners  
912902 carpet cleaner  
912904 operator of cleaning machines  
912990 other cleaning staff not classified elsewhere |

**OCCUPATION CODE AND NAME AS PER KZIS 2014**

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| 164 | the car wash, laundry and ironing rooms workers | 8157 operators of washing machines  
9121 hand launderers and pressers  
9122 vehicle cleaners |
| 165 | building and housekeeping supervisors, porters, ushers and janitors | 515301 Building caretaker  
515303 economic worker  
515390 other building and housekeeping supervisors  
541300 porter  
8182 boiler operators and related workers  
911202 ordinary furnaces operator  
9629 elementary workers not classified elsewhere |
| 166 | domestic cleaners and helpers | 5152 Domestic housekeepers |
| 167 | elementary occupations | 8183 packing and bottling machine operators  
818901 operator of palletizing equipment  
818902 animal waste treatment technician  
818990 stationary plant and machine operators not classified elsewhere  
821901 rubber goods assembler  
821904 textile and cardboard product and related materials assemblers  
821906 plastic products assembler  
821907 parachute equipment assembler  
821990 other assemblers not elsewhere classified  
912903 graffiti remover  
931102 ground worker in mining  
931180 mining and quarrying labourers  
931201 gravedigger  
931202 strip miner  
931203 land reclamation technician  
931204 sewage purifier  
931290 other civil engineering workers  
9321 hand packers and markers  
932901 parts / equipment conservator  
932904 fish paletter  
932911 manufacturing, mining, construction and distribution workers  
932912 washing parts worker  
932913 sorter  
932914 sortliner  
932915 tailor assistant  
932916 mechanic assistant  
932917 locksmith assistant  
932918 carpenter assistant  
932919 hairdresser assistant  
932990 other manufacturing labourers  
9331 hand and pedal vehicle drivers  
9332 carriage drivers  
9333 workers working on transhipment of goods  
9334 sheep fitters  
9510 street and related services workers  
9611 garbage collectors  
9612 refuse sorters  
9613 sweepers and related labourers  
962101 baggageman  
962102 bellhop  
962104 lift operator  
962106 distributor  
962107 ambulance assistant  
962190 other messengers, package deliverers and luggage porters and related workers  
9622 odd-job persons  
9623 meter readers and vending-machine collectors  
754901 navigation marks installer  
754990 craft and trade occupations not classified elsewhere |

www.barometrzawodow.pl
The Occupational Barometer is a nationwide survey carried out by local labour offices in cooperation with private employment agencies. Survey in each region is coordinated by regional labour offices. The national coordinator is Regional Labour Office in Cracow.

The Occupational Barometer is a one-year forecast of the demand for employees. Survey shows in which occupations chances to take up employment will be smaller, and in which will be bigger in upcoming year.

The occupations are classified by experts into three groups:
- Deficit occupations – those in which it should not be difficult to find a job in the coming year
- Balanced occupations – those in which the number of vacancies will be close to the number of people capable of and interested in taking up employment in the occupation concerned
- Surplus occupations – those in which it might be more difficult to find a job because of the low demand and numerous candidates willing to take up employment and meeting the employers’ requirements.

The survey comes from Sweden. Its methodology has been developed in the 90s as the element of wider system designed to predict changes on the labour market. In 2007 The Occupational Barometer was adapted by public employment agencies in south-west Finland, and now is implemented in whole country. The Lesser Poland started realization of the studies in 2009. The survey was carried out by Regional Labour Office in Cracow, within the framework of project “Lesser Poland observatory on Labour and Education markets”.

More information about The Occupational Barometer and its results are available on the website: www.barometrzawodow.pl

The survey is founded from the resources of the Labour Fund by Ministry of the Family, Labour and Social Politics.