

The Occupational Barometer 2020

Report summarizing the research in Poland

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

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Dear Readers,

For the fifth time, we encourage you to read the publication presenting the nationwide results of the *Occupational Barometer* survey. The study is qualitative and based on the knowledge of labour market experts. Its big advantage is the cyclicity and standardization of the method throughout the country, which allows systematizing knowledge on the labour market and forecasting development trends in the coming years.

Another successive year positive changes on the labour market in Poland are being observed. Employment in the enterprise sector has increased as a result of the decrease in the number of the unemployed observed for several years. New jobs are created and salaries are rising. At the same time, the conclusions drawn from this year's edition of the *Occupational Barometer* indicate numerous challenges and difficult tasks that labour market institutions are facing. Polish entrepreneurs experience considerable difficulties in finding suitable employees due to the persistently high number of deficit occupations. Above all, there is shortage of employees in the construction, production, transport, catering as well as medical and care industries. The reasons for deficits may be on the side of employers (e.g. unattractive employment conditions), employees (e.g. health contraindications, difficult family situation) or have a systemic nature, related, among others to the failure to adapt education to the needs of the labour market. A thorough analysis of the results of the *Occupational Barometer* allows a better understanding of the nature of local conditions generating staff shortages and to perceive the diversity of barriers on regional labour markets.

The implementation of the survey was possible primarily thanks to the cooperation of employees of voivodeship and poviat labour offices, as well as representatives of many other institutions who participated in expert panels held in poviats throughout the country. We would like to thank everyone involved for their contribution to this valuable publication. The conclusions it contains may prove useful not only for employers and institutions related to the labour market, but also for young people who have to choose their career path. We invite you to read.

*Department of Labour Market
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 and data from the business surveys conducted by the county labour offices.

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.

The 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 Krakow) 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 shortage of job seekers
 - shortage 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:

- **shortage 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 (168 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 panels¹.

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 168 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

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.

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

2.1 Situation on the labour market

The year 2019 is another year of economic development, which translates into the growing demand for employees, and thus the improvement of employment conditions. An analysis of the population structure shows that the participation rate in the third quarter of 2019 compared to the third quarter of 2018, remained at a similar level, whereas the share of the unemployed decreased, and the share of the employed increased. The participation rate of men was higher and amounted to 65.6% (compared to 65.5% in 2018), while in the case of women - 48.5% (compared to 48.9% in 2018)².

The number of people working nationwide in the third quarter of 2019 (16,619 thousand) increased compared to the previous year (16 617 thousand), with an increase only in 6 voivodeships. The largest increase in the number of the employed was recorded in małopolskie, śląskie and mazowieckie voivodeships, whereas the largest decline was observed in provinces of łódzkie and zachodniopomorskie³.

The employment rate has been growing systematically since 2010, in the third quarter of 2019 it was 54.9%, while for men it was higher (63.7%) than for women (46.9%). It can therefore be predicted that in 2020 this trend will continue⁴.

² Statistics Poland, Labour Force Survey, 2019, Activity rate by sex and age (subgroup P2668) - quarterly data <https://bdl.stat.gov.pl/BDL/dane/podgrup/tablica> (access: 31.12.2019)

³ Statistics Poland, Labour Force Survey, 2019, Employed persons by sex, working time and PKD section (subgroup P2568) - quarterly data; <https://bdl.stat.gov.pl/BDL/dane/podgrup/tablica> (access: 31.12.2019)

⁴ Statistics Poland, Labour Force Survey, 2019, Employment rate by age and sex groups (subgroup P2727) - quarterly data; <https://bdl.stat.gov.pl/BDL/dane/podgrup/tablica> (access: 31.12.2019)

Chart 1. Employment rate in III quarter in years 2010-2019 (in %)

Source: own study based on data from Statistics Poland

Such statistics translate into a number of other positive changes. The dynamics of employment growth translates into an improvement in the economic situation, and thus into better employment conditions for employees. The average gross monthly salary in the enterprise sector is rising, which in October 2018 amounted to PLN 4,921.39, while in the corresponding period of 2019 it is already PLN 5,213.27 (increase by 5.9%). The minimum salary also increased, which amounted to PLN 2,100 (2018) and PLN 2,250 (2019), respectively. The level of average monthly gross remuneration in the enterprise sector higher than the national average was recorded in three voivodships (according to data for October 2019): in mazowieckie (by 20.52%), pomorskie (2.06%), dolnośląskie (1.59%). The lowest salary (significantly lower than the national average), was observed in warmińsko-mazurskie (lower by 23.58%), podkarpackie (by 18.04) and Lubelskie (by 18.11%) provinces⁵. An increase was observed in all PKD sections, the highest in the administration and supporting activities, the lowest increase of remuneration in the professional activities section, scientific and technical activity section.

The value which more accurately determines the actual amount of earnings is the median, which usually takes a value of about 20% lower than average earnings.

The improvement of the country's economic situation makes Poland an increasingly attractive place to develop companies with foreign capital. The value of enterprises' revenues increases every year. The most up-to-date data on the value of revenues⁶ from total activity obtained by the surveyed enterprises comes from the first half of 2019. According to these data, the value of revenues amounted to PLN 1,809.2 billion. Compared to the first half of 2018, the value of revenues increased by 6.7%, for small entities - by 4.0%, medium - by 5.4% and for large entities - by 7.8%.

13.2% of total revenues were generated by small enterprises, 24.5% by medium-sized enterprises, and 62.3% - by large entities⁷. The highest increase was in the manufacturing and

⁵ Statistics Poland, Local Data Bank, 2019, Average employment in the enterprise sector according to PKD 2007 (subgroup P2685) - short-term data; <https://bdl.stat.gov.pl/BDL/dane/podgrup/tablica> (access: 31.12.2019)

⁶ Total revenues (revenues from total activity) include net revenues from sales of products, goods and materials, other operating revenues and financial revenues.

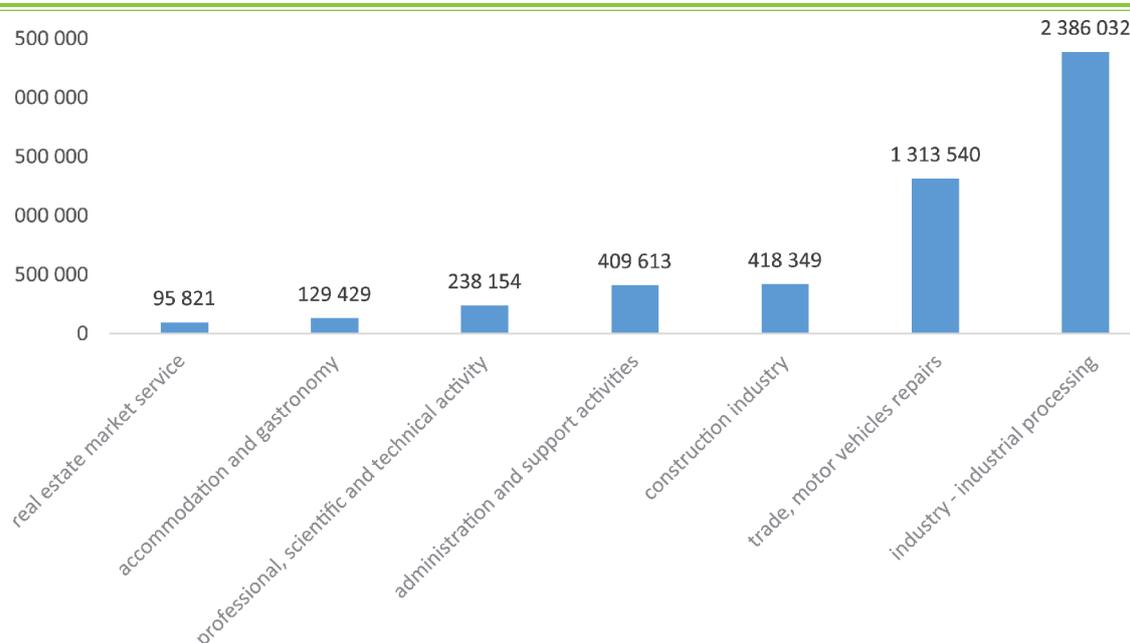
⁷ Financial results of economic entities January-June 2019, Warsaw 2019, Statistics Poland, p. 13. (this study presents the results of the quarterly CSO survey on non-financial enterprises included in the Program of statistical surveys, statistics in electricity (by 19.1%) and trade; repair of motor vehicles public in subject 1.61.01 – report on revenues,

supply section (by 5.9%). Investment outlays in the first half of 2019 amounted to PLN 69.9 billion, which gives a value 17.9% higher than in the corresponding period of the previous year⁸. The sectors from which enterprises investing the most came, included industry (39.1%), trade; repair of motor vehicles (25.7%) and construction (7.7%). The largest share in implemented expenditures in the first half of 2019 were recorded in enterprises located in the mazowieckie, dolnośląskie, śląskie and wielkopolskie voivodeships. In the analyzed period, the value of newly started investments amounted to PLN 22.7 billion; large enterprises invested the most (78%), followed by medium-sized enterprises (16.5%) and small enterprises (5.5%).

It is worth mentioning that in the period from January to September 2019, more apartments were completed than a year ago (145.6 thousand by 12.2% more than in 2018). The number of construction permits issued also increased (201.3 thousand, 4.2% more than in the corresponding period of the previous year) and the number of constructions commenced. It is worth noticing that a positive picture of the economic situation was also noted in the area of business services. The highest turnover growth was related to service activities in the area of information (30.7%), professional, scientific and technical activities (25.3%) as well as those related to architecture and engineering; technical research and analyzes (21.5%). On the other hand, a slowdown in the turnover growth rate was recorded in the activities related to the cleaning of facilities (10.6%), advertising, market and public opinion research (4.2%)⁹.

The dynamics of economic development entails not only an increase in salaries, but also an increase in employment. The average employment in the enterprise sector increased by 2.5% and amounted to around 6,383 thousand (October 2019).

Chart 2. Average employment in the enterprise sector by PKD section in Poland at the end of October 2019



Source: own study based on data from Statistics Poland

costs and financial result and on outlays on fixed assets (F-01 / I-01). This survey covers entities employing 10 persons or more, keeping accounting books.)

⁸ See, p. 26

⁹ Statistics Poland, Information on the socio-economic situation of the country Q1-Q3 2019 p. 47, 54

The highest average employment value was recorded in manufacturing (an increase of 35 218 people compared to the same period of the previous year) and trade and repair of motor vehicles (by 35 639 people). However, the least value was observed in accommodation and catering (by 8 254) as well as in real estate market services (by 1 031 people).

The increase in average employment is accompanied by a decrease in the number of the unemployed and economically inactive, whereas the favourable situation on the labour market makes it easier for employees to find and maintain satisfactory employment.

The number of economically inactive in the third quarter of 2019 decreased (by 15,000 people compared to the same period of the previous year) and amounted to 13,124 thousand, almost twice as many there were economically inactive women - 8,146 thousand, compared to 4,977 thousand men. Most of those economically inactive were recorded in mazowieckie and śląskie voivodships, while the fewest in opolskie and lubuskie. The largest increase in the number of the economically inactive concerned Lubelskie and łódzkie voivodships. The largest decrease in the number of the passive was recorded in dolnośląskie, małopolskie and śląskie¹⁰.

The number of the unemployed registered in labour offices at the end of October 2019 fell by almost 97 thousand people compared to the same period of the previous year and amounted to 840.5 thousand people¹¹. The registered unemployment rate fell at the end of October 2019 by 0.7 percentage point compared to October 2018 and amounted to 5.0%. The highest unemployment rate was recorded in the warmińsko-mazurskie voivodship - 8.6% (9.9% in October 2018) and podkarpackie - 7.6% (8.4% in October 2018), while the lowest in wielkopolskie - 2.8% (3.1% in October 2018) and śląskie - 3.6% (4.3% in October 2018).

Chart 3. Registered unemployment rate in voivodships at the end of October 2019 (in %)



Source: own study based on data from Statistics Poland

¹⁰ Statistics Poland, Labour Force Survey, 2019, Economically inactive by sex - quarterly data (subgroup P2570) <https://bdl.stat.gov.pl/BDL/data/subgroups/table> (access: 31.12.2019)

¹¹ Statistics Poland of Poland, 2019 Information on the number of registered unemployed persons and according to the unemployment rate by the statistical division of the country (revision NUTS 2016) and the administrative territorial division of the country (TERYT) - as at the end of October 2019; <https://stat.gov.pl/obszary-tematyczne/rynek-pracy/bezrobocie-rejestrowane/bezrobotni-zarejestrowani-i-stopa-bezrobocia-stan-w-koncu-pazdziernika-2019-r-,2.87.html> (access:12.31.2019)

In the period from January to October this year, 1,178.3 thousand job offers were submitted to labour offices¹². A decrease was recorded both in the number of job offers from the public sector (by 11.5% compared to the same period of 2018) and in those from the private sector (by 13.4%). The element determining the attractiveness of a given offer is not only remuneration, but also additional, non-salary factors, such as access to private medical care, individual training plans and flexible forms of work, allowing for balance between work and private life. Expectations about benefits are changing faster and becoming the axis of competition for job candidates. However, it should be emphasized that despite the fact that employees are becoming more competent and qualified, employers have a problem finding suitable candidates. Therefore, people with some potential are recruited, candidates with “good prospects”, but not necessarily having all the necessary competences and skills¹³. The competences of the ideal employee most often indicated by employers included: professional competences, diligence and meticulousness, responsibility, interpersonal competences, e.g. group work or communication skills. Physical employees are additionally required to be available (understood as readiness to work at unusual hours), manage time / be punctual, have independent organization of work.

In the third quarter of 2019, the number of newly created jobs amounted to 151.2 thousand, that is, there were 9.6% fewer new jobs compared to the same period last year, while 82.1 thousand jobs, i.e. by 1.9% more than in the third quarter 2018 of the year were liquidated¹⁴. On a yearly scale, large fluctuations in job creation are observed. The economic situation and seasonality are responsible for this state of affairs. Most jobs are created in the first quarter of the year, whereas the fewest in the fourth one. Vacancies at the end of Q3 2019 were concentrated in the private sector (85.4%). Most vacancies were reported in units employing over 49 people (67.4 thousand - 45.3%)¹⁵. The sections that in the third quarter of 2019 declared the most vacancies included: manufacturing and construction. This results from the development of these sections in Poland in 2019.

With the development of the economy, the share of the shadow economy remains high. The development of the shadow economy is influenced also by such factors as high operating costs, which include not only business-related fees, but also tax-related salary charges. According to the calculations of the Institute of Economic Forecasts and Analyzes, the size of the shadow economy in terms of Statistics Poland increased from PLN 243 billion in 2015 to PLN 273 billion in 2018. This means an increase in current prices of 12.3 percent¹⁶. Compared to 2018, the decline in the shadow economy was forecast to the end of 2019 (from 12.9% to 12.6%), however, the rate of decline over the past 5 years is low. The factors affecting the reduction of the shadow economy's share include a favorable economic situation which encourages entrepreneurs as well as actions of the authorities towards sealing the tax system (VAT) and fighting with illegal activities (illegal gambling, smuggling of goods).

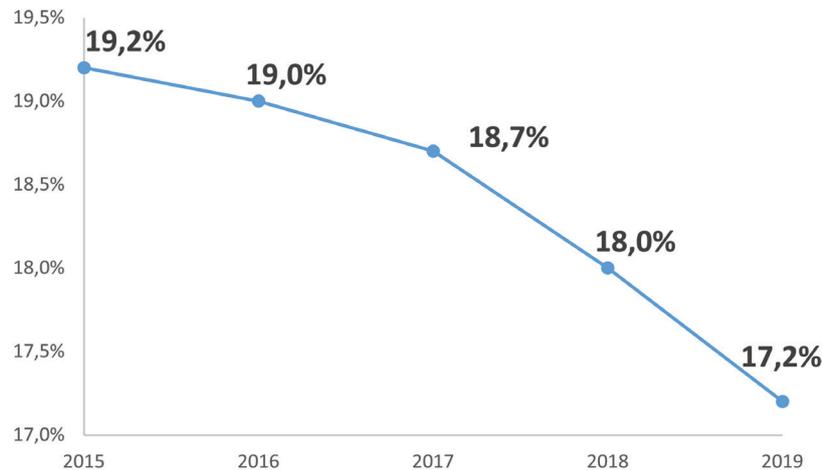
¹² Applies to job vacancies and vocational activation places

¹³ Human Capital Balance II, 2017

¹⁴ Statistics Poland, Labour demand in the third quarter of 2019 (Labour demand survey is carried out using a representative method with a quarterly frequency on Form Z-05. It covers units employing at least 1 person. Units are understood as entities of the national economy or their local units).

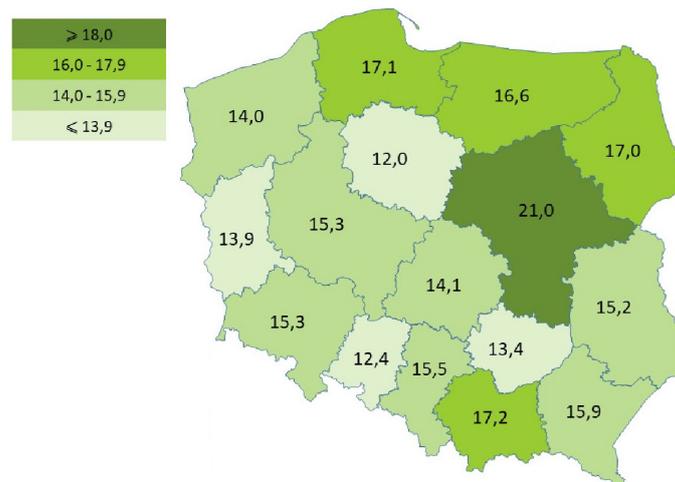
¹⁵ Registered unemployment I-II quarter 2019 CSO, Warsaw 2019

¹⁶ Shadow economy 2019, J. Fundowicz, K. Łapiński, B. Wyżnikiewicz, D. Wyżnikiewicz, Warsaw, Institute of Economic Forecasts and Analyzes, 2019

Chart 4. The share of the shadow economy in the Polish economy in 2015-2019

Source: own study based on data from Statistics Poland

The shadow economy phenomenon is highly diversified at the voivodship level¹⁷. For example, the size of the shadow economy in the mazowieckie voivodeship was larger by approximately 4 percentage points than in the following provinces: małopolskie, pomorskie and podlaskie¹⁸.

Map 1. Shadow economy in percent of the adjusted GDP in 2017 in voivodeships

Source: Own study based on the data of the Institute of Forecasts and Economic Analysis

¹⁷ An experimental estimate of the size of the shadow economy by voivodeship was prepared with the use of the 'general to detailed' method. It consists in the regional decomposition of nationwide values assigned to the shadow economy elements specified by Statistics Poland and activities omitted in Statistics Poland's estimates, assessed by IPAG. Numerous statistical data of Statistics Poland were used to make the estimates in the voivodeship layout. The estimates refer to 2017, adopting the shadow market structure of 2016, i.e. the last year for which the CSO published information on the estimated structure of the shadow area (division into hidden activities in registered enterprises, undeclared work and illegal activities).

¹⁸ The total share of the shadow zone in the economy is calculated by IPAG as the quotient of the total value added, generated in the shadow economy (in terms of IPAG) and gross domestic product corrected for the part of the shadow economy that is not included in official statistics of Statistics Poland (i.e. for IPAG estimation).

The smallest share of the shadow economy was recorded in the kujawsko-pomorskie, opolskie and świętokrzyskie voivodeships.

The most common activities in the shadow economy included services in the areas of: construction, accommodation and catering, health care and social assistance. These data are compliant with the results of this year's Occupational Barometer, where among the professions identified as most often undertaken in the non-registered economy representatives of the construction industry were listed: concrete placers, concrete finishers and related workers, bricklayers and plasterers, roofers and sheet metal workers in building trades, pavers, construction joiners and carpenters, workers of finishing works in construction industry or construction workers.

In accommodation and gastronomy there were listed: waiters and bartenders, kitchen porters, sometimes also chefs. In the service industry, employment in the shadow economy was most often undertaken by hairdressers, beauticians, cleaners and room service, as well as household helps and childminders.

2.2 Factors affecting the situation on the labour market

The population of Poland in 2019 compared to 2018 decreased by 22 410 people. In 12 voivodeships, the absolute population decreased. The largest decrease was recorded in the śląskie voivodeship (by 14 615 people), and the largest increase in the mazowieckie voivodeship (by 18,795 people). At the powiat level the decrease occurred in 227 out of 314 units and in 55 out of 66 cities with powiat rights, at the municipal level, there were fewer residents in 1 589 out of 2 477 municipalities. The number of city residents decreased by 37,164 people, the largest decline was recorded in cities in the śląskie voivodeship (by 17,244 people) and the łódzkie voivodeship (by 10,743 people), the largest increase occurred in cities of the mazowieckie voivodeship (by 15,881 people), podkarpackie voivodeship (by 5,638 people) and świętokrzyskie voivodeship (by 3,354 people)¹⁹.

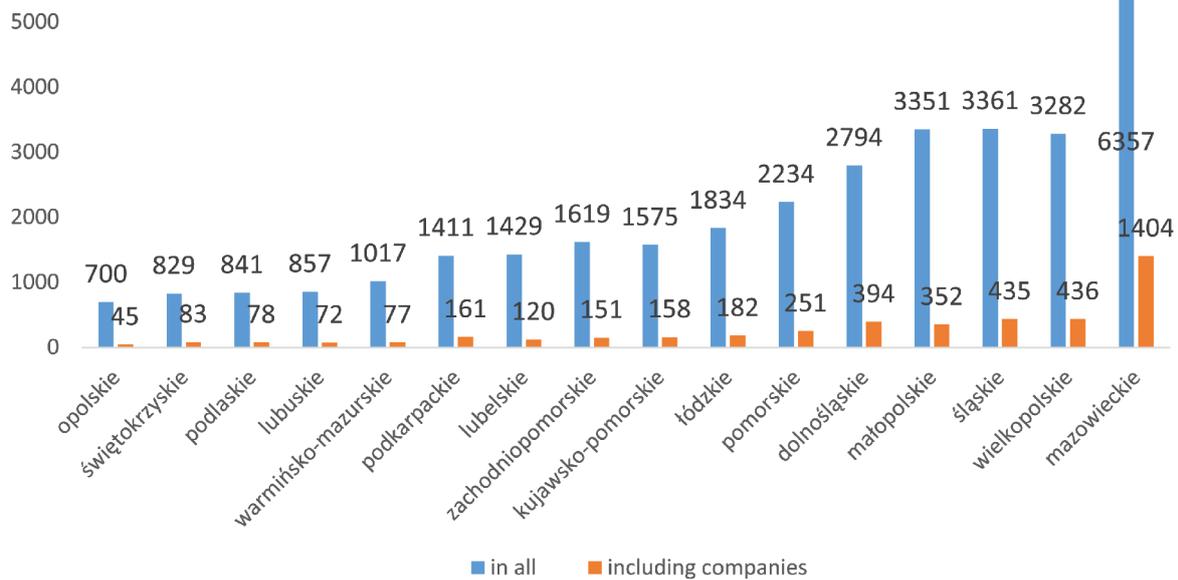
The population density, as compared to the previous year, has not changed and amounts to 123 people per 1 km². At the level of provinces, the highest value of the indicator was recorded in: śląskie (368 people per km²), małopolskie (224) and mazowieckie (152), whereas the lowest in warmińsko-mazurskie (59 people / km²), podlasie (59), lubuskie (73) and zachodniopomorskie (74).

According to data from Statistics Poland, in the period January-October 2019, 33,514 newly registered entities of the national economy were recorded, 4,911 of which were companies, both of commercial and civil status. Most entities were entered in the register in mazowieckie (6,357), wielkopolskie (3 282), śląskie (3 361) and małopolskie (3 351) voivodeships, whereas the fewest in lubuskie (857), podlasie (841), świętokrzyskie (829) and opolskie (700)²⁰.

¹⁹ Area and population in territorial section in 2019, Statistics Poland, Warsaw, 2019.

²⁰ Monthly information on entities of the national economy in the REGON register - October 2019, CSO, Warsaw, 2019. (table 6)

Chart 6. Entities of the national economy (excluding those running only individual agricultural holdings) newly registered in the REGON register by voivodeships - in the period of January-October 2019

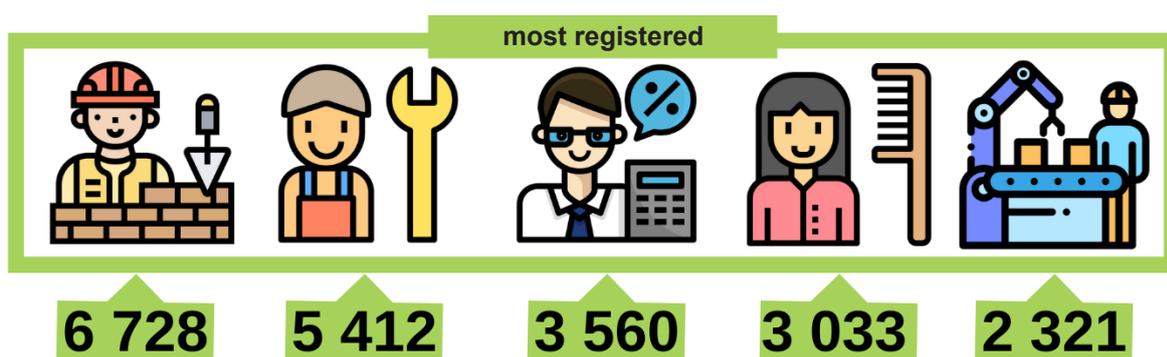


Source: own study based on data from Statistics Poland

For individual sections, the following graphic presents five sections in which the most new entities were registered in the period January-October 2019.

In the division by sections at the end of October 2019, most newly registered entities were recorded in construction (6,728), trade; motor vehicles repairs (5 412), professional, scientific and technical activities (3 560), other service activities (3 033) and in the manufacturing section (2 321)²¹.

Drawing 1. Entities of the national economy newly entered into the REGON register by sections and divisions of the Polish Classification of Activities (PKD) in October 2019



Source: own study based on data from Statistics Poland

²¹ Monthly information on entities of the national economy in the REGON register - October 2019, CSO, Warsaw, 2019. (table 5)

III. Results of the Occupational Barometer 2020

The Occupational Barometer is a one-year forecast of the demand for employees. The analysis of results for the country is based on the generalization of poviata data. It is meant to specify the phenomena that occur on the labour market in Poland and compare the results with the previous edition of the study. The results of the study contain poviata forecasts determining the demand for a given profession on local labour markets.

3.1 Modification of the job list

This year's edition of the Occupational Barometer survey, similarly to previous years starting from 2014, was based on the list of occupations stemming from the Classification of Occupations and specializations for the Labour Market Needs (KZiS). The effective list in the fifth edition of the study was expanded from 167 to 168 occupational groups. This is due to the separation of rail and metro train drivers from the group of rail traffic service employees to a separate, independent group called train drivers. This group requires having qualifications and competences different from other professions within the category of rail traffic service employees.

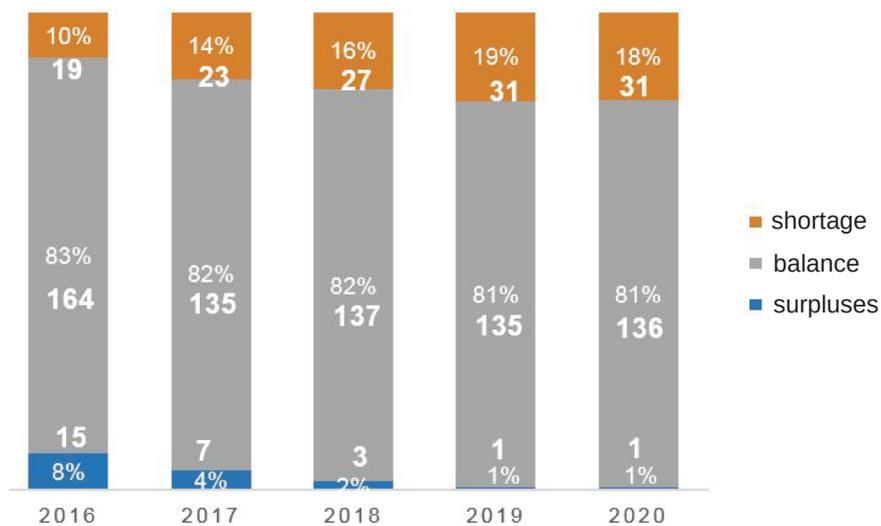
Another change consisted in adding to the name of the group Industrial designers "and CAD operators" to the group's naming. The purpose of this procedure was to draw attention to the profession of CAD operators included in the group for whom there is currently high market demand. In addition, the change in naming made it easier for experts to identify this group during the assessment in the context of the requirements for employees - having the ability to use CAD computer software. Other professions evaluated in this year's edition remained in the same form as compared to the previous edition.

3.2 Demand for employees

The results of this year's survey confirm that employers, as in the previous year, will have a problem recruiting appropriate employees due to the persistently high number of deficit occupations. The number of surpluses remained the same - economists were still assigned to this category. It can be considered that the number of sustainable professions, in which the number of vacancies is close to the number of people interested in taking them up, is identical compared to last year because the increase in the number of occupations by one in this group is caused by the separation of train drivers into a separate group of occupations.

In the case of changes within the category, the group of deficit professions in this year's edition compared to last year's balance includes beauticians and chefs. However, the deficit included occupations previously classified as sustainable: tanners and car varnishers, as well as teachers of practical and vocational subjects. The decrease in the share of deficit occupations in the total number is caused by the addition of a new profession. Therefore, despite the identical number of deficits, their share is smaller than last year.

Chart 7. Number and share of deficit, balanced and surplus professions in the Occupation Barometer in 2016-2020 in Poland



The number of professions assessed as a part of the study varied in subsequent editions. The forecast for 2016 included evaluation of 198 professions, for 2017 - 165, for 2018 and 2019 - 167, and for 2020 - 168.

Source: own study based on barometrzwodow.pl

3.2.1 Deficit professions divided into industries



In the case of deficit occupations, i.e. those in which there are more vacancies than persons interested in taking up employment and meeting the requirements of employers, their number remains at a stable, high level compared to last year. Deficits result from various factors, ranging from those on the side of the employees themselves, such as family considerations, health contraindications or discouragement to work in the profession, up to those which employers are responsible for, including unattractive employment conditions (type of contract, shift, low salary). The occurrence of deficits in some industries results also from systemic factors, such as the lack of vocational education or the failure to adapt education to the needs of the labour market (low number of hours of practical vocational training and its insufficient quality).



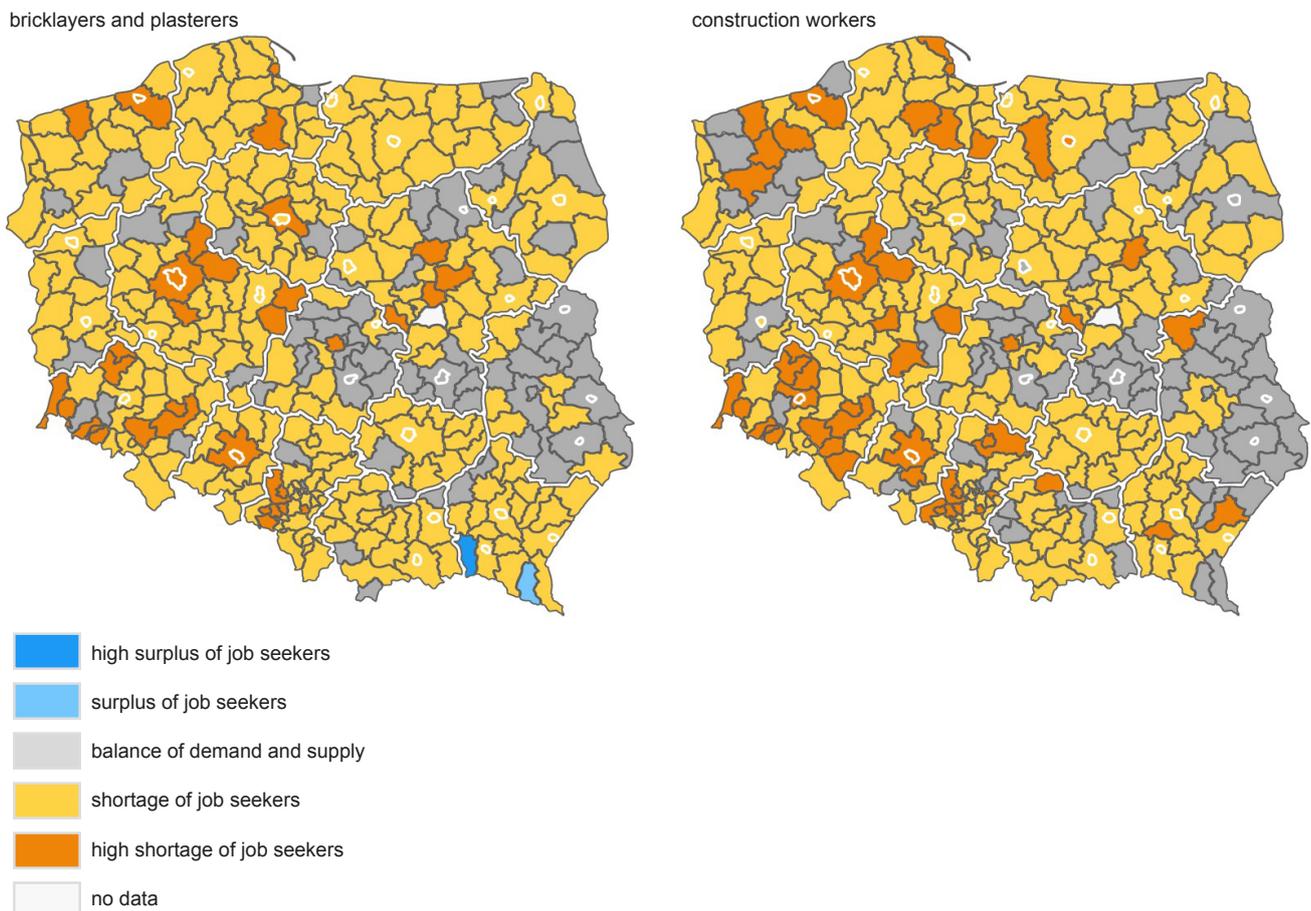
In the case of **the construction industry**, as in the previous year, there will be a shortage of: concrete placers, concrete finishers and related workers, pavers, construction joiners and carpenters, roofers and sheet metal workers in building trades, construction installation assemblers, bricklayers and plasterers, earthmoving plant operators and mechanics, finishing work technologists in building trades as well as construction workers.

Factors affecting the problem of finding employees in the construction industry include, above all, difficult working conditions, often requiring fitness and physical strength. During the panels, experts also pointed out that salaries in construction professions are often too low in relation to the requirements expected from employees: work in difficult weather conditions, business trips, overtime, often requiring the possession of appropriate qualifications. Employees in such professions as operators and mechanics of earthworks equipment are also required to have experience, because employers have the fear of entrusting expensive equipment to inexperienced employees.

The construction industry is also characterized by the largest number of professions in which employees are employed in the shadow economy, mainly in the professions of workers of finishing works in construction and construction workers.

In order to illustrate the deficit in a given occupation, maps presenting results for selected occupations in the industry are presented below.

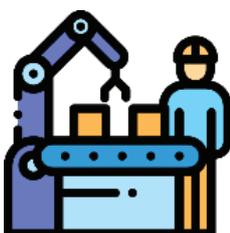
Map 2. The relationship between available employees and the demand for them: bricklayers and plasterers - construction workers



Source: www.barometrzwodow.pl

Another issue is the problem of low interest in education in construction professions. On the one hand, young people are discouraged from taking up hard work conditions in such professions, and on the other, there are more and more of those interested in continuing their education in high schools and technical schools.

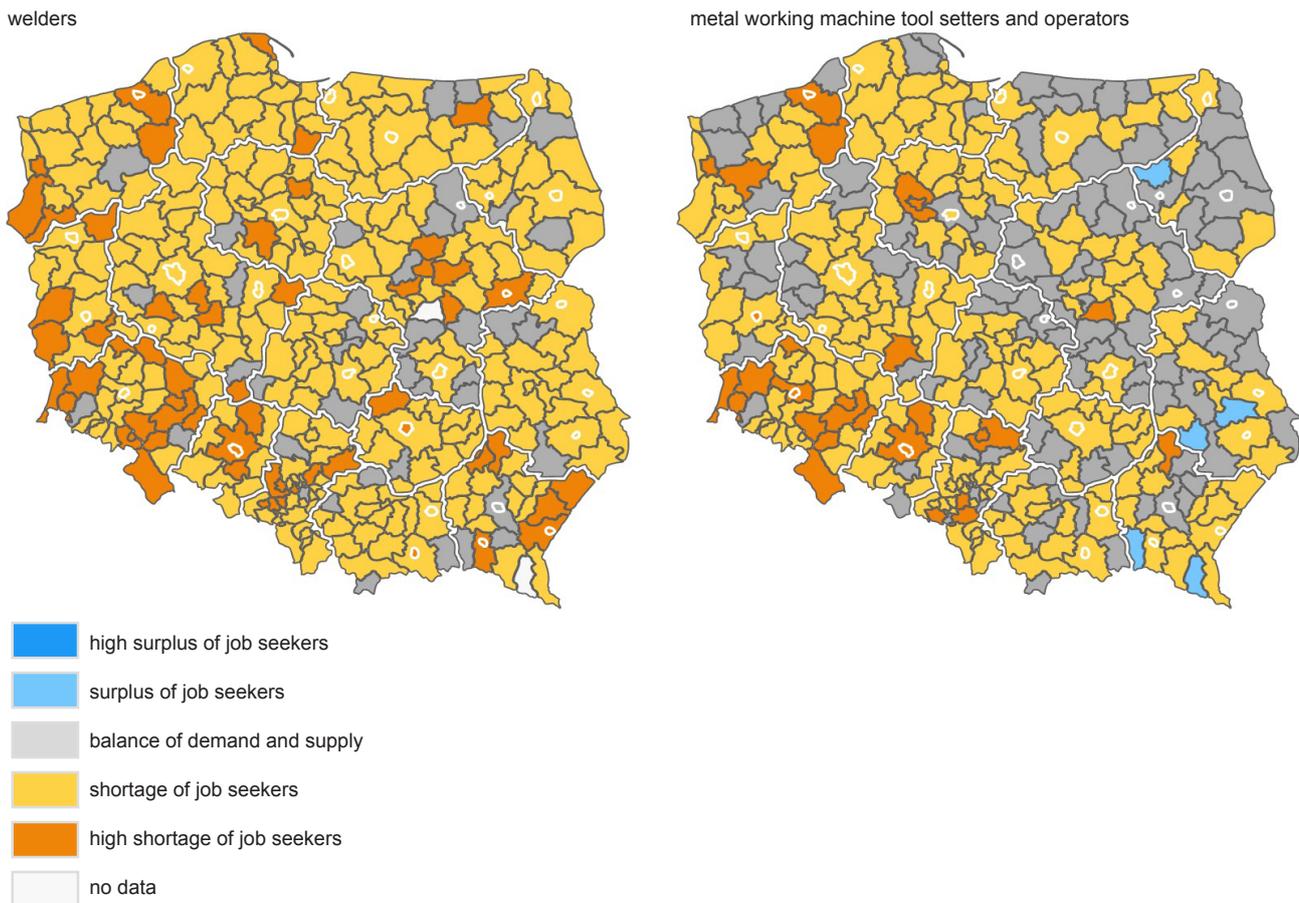
Equally important factor affecting the problem of finding construction workers is the migration of workers abroad. This in turn causes the need to employ foreigners to compensate for staff shortages.



The production industry is another industry where employers will have trouble finding employees. The list of professions classified in this year's edition as deficits includes (similarly to last year): metal working machine tool setters and operators, handicraft workers in wood and joiners, welders, locksmiths, electricians, electromechanics, tailors and clothing manufacturers. Deficits in these professions may result from the lack of

qualifications required by employers, e.g. in the case of machine tool operators, independent work on the operation and programming of CNC numerically controlled machine tools, in the case of welders, the ability to weld using MIG, MAG, TIG methods. The situation is similar for electricians and electromechanics among whom SEP qualifications are welcome. In such professions as locksmiths, tailors and clothing manufacturers employees, the lack of new staff is responsible for the difficulty in finding employees. Experts have pointed out that employees in these professions are often elderly people with health contraindications to work in a learned profession. There are also difficulties with education in these professions, few people are interested in learning, but there is also insufficient number of places where they could study.

Map 3. Relationship between available employees and employers' needs: welders - metal working machine tool setters and operators



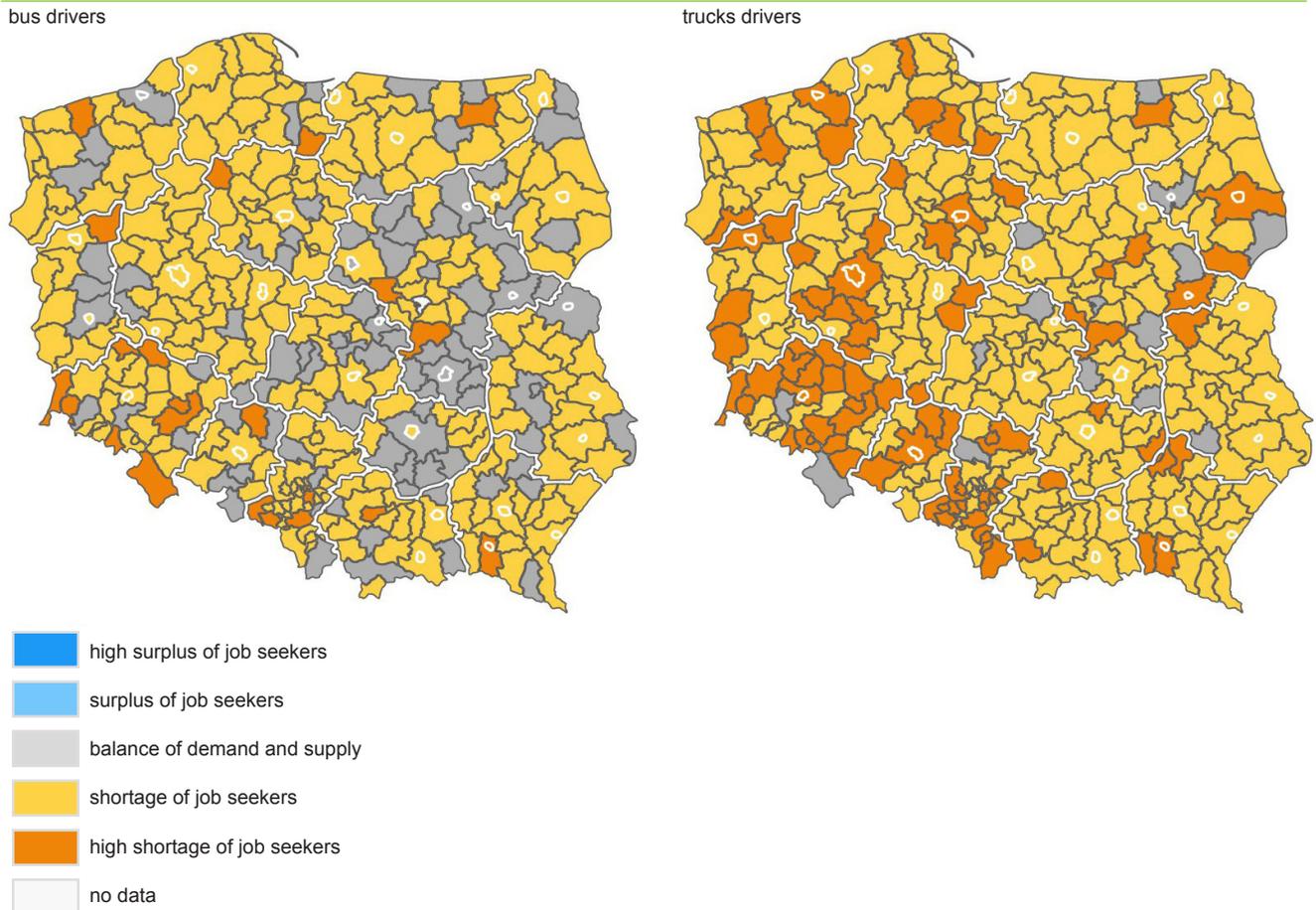
Source: www.barometrzwodow.pl

In the occupations of the production industry in many poviats a large deficit of employees was indicated. Employers must compete with each other in terms of employment to find and retain an employee. Many companies offer the employee training immediately after employment also to meet the needs of those who, e.g. worked in the profession, but their permits have expired. Employment of foreigners is another way of dealing with the personnel gap.



In professions belonging to **the transport industry**, the deficit is forecast in two groups: bus drivers and truck drivers. The development of the transport industry in the last year has increased the demand for occupations requiring authorization to drive vehicles. In the case of bus drivers, a passenger transport license is required. Experts pointed out that employees are discouraged by, among others, irregular working hours, including work at night, as well as at weekends and during holidays. In addition, drivers work many hours, and their breaks, often due to communication difficulties, are shortened to minimum.

Map 4. Relationship between available employees and employers' needs: bus drivers - truck drivers



Source: www.barometrzwodow.pl

The difficult situation in finding drivers results also from the generation gap: many drivers are retiring and there is an insufficient number of young people with qualifications to replace them. Qualifications entitling to drive buses are expensive, time consuming, but also difficult, as evidenced by the low pass rate of these types of exams. Employers are trying to meet the needs of employees and offer them full or partial financing of expensive courses, exams and entitlements to transport passengers just after hiring.

In the case of truck and tractor drivers, the frequency of deficits and large deficits is much higher than for bus drivers. Employers are looking for people with a full set of qualifications and experience, mobile and willing to work in a delegation (work on international routes), ready to be separated from their closed ones. In addition, it happens that an employee is additionally required to load and unload goods, as well as have the knowledge of foreign languages. The employee also takes full responsibility for the efficient and safe transport of the goods. Experts also pointed out that people who are in the registers of poviats labour offices have the right to drive a vehicle, but they lack additional qualifications, e.g. ADR, for the transport of hazardous materials. It is worth mentioning that a large part of job offers in the profession of drivers is addressed to foreigners, due to a greater inclination to work in international transport, mainly to the east.

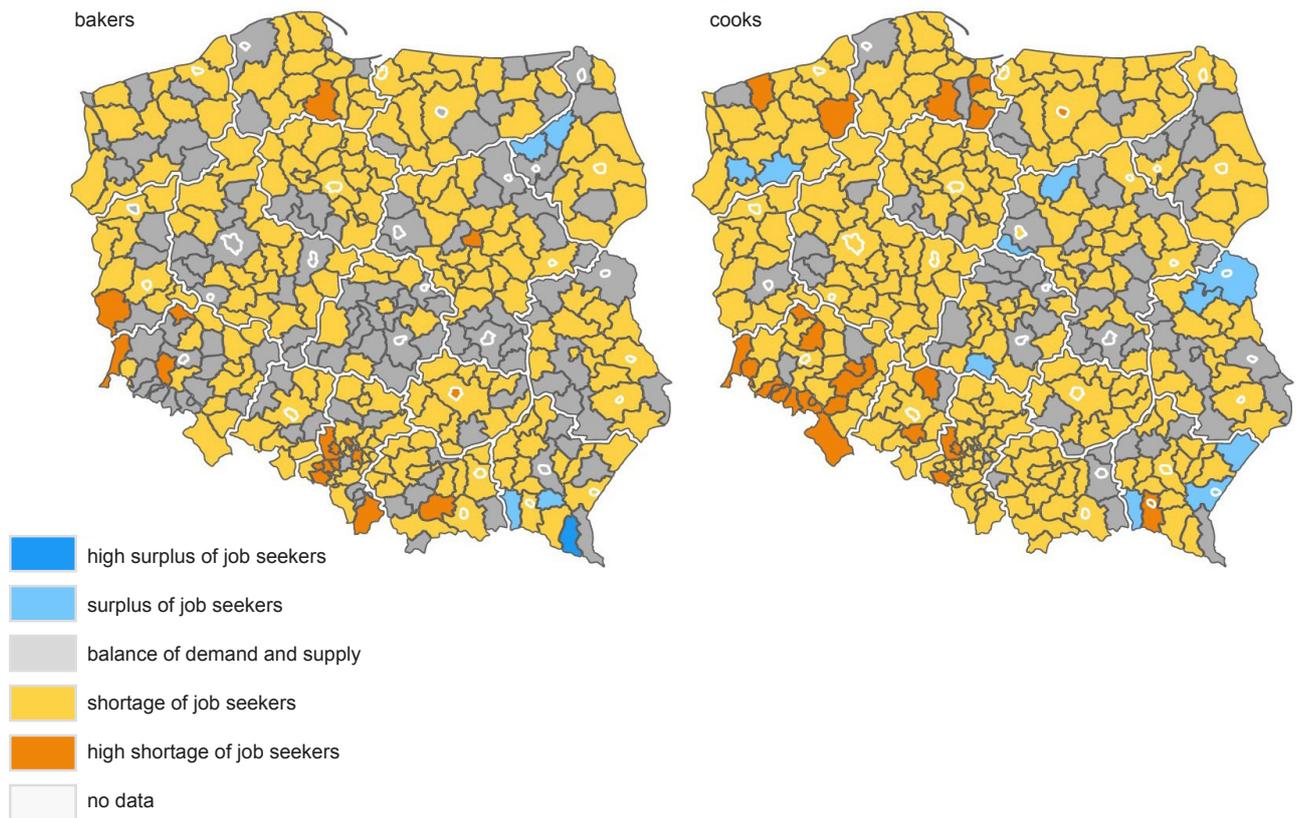


Another group of professions in which the deficit is forecast for 2020 are those included in **the catering industry**. The deficit is predicted in two professions: chefs and bakers (in 2019 the deficit was in 4 professions - additionally among confectioners and chefs). Research results indicate an improvement in the gastronomy professions. Chefs more and more often decide to work abroad or outside the local labour market, due to higher earnings offered.

Therefore, this problem is intensified particularly in smaller poviats. Taking up employment in the profession is discouraged by: low salaries, shift work, irregular working hours (frequent overtime, weekends and public holidays). Workers are required to have experience, often knowledge of oriental cuisines, and new trends in gastronomy as well as the desire to improve qualifications. The chef should also have appropriate predispositions, including work under time pressure, manual skills and self-organization. There is still a problem for chefs with employment in the shadow economy. In poviats of the western part of the country most often a large deficit was pointed out in this profession.

In the case of bakers, the factors affecting the deficit included: health contraindications to work in the profession (allergies), work at night and unattractive remuneration. In this profession, the deficit is also affected by the staff gap, resulting not only from the low interest of the young in baker's profession, but also from the problem related to proper practical preparation for the profession.

Map 5. Relationship between available employees and employers' needs: bakers - cooks

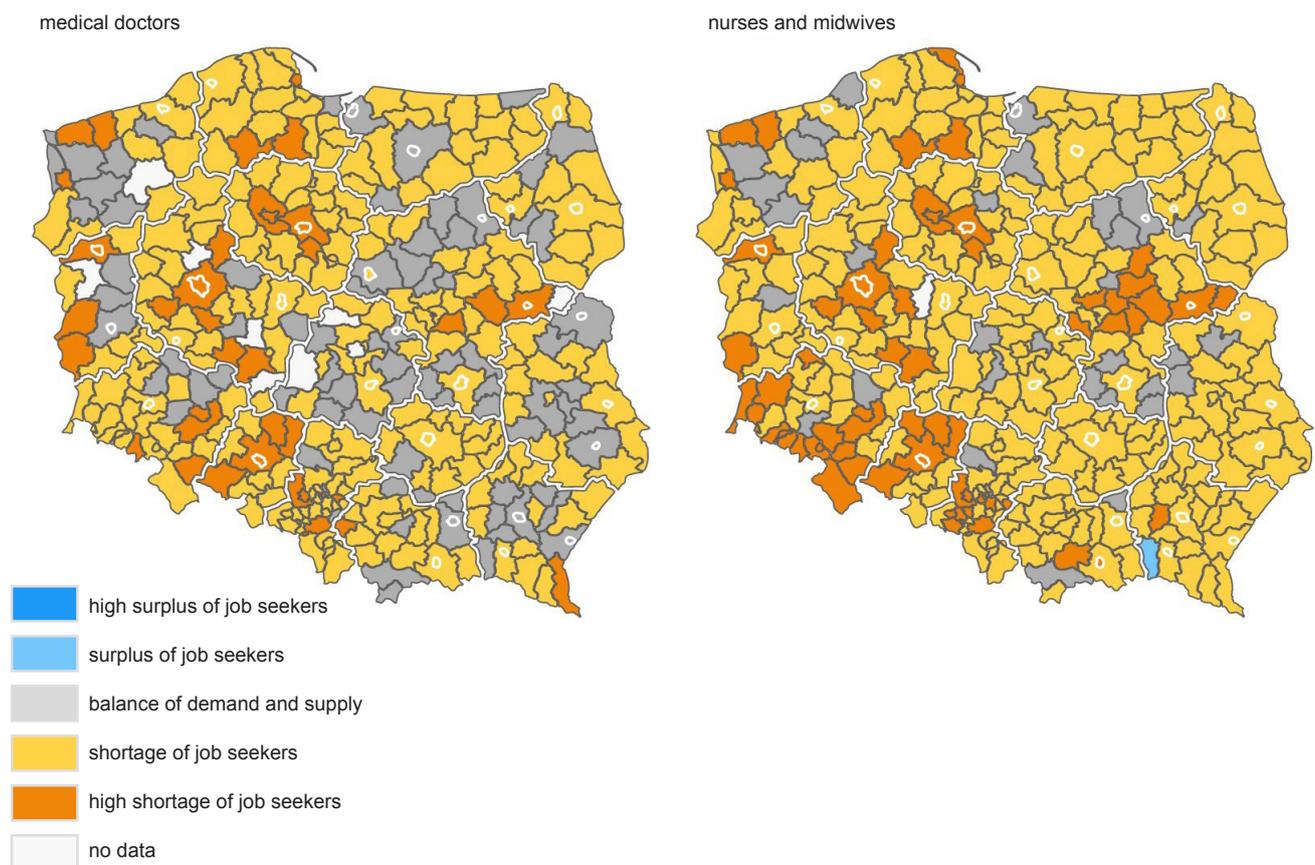


Source: www.barometrzwodow.pl



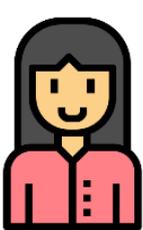
In 2020, a deficit is forecast in four professions in **the medical and care** industry including: medical doctors, Physiotherapy technicians and assistants, nurses and midwives as well as carers for the elderly or disabled. The effects of an aging society are clearly felt in this industry, as the same four professions hit the deficit for another year in succession.

Map 6. Relationship between available employees and employers' needs: Medical doctors - nurses and midwives



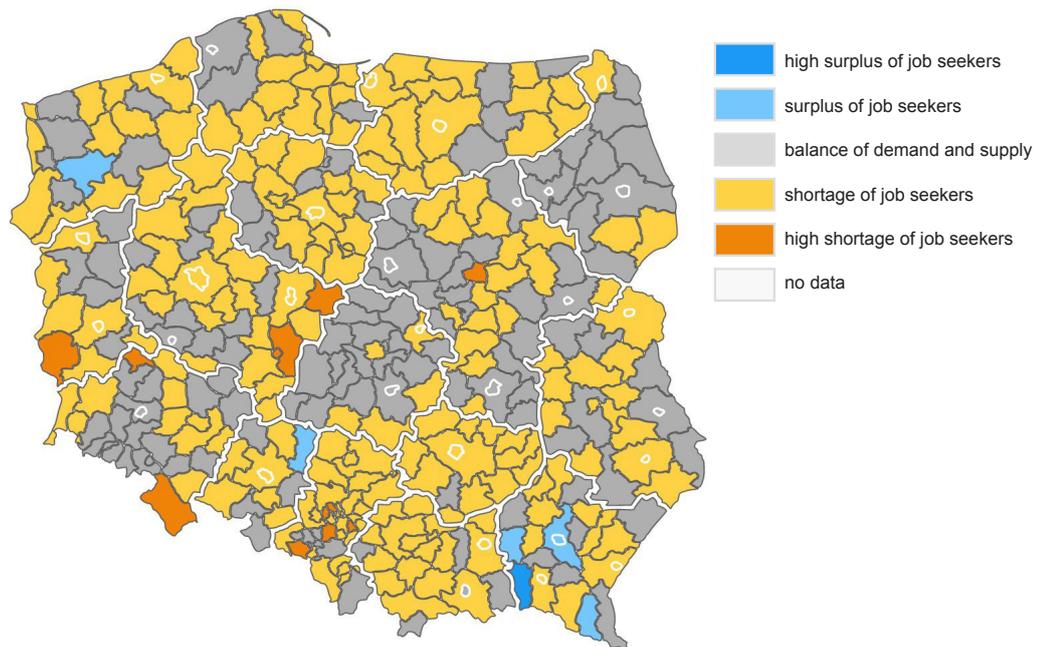
Source: www.barometrzwodow.pl

The largest staff deficiencies are reported by hospitals and facilities in small poviats, located near larger cities, where much more attractive earnings are offered. Although job offers in this type of profession rarely reach poviat labour offices, experts see problems in recruiting staff. Employees in the aforementioned professions often work in several facilities simultaneously, both public and private. In the case of doctors, deficiencies are noted in many specializations. The demand for physiotherapy and massage services is growing, but people in this profession often decide to set up their own business, due to the unattractive remuneration in public institutions.

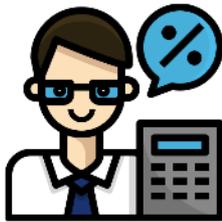


Shortage occupations also include professions from **the service industry**, including hairdressers (similar to the previous year). Beauticians who were in deficit in the last edition, were described as sustainable at this year's country level. Employers are looking for experienced people with practical preparation who are familiar with current trends in hairdressing and have appropriate qualifications. The results of this year's survey show that there is insufficient number of such people, school graduates lack sufficient practical preparation and experience. Therefore, young people often decide to work in the shadow economy zone or start their own business, so-called mobile services with access to the client. Furthermore, hairdressers often extend the scope of their services to those related to makeup or manicure in order to expand the customer base.

Map 7. Relationship between available employees and employers' needs: hairdressers

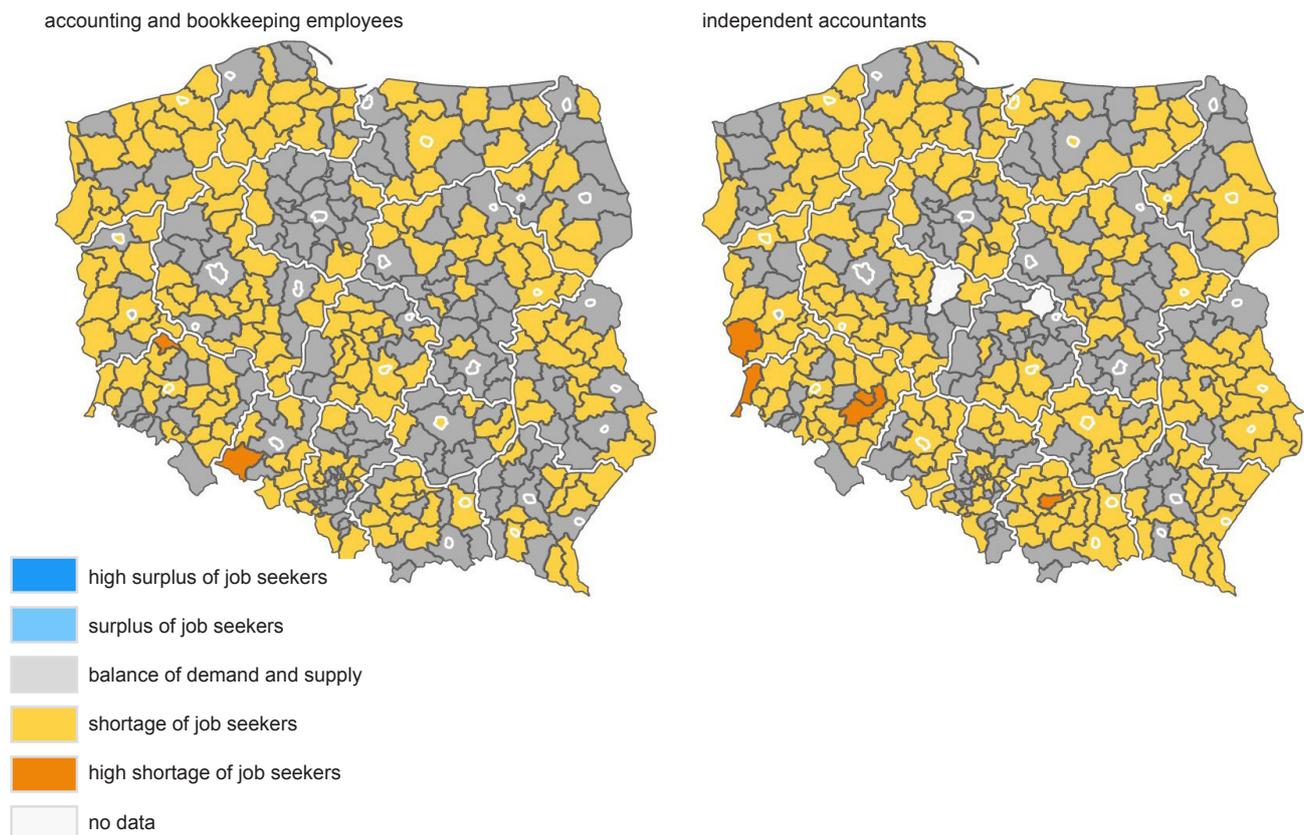


Source: www.barometrzwodow.pl



The last industry for the representatives of which a deficit is forecast regards representatives of **the financial industry**, more specifically accounting employees as well as independent accountants. These results duplicate last year's forecast. In the case of the first of the above-mentioned professions, many graduates have a specialized education, but they lack foreign language skills. The development of enterprises with foreign capital as well as the opening of domestic companies for foreign markets means that the demand for such people will increase. In the case of independent accountants, the knowledge of foreign languages, current regulations and usage of specialized accounting programs is also welcome. It is worth mentioning that this is a profession that requires great responsibility and independence in carrying out tasks.

Map 8. Relationship between available employees and employers' needs: accounting and bookkeeping employees - independent accountants



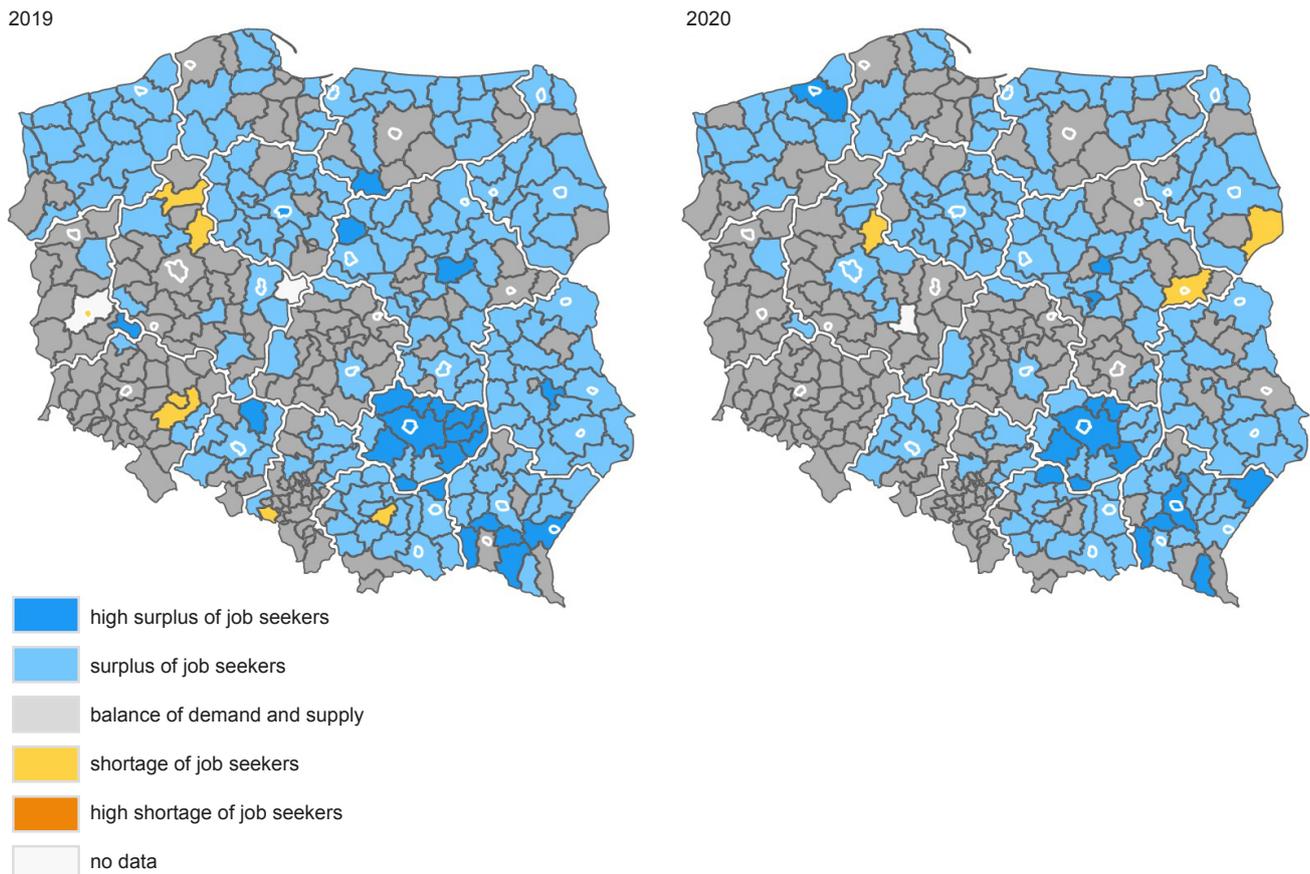
Source: www.barometrzwodow.pl

3.2.2 Surplus professions

Among the surplus professions in this year's edition, similarly to the previous year, there was only one profession - economists. This is the only profession in which the number of candidates willing to work is higher than the number of actual jobs. This profession can be considered as permanently surplus, since it has been reaching the national level of surplus since 2016. A lot of factors are responsible for this, on the one hand it is a matter of a large number of graduates, including economist technicians, as well as the high popularity and availability of schools in this field. Despite the high dynamics of market development, economists are often unable to find specialized employment, that is why they complete their qualifications or sometimes change the industry completely.



Map 9. Relationship between available employees and employers' needs: economists



Source: www.barometrzwodow.pl

In the case of an economics graduate, formal education is not a factor conditioning employment, it is often necessary to supplement education with additional courses, e.g. in the area of accounting, finance. Economics graduates take up employment in positions related to accounting, management, banking, controlling, tax consulting, etc. A positive change is, however, the decrease in the number of poviats, in which economists were placed in a group of professions with a large surplus.

3.2.3 Balanced professions

Since the beginning of the nationwide survey, i.e. since 2015 (the first forecast for 2016), the share of balanced professions has been the highest (about 80% of all evaluated professions) compared to the share of deficit (approximately 15%) and surplus professions (approximately 5%). In this year's edition of the survey, former deficit professions are classified as balanced ones, and this refers to chefs and beauticians. That means that the number of vacancies in these occupations will be similar to the number of people interested in taking up a job. From balanced to a deficit group in this year's editions 3 professions were moved, and this refers to: tanners and car varnishers, teachers of practical and professional subjects. It is difficult to clearly determine what factor influenced the change in the teaching professions of industry and technical education, however, it can be assumed that this is also the result of the generation gap. In the case of tanners and car varnishers the popularity of car import from abroad including postaccident ones contributed to the increase of the demand for this kind of services for the purpose of their repair and sale. The number of commission shops as well as of independent traders is growing.

3.3 Deficit and surplus professions in individual voivodeship

On a national scale, the results of this year's edition by industry show similarities to the results of last year's edition. Changes in the number of deficit, balanced and surplus professions in recent years have tended to increase the number of deficit professions with a simultaneous decrease in the number of surplus ones. The diversity of demand is, however, visible at the voivodeship level, which is affected by many factors, such as: geographical location, which translates into development in the selected industry, proximity of training centers which educate future staff, or demographic factors determining the fact that selected regions are depopulating, e.g. due to labour migration.

In 2020 in the **dolnośląskie voivodeship**, 46 professions were in deficit, the remaining professions were identified as balanced (identically as in the previous year). The share of deficit occupations among all professions was 27.4%. Deficit occupations included representatives of the construction industry, such as bricklayers and plasterers, as well as concrete mixers and fixers. Compared to national results, the deficit professions in dolnośląskie were also supplemented by such professions as: waiters and bartenders, construction managers, machine and device mechanics, foreign language teachers and teachers, general education teachers, kindergarten teachers, childminders, kitchen assistants, manual workers in production and simple works, employees of uniformed services, social workers, psychologists and psychotherapists, specialists in human resource management and recruitment, salesmen and cashiers, chefs, suppliers and deliverers. Characteristic for this province is the occurrence of deficits in all professions related to education. The highest number of deficits (48) and large deficits (31) were recorded in the Wrocław agglomeration (city and poviats of Wrocław). Despite large deficits in many professions, particularly in positions which do not require high qualifications (e.g. kitchen assistants or manual workers in production and simple work), a large group of the unemployed is still registered in the registers of labour offices. The reasons for this being outdated qualifications, lack of experience or lack of professional qualifications.

In the **kujawsko-pomorskie voivodeship**, employers will report a problem finding employees in 34 professions, two more than in the previous edition. The share of deficit occupations in the total number of evaluated occupations amounted to 20.2%, while the surplus occupations - 2.4%. The deficit included such professions as: beauticians, metal construction fitters, machine operators for the production of rubber and plastic products, psychologists and psychotherapists, specialists in electronics, automation and robotics, as well as chefs. At the same time, these are professions which have been in balance across the country. In Toruń, truck and tractor truck drivers, doctors and midwives were in a deficit. The shortage of staff is largely addressed by employing foreigners. Most declarations about entrusting work to a foreigner were reported to poviats labour offices in Bydgoszcz (27.2%), Nakło nad Notecią (13.1%), Chełmno (9.7%) and Toruń (8.8%). Above all, there was demand for employees needed in simple work - 44.3%, as well as for industrial workers and craftsmen - 35.6%.

The surplus, as in the whole country, included economists and philosophers, historians, political scientists and culture experts as well as food and nutrition technology specialists. In these professions, the problem of surplus may result from a the large number of graduates in these popular fields whom the market is unable to absorb. In Toruń the surplus included: economists, philosophers, historians, political scientists and cultural experts, chemists and chemical engineers, educators, administrative and office employees, employees of travel agencies and tourist service organizers, specialists of public administration as well as financial specialists.

Among the professions assessed in the **lubelskie voivodeship**, the deficit included 23 professions (13.7% share) whereas the surplus 10 (6% share). For shortage occupations, compared to national results, car diagnostics, special school and integration departments teachers were also included. In turn, in the surplus there appeared: philosophers, historians, political scientists and culture scholars, pedagogues, administrative staff and office workers, travel agency employees and tour operators, farmers and breeders, sociologists and socio-economic research specialists, public administration specialists, food and nutrition technology specialists as well as mechanic technicians. The justification for the surplus in the aforementioned professions is similar to that indicated above: a large number of graduates often supplement their qualifications or take up employment in related professions because they lack a sufficient number of job offers. In the capital of the province, Lublin, there will be a lack of specialists, including specialists in human resources management and recruitment or specialists in electronics, automation and robotics. It is Lublin which is the center of concentration of the largest number of specialist professions, requiring specific education, qualifications and licenses. The main reason for this may be the fact that the largest number of companies operate on Lublin's labour market. They are often strongly profiled and employ specialists in specific fields.

In the **lubuskie voivodeship**, the deficit noted the demand for most professions from the education industry. In addition to teachers of all types of schools, there will also be a shortage of educators in educational and care facilities. The next deficit industry in lubuskie is the gastronomy and medical-care industry. There will also be a lack of employees of uniformed services, which may be dictated by the need to meet demanding recruitment criteria, including high physical fitness checked in tests. Candidates are also required to pass psychological tests, knowledge tests and have a job interview.

In addition, work in uniformed services requires high availability: shift work, availability on Sundays and holidays. Uniformed professions also require a lot of responsibility, and thus expose one to loss of health and even loss of life. In the lubuskie voivodeship no surpluses were recorded, whereas the share of deficits was 34% in the number of 57 (in 2019 - 60 deficit occupations). One profession was recorded in Zielona Gora in a large deficit - machine tool operators and 2 surpluses - biologists, biotechnologists, biochemists, artists, interior decorators and monument conservators.

Among the deficit occupations in the **łódzkie voivodeship** there were 17 professions (share in the total number of occupations - 10%), including butchers and fish processors that were not recorded among national deficits. There were no surpluses in łódzkie. Compared to last year's edition, the number of deficits increased by two, and additional professions include: accounting staff and construction workers. In this year's edition in Łódź only one profession previously in deficit (bricklayers and plasterers) was in balance.

Among the most sought after professions on the labour market in the capital of the voivodeship there were warehousemen, bricklayers and plasterers as well as manual workers in production and simple work. Attention is drawn to the fact that in over fifty shortage occupations in Łódź, as many as eleven categories belong to specialists. These are professions from the medical sphere, IT industry (including programmers), vocational teachers and educators in educational institutions and caring, financial specialists as well as production and logistics services. Other deficit occupations mostly coincide with the indications in other poviats of the Łódź voivodeship.

In the case of the **małopolskie voivodeship**, this year's deficit included 35 professions (20.8%) compared to 38 last year. Only economists were in the surplus. Analyzing data for Poland and Małopolska, it can be seen that employers will have a problem finding

employees in Malopolska in such professions as: construction managers, beauticians, designers and database administrators, programmers as well as freight forwarders and logistics specialists. Such a demand may result from the development of companies with foreign capital and new investments in the province. In the capital of the province, Crakow, the deficit in 2020 was forecast in 65 professions, while surpluses in 11 professions. High employee supply is generated by graduates of vocational schools, including technical schools and post-secondary schools as well as universities. Ill-considered educational choices made by the young are also a reason for the surpluses.

In this year's edition in the **mazowieckie voivodeship**, 20 professions were in deficit (share - 12%), while in the surplus there was one: economists (similarly to the previous edition). In the mazowieckie voivodeship all deficit professions coincide with the national forecast. Staff shortages were noted in each from the deficit industries described above. In 2020 in the mazowieckie voivodeship there will be insufficient number of chefs, doctors, but also bakers or welders. The results for this voivodships well reflect the nationwide trends observed. This year's edition of the study confirms intraregional diversity²² between Warsaw capital region (including the capital city of Warsaw and 9 poviats) and the mazowieckie region. In the Warsaw capital region, most deficit occupations were indicated in Warsaw - 79 (including 7 in large deficit), only the economist profession was forecast in the surplus. Warsaw stands out not only in the voivodship but also the country. The survey results confirm that the Warsaw labour market absorbs native workers as well as foreigners with different competences.

Interesting are the observations at the level of individual occupations / groups of occupations, e.g. a large share of foreigners not only in professions with lower competencies, but also in professions from the IT industry, such as analysts, IT systems testers and operators, computer graphic designers, designers as well as database administrators, programmers.

In 2020 in the **opolskie voivodeship** the problem with finding employment will be faced by economists. Among the deficit occupations, i.e. those in which the number of job offers exceeds the number of people willing to take them, 46 professions (27.4%) have been reported compared to 40 reported in the previous edition. Only economists are a profession in which the number of job offers will be lower than the number of candidates ready to take them (it was similar in the previous edition study). Compared to nationwide deficits, representatives of manufacturing and construction industries should not have a problem with finding a job in the opolskie voivodeship.

, lifting and transport equipment or machines for the production of rubber and plastic products. In opolskie there is a shortage of representatives of the financial industry (finance and accounting employees with the knowledge of foreign languages, accounting and book-keeping employees, independent accountants). In Opole a large deficit was forecast in as many as 16 professions, while the deficit in 60 professions. Two professions were considered surplus in Opole: economists and philosophers, historians, political scientists and culture experts.

²² Since January 1, 2018, a new statistical division of the mazowieckie voivodeship is effective, within which the mazowieckie voivodeship has been divided into 2 statistical regions, i.e. Warsaw's capital city (including the capital city of Warsaw and 9 poviats surrounding it) and the mazowieckie region (which includes the remaining poviats and cities with poviat status).

In the **podkarpackie voivodeship**, compared to the previous year, the number of deficit occupations remained unchanged and amounts to 31 (share of 18.4%). In the case of surplus professions, there were as many as 8 professions in which there may be a problem finding a job. These include: economists, philosophers, historians, political scientists and culture scholars, educators, travel agency employees and tour operators, farmers and breeders, sociologists and specialists in socio-economic research, specialists in public administration, specialists in food technology and nutrition. These include graduates of humanities in the case of whom there is a problem with employment due to the insufficient number of job offers in relation to those willing to take them, which in turn is dictated by the high popularity and the availability of such courses.

Many universities, including technical universities, offer humanities. More and more companies with foreign capital are being created in the provincial city of Rzeszów. These include companies from the aviation, pharmacy, I&T and construction industries. Among the deficit occupations there were, among others designers and database administrators, programmers or construction engineers - a total of 17 professions which will lack employees. In Rzeszow, there was also a large surplus in 3 professions and a surplus in 11.

In 2020 in **podlasie** economists, as in the whole country, will have the biggest problems finding a job (in the previous edition there were 3 surplus professions in this voivodeship). Shares of deficits will be at the level of 14.3%, i.e. 24 occupations (22 deficit occupations in the previous edition). The results for podlasie are in line with the national forecast, there will be a shortage of employees in typical deficit industries, including: construction, production or transport. The Bialystok labour market, and in particular the city of Bialystok, create favourable conditions for the development of the economy, and thus for the creation of new jobs.

Leading industries include: trade, construction, industry and motor industry. Slightly fewer companies operate in the industry of: food, including agri-food and transport, IT, hotel and catering industries as well as in furniture production. In Bialystok, the deficit is forecast in 58 professions, including a large deficit for truck and tractor units drivers. Nine professions were included in the surplus in Bialystok.

Deficit is predicted in 53 professions in the **pomorskie voivodeship** (33% share in the total number of professions evaluated), compared to 55 in the previous edition of the survey. Compared to nationwide results, deficits were also noted among varnishers, assemblers of machines and devices or kitchen aids. In the case of professions related to the education industry, teachers from kindergartens, of vocational subjects, practical vocational training, foreign languages and as well as general subjects were included in a deficit in the pomorskie voivodeship. Similar results are observable in this year's edition in several voivodeships. In Gdansk, the deficit was forecast in 55 professions, in one profession a large deficit was indicated (kitchen porters), while the surplus in one profession - service managers.

In the **śląskie voivodeship**, 41 professions (24.4%) were in deficit compared to 40 in the previous edition. In 2020 there will be no surplus professions in Silesia. The professions where there is going to be a problem with finding employees, include the construction industry, carpenters and construction carpenters, roofers and tinsmiths builders or fitters of building installations. Also, there will be a lack of teachers or paramedics. In Katowice, 6 professions were included in the large deficit, while there will be a deficit of 36 professions. There are no surplus professions in the forecast for 2020. Automation will be more and more willingly introduced in most companies and new technologies will be applied. It is therefore important for employees and job seekers to acquire the skills they need in the long run, it is necessary to participate in training, raise qualifications, and in some cases modify them.

In the **świętokrzyskie voivodeship**, 28 professions (16.7%) were in deficit compared to 26 last year. There were, however, surplus professions. It is forecast that in 2020 it will be 7 professions compared to 1 profession in the previous edition. Similarly, the deficit included professions which in other voivodships were also referred to as those in which there may be a problem finding a job. In the capital of the province, Kielce, a large deficit was forecast in 5 professions, deficit in 30, surplus in 10, and large surplus in 1 (economists).

In the **warmińsko-mazurskie voivodeship**, 28 professions (16.7%) and one surplus profession - economists - were recorded in the deficit. Compared to the previous edition, the number of deficit occupations dropped (by two), the number of surpluses remained unchanged. In the warmińsko-mazurskie voivodeship, representatives of the construction industry will be demanded the most. In the capital of the province, Olsztyn a large deficit was forecast in 6 professions (carpenters and construction carpenters, chefs, carers for the elderly or the disabled, manual workers in production and simple works, construction workers, cleaners and room cleaners), deficit in 36, surplus in 2 (philosophers, historians, political scientists) and culture experts in passenger car drivers).

In the case of the **wielkopolskie voivodeship**, employers may have a problem finding employees in 46 professions (54 last year), i.e. in 27.4% of the assessed occupational groups. The surplus forecast duplicates with that from last year - no group of occupations was recorded in which the number of employees exceeds the number of job offers. There will be a shortage of teachers, fitters, but also drivers and mechanics. In Poznań, there were 17 large deficits, 57 deficits and 8 deficits, mainly in occupations in which humanities graduates are represented in large numbers.

In the **zachodniopomorskie voivodeship**, economists as well as food and nutrition technology specialists may have a problem with finding a job in 2020. Deficit is forecast for 39 professions (compared to 40 professions in the forecast for 2019). The share of deficit occupations in the total number of persons assessed amounts to 23.2%. There will be a deficit of employees in the financial, construction, education and transport industries. In a provincial capital city of Szczecin a large deficit is reported in 7 professions, a deficit in 44, and a surplus in 7 professions (economists, managers for management and business services, managers in social and cultural institutions, administrative and office staff secretaries and sociologists, assistants and specialists in socio-economic research, PR, advertising as well as marketing and sales specialists).

3.4 Summary

Occupational Barometer results indicate that employers may have a problem finding employees in the construction, manufacturing, transport and catering as well as in medical and caring industries. The causes of shortage may be on the side of employers (e.g. unattractive employment conditions), employees (e.g. health contraindications, difficult family situation) or have a systemic nature, related also with the failure to adapt education to the needs of the labour market. Problems with recruitment of employees will increase. From the employees' point of view, this situation improves employment conditions, as employers are more willing to adapt the conditions to employees' expectations. Labour market institutions face a challenge in the form of activating people who remain in the registers. It seems necessary to identify obstacles which make young people not interested in education in occupations which are in demand on the labour market. Very often educational decisions translate into the market situation. Therefore, changes are necessary at the lowest level of education. From the beginning, young people should shape skills which they will be able to use when entering the

labour market in the future. It is also necessary to constantly improve the quality of vocational counseling in schools, because only a good diagnosis and reliable knowledge about the needs of local labour markets can contribute to a greater balance in the demand for occupations in poviats.

More about the demand for occupations in local labour markets can be read at www.barometrzawodow.pl.

Occupational Barometer 2020

Poland

www.barometrzwodow.pl

SHORTAGE

Accounting and bookkeeping clerks
Bakers
Bricklayers and plasterers
Bus drivers
Concrete placers, concrete finishers and related workers
Construction installation assemblers
Construction joiners and carpenters
Construction workers
Cooks
Earthmoving plant operators and mechanics
Electrical mechanics and electrical assemblers

Finishing work technologists in building trades
Hairdressers
Handicraft workers in wood and joiners
Independent accountants
Medical doctors
Metal working machine tool setters and operators
Motor vehicle mechanics and repairers
Nurses and midwives
Pavers
Physiotherapy technicians and assistants
Roofers and sheet metal workers in building trades

Social work professionals caring for the elderly and disabled
Stock clerks
Tailors and clothing manufacturers
Teachers for practical vocational training
Teachers of vocational subjects
Tinsmiths and laquerers
Locksmith
Truck drivers
Welders

BALANCE

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
Butchers and fishmongers
Car wash, laundry and ironing workers
Caretakers, doorkeepers, janitors and custodians
Cement and stone machine operators
Chefs
Chemical engineers and chemists
Chemical products plant and machine operators
Childminders
Cleaners and room service
Clearing and forwarding agents
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
Educational counsellors
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 advisers
Finance and accounting staff with knowledge of foreign languages
Finance professionals

Fishermen
Florists
Food and nutrition technology professionals
Food processing workers
Foreign language teachers
Forest workers
Funeral service workers
Gardeners i orchardists
Glaziers and window fitters
Graphic and multimedia designers
Handicraft workers in leather and related materials
Household helps
Human resources and recruitment professionals
Industrial ceramists
Insurance agents
Internet salespersons
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 engineering technicians
Mechanical engineers
Medical imaging and therapeutic equipment technicians
Metal processing workers
Meteorologists, geologists, geographers
Miners and mining plant and machine operators
OHS specialists
Opticians and prosthetics workers
Other education specialists
Painters and varnishers
Paper manufacturing and processing machine operators
Paramedical practitioners
Passenger car drivers
Pharmacists
Photographers
Physical protection services workers
Plant and machine operators and assemblers
Political scientists, historians, philosophers
Postal clerks
Postmen and package deliverers
Potters and glaziers

PR, advertising, marketing and sales specialists
Pre-school teachers
Primary education teachers
Printing trades workers
Product and garment designers and CAD operators
Production managers
Production organisation professionals
Psychologists and psychotherapists
Public administration professionals
Quality specialists
Railway traffic operators
Real estate professionals
Receptionists
Road construction workers
Rubber and plastic machine operators
Sales managers
Salespeople and pos operators
Secretaries and assistants
Service managers
Shipdeck crew, ship and port operators
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
Structural metal workers
Surveyors and cartographers
Teachers of general subjects
Telecommunications specialists
Textile machine operators
Trade representatives
Train driver
Translators, interpreters and other linguists
Travel consultants and clerks
Uniformed services workers
Upholsterers
Veterinarians
Vindicators
Visual artists and interior designers
Waiters and bartenders
Webmasters

SURPLUS

Economists

The "Occupational Barometer" is a forecast for the demand for employees in 2020. The study was conducted by experts at the turn of the third and fourth quarters of 2019. The situation in some professions may change depending on market conditions. The result for the region include professions assessed in at least half of the counties.



National coordinator

The institution ordering the study

Occupational Barometer 2020

kujawsko-pomorskie region

www.barometrzasowodow.pl

SHORTAGE	BALANCE	SURPLUS
Bakers Beauticians Bricklayers and plasterers Bus drivers Chefs Concrete placers, concrete finishers and related workers Construction installation assemblers Construction joiners and carpenters Construction workers Cooks Earthmoving plant operators and mechanics Electrical mechanics and electrical assemblers	Accounting and bookkeeping clerks 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 Assistants in education Automotive diagnosis technicians 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 Clearing and forwarding agents 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 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 advisers Finance professionals Florists Economists	Electronics technology, automation and robotics specialists Finishing work technologists in building trades Hairdressers Handicraft workers in wood and joiners Independent accountants Medical doctors Metal working machine tool setters and operators Motor vehicle mechanics and repairers Nurses and midwives Pavers Psychologists and psychotherapists Food processing workers Foreign language teachers Forest workers Funeral service workers Gardeners i orchardists Glaziers and window fitters Graphic and multimedia designers Household helps Human resources and recruitment professionals Insurance agents Internet salespersons 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 engineering technicians Mechanical engineers Medical imaging and therapeutic equipment technicians Metal processing workers Miners and mining plant and machine operators OHS specialists Opticians and prosthetics workers Other education specialists Painters and varnishers Paper manufacturing and processing machine operators Paramedical practitioners Passenger car drivers Pharmacists Photographers Physical protection services workers Physiotherapy technicians and assistants Plant and machine operators and assemblers Postal clerks Postmen and package deliverers Potters and glaziers Food and nutrition technology professionals
Roofers and sheet metal workers in building trades Rubber and plastic machine operators Social work professionals caring for the elderly and disabled Structural metal workers Tailors and clothing manufacturers Teachers for practical vocational training Teachers of vocational subjects Tinsmiths and laquerers Toolmakers Truck drivers Welders PR, advertising, marketing and sales specialists Pre-school teachers Primary education teachers Printing trades workers Product and garment designers and CAD operators Production managers Production organisation professionals Public administration professionals Quality specialists Railway traffic operators Real estate professionals Receptionists Road construction workers Sales managers Salespeople and pos operators Secretaries and assistants Service managers Social institutions and culture managers Social workers Sociologists and social/economic surveys professionals Special school teachers Speech therapists and audiophonologists Sport and recreation instructors Stock clerks Stonemasons Surveyors and cartographers Teachers of general subjects Telecommunications specialists Trade representatives Translators , interpreters and other linguists Travel consultants and clerks Uniformed services workers Upholsterers Veterinarians Vindicators Visual artists and interior designers Waiters and bartenders Webmasters Political scientists, historians, philosophers		

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Regional/Province coordinator



National coordinator



The person ordering the study

Occupational Barometer 2020

lubelskie region

www.barometrzwodow.pl

SHORTAGE	BALANCE	SURPLUS
Accounting and bookkeeping clerks Automotive diagnosis technicians Bakers Bus drivers Chefs Construction installation assemblers Cooks Earthmoving plant operators and mechanics	Acoustics and sound engineers Agricultural and gardening machines operators Analysts, testers and ICT system operators Animal services workers Architects and urban planners Archivists and curators Assistants in education Beauticians Biologists, biotechnologists, biochemists Bricklayers and plasterers 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 Clearing and forwarding agents Concrete placers, concrete finishers and related workers Confectioners Construction engineers Construction joiners and carpenters 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 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 advisers Finance professionals Finishing work technologists in building trades Florists	Administration and office clerks Economists Educational counsellors Farmers and animal producers
Electrical mechanics and electrical assemblers Hairdressers Independent accountants Medical doctors Metal working machine tool setters and operators Motor vehicle mechanics and repairers Nurses and midwives Physiotherapy technicians and assistants	Food processing workers Foreign language teachers Forest workers Funeral service workers Gardeners i orchardists Glaziers and window fitters Graphic and multimedia designers Handicraft workers in leather and related materials Handicraft workers in wood and joiners Household helps Human resources and recruitment professionals Industrial ceramists Insurance agents Internet salespersons 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 imaging and therapeutic equipment technicians Metal processing workers Meteorologists, geologists, geographers OHS specialists Opticians and prosthetics workers Other education specialists Painters and varnishers Paper manufacturing and processing machine operators Paramedical practitioners Passenger car drivers Pavers Pharmacists Photographers Physical protection services workers Plant and machine operators and assemblers Postal clerks Postmen and package deliverers Potters and glaziers PR, advertising, marketing and sales specialists Pre-school teachers	Food and nutrition technology professionals Mechanical engineering technicians Political scientists, historians, philosophers Public administration professionals
Roofers and sheet metal workers in building trades Special school teachers Tailors and clothing manufacturers Teachers for practical vocational training Teachers of vocational subjects Truck drivers Welders	Primary education teachers Printing trades workers Product and garment designers and CAD operators Production managers Production organisation professionals Psychologists and psychotherapists Quality specialists Railway traffic operators Real estate professionals Receptionists Road construction workers Rubber and plastic machine operators Sales managers Salespeople and POS operators Secretaries and assistants Service managers Shoemakers Social institutions and culture managers Social work professionals caring for the elderly and disabled Social workers Speech therapists and audiophonologists Sport and recreation instructors Stock clerks Stonemasons Structural metal workers Surveyors and cartographers Teachers of general subjects Telecommunications specialists Textile machine operators Tinsmiths and laquerers Toolmakers Trade representatives Train driver Translators, interpreters and other linguists Uniformed services workers Upholsterers Veterinarians Vindicators Visual artists and interior designers Waiters and bartenders Webmasters	Sociologists and social/economic surveys professionals Travel consultants and clerks

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Regional/Province coordinator



National coordinator



Ministerstwo Rodziny,
Pracy i Polityki Społecznej

Institution ordering the study

Occupational Barometer 2020

Iubuskie region

www.barometrzwodow.pl

SHORTAGE

Accounting and bookkeeping clerks
Bakers
Bricklayers and plasterers
Bus drivers
Butchers and fishmongers
Chefs
Childminders
Clearing and forwarding agents
Concrete placers, concrete finishers and related workers
Confectioners
Construction engineers
Construction installation assemblers
Construction joiners and carpenters
Construction managers
Construction workers
Cooks
Earthmoving plant operators and mechanics
Educators in educational and care institutions
Electrical mechanics and electrical assemblers
Electronics technology, automation and robotics specialists

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
Machinery mechanics and repairers
Manual workers in production and simple works
Medical doctors
Metal processing workers
Metal working machine tool setters and operators
Motor vehicle mechanics and repairers
Nurses and midwives
Pavers
Physiotherapy technicians and assistants
Postmen and package deliverers
Pre-school teachers
Primary education teachers
Psychologists and psychotherapists

Roofers and sheet metal workers in building trades
Salespeople and pos operators
Social work professionals caring for the elderly and disabled
Social workers
Special school teachers
Stock clerks
Tailors and clothing manufacturers
Teachers for practical vocational training
Teachers of general subjects
Teachers of vocational subjects
Tinsmiths and laquerers
Toolmakers
Truck drivers
Uniformed services workers
Upholsterers
Waiters and bartenders
Welders

BALANCE

Acoustics and sound engineers
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
Assistants in education
Automotive diagnosis technicians
Beauticians
Biologists, biotechnologists, biochemists
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
Cleaners and room service
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
Economists
Educational counsellors
Electrical and energetic engineers
Electronic assemblers
Environmental engineering engineers
Events, cultural activities and animation organizers
Farmers and animal producers
Farming and forestry advisers
Finance professionals

Florists
Food and nutrition technology professionals
Food processing workers
Forest workers
Funeral service workers
Gardeners i orchardists
Glaziers and window fitters
Graphic and multimedia designers
Household helps
Human resources and recruitment professionals
Insurance agents
Internet salespersons
It technicians
Journalists and editors
Landscape architects
Lawyers
Librarians and related information professionals
Logistics managers
Management and business service managers
Mechanical engineering technicians
Mechanical engineers
Medical imaging and therapeutic equipment technicians
Ohs specialists
Opticians and prosthetics workers
Other education specialists
Painters and varnishers
Paper manufacturing and processing machine operators
Paramedical practitioners
Passenger car drivers
Pharmacists
Photographers
Physical protection services workers
Plant and machine operators and assemblers
Political scientists, historians, philosophers
Postal clerks

Potters and glaziers
PR, advertising, marketing and sales specialists
Printing trades workers
Product and garment designers and cad operators
Production managers
Production organisation professionals
Public administration professionals
Quality specialists
Railway traffic operators
Real estate professionals
Receptionists
Road construction workers
Rubber and plastic machine operators
Sales managers
Secretaries and assistants
Service managers
Shoemakers
Social institutions and culture managers
Sociologists and social/economic surveys professionals
Speech therapists and audiophonologists
Sport and recreation instructors
Stonemasons
Structural metal workers
Surveyors and cartographers
Telecommunications specialists
Trade representatives
Translators, interpreters and other linguists
Travel consultants and clerks
Veterinarians
Vindicators
Visual artists and interior designers
Webmasters

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Regional/Province coordinator



National coordinator



Ministerstwo Rodziny,
Pracy i Polityki Społecznej

The person ordering the study

Occupational Barometer 2020

łódzkie region

www.barometrzwodow.pl

SHORTAGE	BALANCE		
Accounting and bookkeeping clerks	Administration and office clerks	Electrical mechanics and electrical assemblers	Tailors and clothing manufacturers
Bus drivers	Agricultural and gardening machines operators	Metal working machine tool setters and operators	Toolmakers
Butchers and fishmongers	Analysts, testers and ICT system operators	Nurses and midwives	Truck drivers
Construction installation assemblers	Animal services workers	Physiotherapy technicians and assistants	Welders
Construction workers	Architects and urban planners	Social work professionals caring for the elderly and disabled	
Cooks	Archivists and curators	Stock clerks	
Earthmoving plant operators and mechanics	Assistants in education		
	Automotive diagnosis technicians		
	Bakers	Food and nutrition technology professionals	
	Beauticians	Food processing workers	Potters and glaziers
	Biologists, biotechnologists, biochemists	Foreign language teachers	PR, advertising, marketing and sales specialists
	Bricklayers and plasterers	Forest workers	Pre-school teachers
	Car wash, laundry and ironing workers	Funerary service workers	Primary education teachers
	Caretakers, doorkeepers, janitors and custodians	Gardeners and orchardists	Printing trades workers
	Cement and stone machine operators	Glaziers and window fitters	Product and garment designers and CAD operators
	Chefs	Graphic and multimedia designers	Production managers
	Chemical engineers and chemists	Hairdressers	Production organisation professionals
	Chemical products plant and machine operators	Handicraft workers in leather and related materials	Psychologists and psychotherapists
	Childminders	Handicraft workers in wood and joiners	Public administration professionals
	Cleaners and room service	Human resources and recruitment professionals	Quality specialists
	Clearing and forwarding agents	Independent accountants	Railway traffic operators
	Concrete placers, concrete finishers and related workers	Industrial ceramists	Real estate professionals
	Confectioners	Insurance agents	Receptionists
	Construction engineers	Internet salespersons	Road construction workers
	Construction joiners and carpenters	IT technicians	Roofers and sheet metal workers in building trades
	Construction managers	Journalists and editors	Rubber and plastic machine operators
	Construction supervision inspectors	Kitchen helpers	Sales managers
	Construction technicians	Landscape architects	Salespeople and POS operators
	Contact centre agents, survey and market research interviewers	Lawyers	Secretaries and assistants
	Crane, hoist and related plant operators	Librarians and related information professionals	Service managers
	Database designers and administrators, programmers	Logistics managers	Shoemakers
	Dental technicians	Machinery mechanics and repairers	Social institutions and culture managers
	Dentists	Management and business service managers	Social workers
	Driving instructors	Manual workers in production and simple works	Sociologists and social/economic surveys professionals
	Economists	Mechanical engineering technicians	Special school teachers
	Educational counsellors	Mechanical engineers	Speech therapists and audiophonologists
	Educators in educational and care institutions	Medical doctors	Sport and recreation instructors
	Electrical and energetic engineers	Medical imaging and therapeutic equipment technicians	Stonemasons
	Electronic assemblers	Metal processing workers	Structural metal workers
	Electronics technology, automation and robotics specialists	Meteorologists, geologists, geographers	Surveyors and cartographers
	Environmental engineering engineers	Miners and mining plant and machine operators	Teachers for practical vocational training
	Events, cultural activities and animation organizers	Motor vehicle mechanics and repairers	Teachers of general subjects
	Farmers and animal producers	OHS specialists	Teachers of vocational subjects
	Farming and forestry advisers	Opticians and prosthetics workers	Telecommunications specialists
	Finance professionals	Other education specialists	Textile machine operators
	Finishing work technologists in building trades	Painters and varnishers	Tinsmiths and laquerers
	Florists	Paper manufacturing and processing machine operators	Trade representatives
		Paramedical practitioners	Translators, interpreters and other linguists
		Passenger car drivers	Travel consultants and clerks
		Pavers	Uniformed services workers
		Pharmacists	Upholsterers
		Photographers	Veterinarians
		Physical protection services workers	Visual artists and interior designers
		Plant and machine operators and assemblers	Waiters and bartenders
		Political scientists, historians, philosophers	Webmasters
		Postal clerks	
		Postmen and package deliverers	

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Regional/Province coordinator



National coordinator



Ministerstwo Rodziny, Pracy i Polityki Społecznej

The person ordering the study

Occupational Barometer 2020

małopolskie region

www.barometrzwodow.pl

SHORTAGE	BALANCE	SURPLUS
Accounting and bookkeeping clerks Bakers Beauticians Bricklayers and plasterers Bus drivers Chefs Clearing and forwarding agents Concrete placers, concrete finishers and related workers Construction engineers Construction installation assemblers Construction joiners and carpenters Construction managers	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 Assistants in education Automotive diagnosis technicians 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 Confectioners Construction supervision inspectors Construction technicians Contact centre agents, survey and market research interviewers Crane, hoist and related plant operators Dental technicians Dentists Driving instructors Educational counsellors 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 advisers Finance and accounting staff with knowledge of foreign languages Finance professionals Florists Food and nutrition technology professionals Food processing workers Foreign language teachers Forest workers	Construction workers Cooks Database designers and administrators, programmers Earthmoving plant operators and mechanics Electrical mechanics and electrical assemblers Finishing work technologists in building trades Hairdressers Handicraft workers in wood and joiners Independent accountants Medical doctors Metal working machine tool setters and operators Motor vehicle mechanics and repairers Nurses and midwives Pavers Physiotherapy technicians and assistants Roofers and sheet metal workers in building trades Salespeople and pos operators Social work professionals caring for the elderly and disabled Stock clerks Tailors and clothing manufacturers Tinsmiths and laquerers Truck drivers Welders Product and garment designers and CAD operators Production managers Production organisation professionals Psychologists and psychotherapists Public administration professionals Quality specialists Railway traffic operators Real estate professionals Receptionists Road construction workers Rubber and plastic machine operators Sales managers 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 Structural metal workers Surveyors and cartographers Teachers for practical vocational training Teachers of general subjects Teachers of vocational subjects Telecommunications specialists Textile machine operators Toolmakers Trade representatives Train driver Translators, interpreters and other linguists Travel consultants and clerks Uniformed services workers Upholsterers Veterinarians Vindicators Visual artists and interior designers Waiters and bartenders Webmasters
	Funeral service workers Gardeners i orchardists Glaziers and window fitters Graphic and multimedia designers Handicraft workers in leather and related materials Household helps Human resources and recruitment professionals Industrial ceramists Insurance agents Internet salespersons 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 engineering technicians Mechanical engineers Medical imaging and therapeutic equipment technicians Metal processing workers Meteorologists, geologists, geographers OHS specialists Opticians and prosthetics workers Other education specialists Painters and varnishers Paper manufacturing and processing machine operators Paramedical practitioners Passenger car drivers Pharmacists Photographers Physical protection services workers Plant and machine operators and assemblers Political scientists, historians, philosophers Postal clerks Postmen and package deliverers Potters and glaziers PR, advertising, marketing and sales specialists Pre-school teachers Primary education teachers Printing trades workers	
	Economists	

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Regional/Province coordinator



National coordinator



Ministerstwo Rodziny,
Pracy i Polityki Społecznej

The person ordering the study

Occupational Barometer 2020

mazowieckie region

www.barometrzaszawodow.pl

SHORTAGE	BALANCE	SURPLUS
<ul style="list-style-type: none"> Bakers Bricklayers and plasterers Construction installation assemblers Construction joiners and carpenters Construction workers Cooks Earthmoving plant operators and mechanics 	<ul style="list-style-type: none"> Electrical mechanics and electrical assemblers Finishing work technologists in building trades Medical doctors Nurses and midwives Physiotherapy technicians and assistants Roofers and sheet metal workers in building trades Stock clerks 	<ul style="list-style-type: none"> Tailors and clothing manufacturers Teachers for practical vocational training Teachers of vocational subjects Toolmakers Truck drivers Welders
<ul style="list-style-type: none"> Accounting and bookkeeping clerks Acoustics and sound engineers 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 Assistants in education Automotive diagnosis technicians Beauticians Biologists, biotechnologists, biochemists Bus drivers Butchers and fishmongers Car wash, laundry and ironing workers Caretakers, doorkeepers, janitors and custodians Cement and stone machine operators Chefs Chemical engineers and chemists Chemical products plant and machine operators Childminders Cleaners and room service Clearing and forwarding agents Concrete placers, concrete finishers and related workers 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 Educational counsellors 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 advisers Finance and accounting staff with knowledge of foreign languages Finance professionals Economists 	<ul style="list-style-type: none"> Florists Food and nutrition technology professionals Food processing workers Foreign language teachers Forest workers Funeral service workers Gardeners and orchardists Glaziers and window fitters Graphic and multimedia designers Hairdressers Handicraft workers in leather and related materials Handicraft workers in wood and joiners Household helps Human resources and recruitment professionals Independent accountants Insurance agents Internet salespersons 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 engineering technicians Mechanical engineers Medical imaging and therapeutic equipment technicians Metal processing workers Metal working machine tool setters and operators Motor vehicle mechanics and repairers OHS specialists Opticians and prosthetics workers Other education specialists Painters and varnishers Paper manufacturing and processing machine operators Paramedical practitioners Passenger car drivers Pavers Pharmacists Photographers Physical protection services workers Plant and machine operators and assemblers Political scientists, historians, philosophers Postal clerks Postmen and package deliverers Potters and glaziers 	<ul style="list-style-type: none"> PR, advertising, marketing and sales specialists Pre-school teachers Primary education teachers Printing trades workers Product and garment designers and cad operators Production managers Production organisation professionals Psychologists and psychotherapists Public administration professionals Quality specialists Railway traffic operators Real estate professionals Receptionists Road construction workers Rubber and plastic machine operators Sales managers Salespeople and pos operators 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 Stonemasons Structural metal workers Surveyors and cartographers Teachers of general subjects Telecommunications specialists Textile machine operators Tinsmiths and laquerers Trade representatives Train driver Translators, interpreters and other linguists Travel consultants and clerks Uniformed services workers Upholsterers Veterinarians Vindicators Visual artists and interior designers Waiters and bartenders Webmasters

The "Occupational Barometer" is a forecast for the demand for employees in 2020. The study was conducted by experts at the turn of the third and fourth quarters of 2019. The situation in some professions may change depending on market conditions. The result for the region include professions assessed in at least half of the counties.



WOJEWÓDZKI URZĄD PRACY
w WARSZAWIE



Ministerstwo Rodziny,
Pracy i Polityki Społecznej

Regional / Voivodeship coordinator

National coordinator

The person ordering the study

Occupational Barometer 2020

opolskie region

www.barometrzasawodow.pl

SHORTAGE	BALANCE	SURPLUS
Accounting and bookkeeping clerks Bakers Bricklayers and plasterers Bus drivers Concrete placers, concrete finishers and related workers Confectioners Construction installation assemblers Construction joiners and carpenters Construction workers Cooks Crane, hoist and related plant operators Earthmoving plant operators and mechanics Electrical mechanics and electrical assemblers Electronics technology, automation and robotics specialists Finance and accounting staff with knowledge of foreign languages	Acoustics and sound engineers 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 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 Chefs 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 Database designers and administrators, programmers 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 advisers Finance professionals Economists	Finishing work technologists in building trades Hairdressers Handicraft workers in wood and joiners Independent accountants Kitchen helpers Machinery mechanics and repairers Medical doctors Metal processing workers Metal working machine tool setters and operators Motor vehicle mechanics and repairers Nurses and midwives Painters and varnishers Pavers Physical protection services workers Physiotherapy technicians and assistants Road construction workers Roofers and sheet metal workers in building trades Rubber and plastic machine operators Salespeople and POS operators Social work professionals caring for the elderly and disabled Social workers Stock clerks Structural metal workers Tailors and clothing manufacturers Tinsmiths and laquerers Toolmakers Truck drivers Uniformed services workers Upholsterers Waiters and bartenders Welders Postmen and package deliverers Potters and glaziers PR, advertising, marketing and sales specialists Pre-school teachers Primary education teachers Printing trades workers Product and garment designers and CAD operators Production managers Production organisation professionals Psychologists and psychotherapists Public administration professionals Quality specialists Railway traffic operators Real estate professionals Receptionists Sales managers Secretaries and assistants Service managers Shoemakers Social institutions and culture managers 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 vocational subjects Telecommunications specialists Textile machine operators Trade representatives Train driver Translators, interpreters and other linguists Travel consultants and clerks Veterinarians Vindicators Visual artists and interior designers Webmasters

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Wojewódzki
Urząd Pracy
w Opolu



INSTITUTION OF THE MAŁOPOLSKA REGION
Regional Labour Office
in Krakow



Ministerstwo Rodziny,
Pracy i Polityki Społecznej

Regional/Province coordinator

National coordinator

The person ordering the study

Occupational Barometer 2020

podkarpackie region

www.barometrzwodow.pl

SHORTAGE	BALANCE	SURPLUS	
<ul style="list-style-type: none"> Bakers Bricklayers and plasterers Bus drivers Chefs Concrete placers, concrete finishers and related workers Construction engineers Construction installation assemblers Construction joiners and carpenters Construction managers Construction workers Cooks 	<ul style="list-style-type: none"> Accounting and bookkeeping clerks 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 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 Clearing and forwarding agents Confectioners 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 Electronics technology, automation and robotics specialists Environmental engineering engineers Events, cultural activities and animation organizers Farming and forestry advisers Finance professionals Florists Economists Educational counsellors Farmers and animal producers 	<ul style="list-style-type: none"> Earthmoving plant operators and mechanics Electrical mechanics and electrical assemblers Finishing work technologists in building trades Hairdressers Handicraft workers in wood and joiners Independent accountants Medical doctors Metal working machine tool setters and operators Motor vehicle mechanics and repairers Nurses and midwives Pavers Food processing workers Foreign language teachers Forest workers Funeral service workers Gardeners i orchardists Glaziers and window fitters Graphic and multimedia designers Household helps Human resources and recruitment professionals Insurance agents Internet salespersons 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 engineering technicians Mechanical engineers Medical imaging and therapeutic equipment technicians Metal processing workers Meteorologists, geologists, geographers Ohs specialists Opticians and prosthetics workers Other education specialists Painters and varnishers 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 glaziers Food and nutrition technology professionals Political scientists, historians, philosophers Public administration professionals 	<ul style="list-style-type: none"> Physiotherapy technicians and assistants Roofers and sheet metal workers in building trades Special school teachers Teachers for practical vocational training Teachers of vocational subjects Tinsmiths and laquerers Toolmakers Truck drivers Welders PR, advertising, marketing and sales specialists Pre-school teachers Primary education teachers Printing trades workers Product and garment designers and cad operators Production managers Production organisation professionals Psychologists and psychotherapists Quality specialists Real estate professionals Receptionists Road construction workers Rubber and plastic machine operators Sales managers Salespeople and pos operators Secretaries and assistants Service managers Shoemakers Social institutions and culture managers Social work professionals caring for the elderly and disabled Social workers Speech therapists and audiophonologists Sport and recreation instructors Stock clerks Stonemasons Structural metal workers Surveyors and cartographers Tailors and clothing manufacturers Teachers of general subjects Telecommunications specialists Trade representatives Translators , interpreters and other linguists Uniformed services workers Upholsterers Veterinarians Visual artists and interior designers Waiters and bartenders Webmasters Sociologists and social/economic surveys professionals Travel consultants and clerks

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Occupational Barometer 2020

podlaskie region

www.barometrzwodow.pl

SHORTAGE

Bricklayers and plasterers
Bus drivers
Chefs
Childminders
Construction installation assemblers
Construction joiners and carpenters
Construction workers
Cooks
Earthmoving plant operators and mechanics

Electricians, electromechanics and electrical assembles
Finishing work technologists in building trades
Medical doctors
Motor vehicle mechanics and repairers
Nurses and midwives
Pavers
Roofers and sheet metal workers in building trades
Social work professionals caring for the elderly and disabled

Special school teachers
Stock clerks
Teachers for practical vocational training
Toolmakers
Truck drivers
Uniformed services workers
Welders

BALANCE

Accounting and bookkeeping clerks
Acoustics and sound engineers
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
Assistants in education
Automotive diagnosis technicians
Bakers
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
Cleaners and room service
Clearing and forwarding agents
Concrete placers, concrete finishers and related workers
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
Educational counsellors
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 advisers
Finance professionals
Florists
Food and nutrition technology professionals

Food processing workers
Foreign language teachers
Forest workers
Funeral service workers
Gardeners i orchardists
Glaziers and window fitters
Graphic and multimedia designers
Hairdressers
Handicraft workers in leather and related materials
Handicraft workers in wood and joiners
Household helps
Human resources and recruitment professionals
Independent accountants
Industrial ceramists
Insurance agents
Internet salespersons
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 engineering technicians
Mechanical engineers
Medical imaging and therapeutic equipment technicians
Metal processing workers
Metal working machine tool setters and operators
Meteorologists, geologists, geographers
Miners and mining plant and machine operators
OHS specialists
Opticians and prosthetics workers
Other education specialists
Painters and varnishers
Paper manufacturing and processing machine operators
Paramedical practitioners
Passenger car drivers
Pharmacists
Photographers
Physical protection services workers
Physiotherapy technicians and assistants
Plant and machine operators and assemblers
Political scientists, historians, philosophers
Postal clerks

Postmen and package deliverers
Potters and glaziers
PR, advertising, marketing and sales specialists
Pre-school teachers
Primary education teachers
Printing trades workers
Product and garment designers and CAD operators
Production managers
Production organisation professionals
Psychologists and psychotherapists
Public administration professionals
Quality specialists
Railway traffic operators
Real estate professionals
Receptionists
Road construction workers
Rubber and plastic machine operators
Sales managers
Salespeople and pos operators
Secretaries and assistants
Service managers
Shoemakers
Social institutions and culture managers
Social workers
Sociologists and social/economic surveys professionals
Speech therapists and audiophonologists
Sport and recreation instructors
Stonemasons
Structural metal workers
Surveyors and cartographers
Tailors and clothing manufacturers
Teachers of general subjects
Teachers of vocational subjects
Telecommunications specialists
Textile machine operators
Tinsmiths and laquerers
Trade representatives
Train driver
Translators , interpreters and other linguists
Travel consultants and clerks
Upholsterers
Veterinarians
Vindicators
Visual artists and interior designers
Waiters and bartenders
Webmasters

SURPLUS

Economists

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Wojewódzki Urząd Pracy
w Białymstoku



INSTITUTION OF THE MAŁOPOLSKA REGION
Regional Labour Office
in Krakow



Ministerstwo Rodziny,
Pracy i Polityki Społecznej

Regional/Province coordinator

National coordinator

The person ordering the study

Occupational Barometer 2020

pomorskie region

www.barometrzaszawodow.pl

SHORTAGE

Accounting and bookkeeping clerks
Bakers
Beauticians
Bricklayers and plasterers
Bus drivers
Butchers and fishmongers
Chefs
Cleaners and room service
Clearing and forwarding agents
Concrete placers, concrete finishers and related workers
Construction installation assemblers
Construction joiners and carpenters
Construction workers
Cooks
Earthmoving plant operators and mechanics
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 and varnishers
Paramedical practitioners
Pavers
Physical protection services workers
Physiotherapy technicians and assistants
Plant and machine operators and assemblers
Pre-school teachers
Psychologists and psychotherapists
Receptionists

Roofers and sheet metal workers in building trades
Salespeople and pos operators
Social work professionals caring for the elderly and disabled
Social workers
Special school teachers
Stock clerks
Tailors and clothing manufacturers
Teachers for practical vocational training
Teachers of general subjects
Teachers of vocational subjects
Tinsmiths and laquers
Toolmakers
Truck drivers
Uniformed services workers
Waiters and bartenders
Welders

BALANCE

Acoustics and sound engineers
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
Assistants in education
Automotive diagnosis technicians
Biologists, biotechnologists, biochemists
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
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
Educational counsellors
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 advisers

Finance professionals
Fishermen
Florists
Food and nutrition technology professionals
Food processing workers
Forest workers
Funeral service workers
Gardeners i orchardists
Glaziers and window fitters
Graphic and multimedia designers
Handicraft workers in leather and related materials
Household helps
Human resources and recruitment professionals
Industrial ceramists
Insurance agents
Internet salespersons
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
Medical imaging and therapeutic equipment technicians
Metal processing workers
Meteorologists, geologists, geographers
OHS specialists
Opticians and prosthetics workers
Other education specialists
Paper manufacturing and processing machine operators
Passenger car drivers
Pharmacists
Photographers
Political scientists, historians, philosophers
Postal clerks

Postmen and package deliverers
Potters and glaziers
PR, advertising, marketing and sales specialists
Primary education teachers
Printing trades workers
Product and garment designers and CAD operators
Production managers
Production organisation professionals
Public administration professionals
Quality specialists
Railway traffic operators
Real estate professionals
Road construction workers
Rubber and plastic machine operators
Sales managers
Secretaries and assistants
Service managers
Shipdeck crew, ship and port operators
Shoemakers
Social institutions and culture managers
Sociologists and social/economic surveys professionals
Speech therapists and audiophonologists
Sport and recreation instructors
Stonemasons
Structural metal workers
Surveyors and cartographers
Telecommunications specialists
Textile machine operators
Trade representatives
Train driver
Translators , interpreters and other linguists
Travel consultants and clerks
Upholsterers
Veterinarians
Vindicators
Visual artists and interior designers
Webmasters

SURPLUS

Economists

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Regional/Province coordinator



National coordinator



Ministerstwo Rodziny,
Pracy i Polityki Społecznej

The person ordering the study

Occupational Barometer 2020

śląskie region

www.barometrzaslowodow.pl

SHORTAGE

Bakers
 Beauticians
 Bricklayers and plasterers
 Bus drivers
 Butchers and fishmongers
 Concrete placers, concrete finishers and related workers
 Confectioners
 Construction installation assemblers
 Construction joiners and carpenters
 Construction workers
 Cooks
 Earthmoving plant operators and mechanics
 Electrical mechanics and electrical assemblers
 Finishing work technologists in building trades

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
 Paramedical practitioners
 Pavers
 Physiotherapy technicians and assistants
 Road construction workers
 Roofers and sheet metal workers in building trades

Salespeople and pos operators
 Social work professionals caring for the elderly and disabled
 Special school teachers
 Stock clerks
 Tailors and clothing manufacturers
 Teachers for practical vocational training
 Teachers of vocational subjects
 Tinsmiths and laquerers
 Toolmakers
 Truck drivers
 Uniformed services workers
 Waiters and bartenders
 Welders

BALANCE

Accounting and bookkeeping clerks
 Acoustics and sound engineers
 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
 Assistants in education
 Automotive diagnosis technicians
 Biologists, biotechnologists, biochemists
 Car wash, laundry and ironing workers
 Caretakers, doorkeepers, janitors and custodians
 Cement and stone machine operators
 Chefs
 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 designers and administrators, programmers
 Dental technicians
 Dentists
 Driving instructors
 Economists
 Educational counsellors
 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

Finance and accounting staff with knowledge of foreign languages
 Finance professionals
 Florists
 Food and nutrition technology professionals
 Food processing workers
 Foreign language teachers
 Forest workers
 Funeral service workers
 Gardeners i orchardists
 Glaziers and window fitters
 Graphic and multimedia designers
 Handicraft workers in leather and related materials
 Household helps
 Human resources and recruitment professionals
 Insurance agents
 Internet salespersons
 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
 Medical imaging and therapeutic equipment technicians
 Metal processing workers
 Meteorologists, geologists, geographers
 Miners and mining plant and machine operators
 Ohs specialists
 Opticians and prosthetics workers
 Other education specialists
 Painters and varnishers
 Paper manufacturing and processing machine operators
 Passenger car drivers
 Pharmacists
 Photographers
 Physical protection services workers
 Plant and machine operators and assemblers
 Political scientists, historians, philosophers

Postal clerks
 Postmen and package deliverers
 Potters and glaziers
 PR, advertising, marketing and sales specialists
 Pre-school teachers
 Primary education teachers
 Printing trades workers
 Product and garment designers and cad operators
 Production managers
 Production organisation professionals
 Psychologists and psychotherapists
 Public administration professionals
 Quality specialists
 Railway traffic operators
 Real estate professionals
 Receptionists
 Rubber and plastic machine operators
 Sales managers
 Secretaries and assistants
 Service managers
 Shoemakers
 Social institutions and culture managers
 Social workers
 Sociologists and social/economic surveys professionals
 Speech therapists and audiophonologists
 Sport and recreation instructors
 Stonemasons
 Structural metal workers
 Surveyors and cartographers
 Teachers of general subjects
 Telecommunications specialists
 Trade representatives
 Train driver
 Translators, interpreters and other linguists
 Travel consultants and clerks
 Upholsterers
 Veterinarians
 Vindicators
 Visual artists and interior designers
 Webmasters

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Regional/Province coordinator



National coordinator



The person ordering the study

Occupational Barometer 2020

świętokrzyskie region

www.barometrzaswobodow.pl

SHORTAGE	BALANCE	SURPLUS
Bakers Bricklayers and plasterers Bus drivers Butchers and fishmongers Concrete placers, concrete finishers and related workers Construction installation assemblers Construction joiners and carpenters Construction workers Cooks Earthmoving plant operators and mechanics	Accounting and bookkeeping clerks Acoustics and sound engineers Agricultural and gardening machines operators 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 Car wash, laundry and ironing workers Caretakers, doorkeepers, janitors and custodians Cement and stone machine operators Chefs Chemical engineers and chemists Chemical products plant and machine operators Childminders Cleaners and room service Clearing and forwarding agents 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 Electronics technology, automation and robotics specialists Environmental engineering engineers Events, cultural activities and animation organizers Farmers and animal producers Farming and forestry advisers Finance professionals Florists	Electrical mechanics and electrical assemblers Finishing work technologists in building trades Hairdressers Handicraft workers in wood and joiners Independent accountants Medical doctors Metal working machine tool setters and operators Motor vehicle mechanics and repairers Nurses and midwives Pavers Food processing workers Foreign language teachers Forest workers Funeral service workers Gardeners i orchardists Glaziers and window fitters Graphic and multimedia designers Household helps Human resources and recruitment professionals Industrial ceramists Insurance agents Internet salespersons 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 engineering technicians Mechanical engineers Medical imaging and therapeutic equipment technicians Metal processing workers Meteorologists, geologists, geographers Miners and mining plant and machine operators Ohs specialists Opticians and prosthetics workers Other education specialists Painters and varnishers Paper manufacturing and processing machine operators Paramedical practitioners Passenger car drivers Pharmacists Photographers Physical protection services workers Physiotherapy technicians and assistants Plant and machine operators and assemblers Postal clerks Postmen and package deliverers Potters and glaziers
Roofers and sheet metal workers in building trades Social work professionals caring for the elderly and disabled Stock clerks Tailors and clothing manufacturers Tinsmiths and laquerers Toolmakers Truck drivers Welders	PR, advertising, marketing and sales specialists Pre-school teachers Primary education teachers Printing trades workers Product and garment designers and cad operators Production managers Production organisation professionals Psychologists and psychotherapists Quality specialists Railway traffic operators Real estate professionals Receptionists Road construction workers Rubber and plastic machine operators Sales managers Salespeople and pos operators 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 Structural metal workers Surveyors and cartographers Teachers for practical vocational training Teachers of general subjects Teachers of vocational subjects Telecommunications specialists Trade representatives Translators , interpreters and other linguists Uniformed services workers Upholsterers Veterinarians Visual artists and interior designers Waiters and bartenders Webmasters	Administration and office clerks Economists Educational counsellors Food and nutrition technology professionals Political scientists, historians, philosophers Public administration professionals Travel consultants and clerks

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Wojewódzki
Urząd Pracy
w Kielcach

Regional/Province coordinator



INSTITUTION OF THE MAŁOPOLSKA REGION
Regional Labour Office
in Krakow

National coordinator



Ministerstwo Rodziny,
Pracy i Polityki Społecznej

The person ordering the study

Occupational Barometer 2020

warmińsko-mazurskie region

www.barometrzwodow.pl

SHORTAGE	BALANCE	SURPLUS
<ul style="list-style-type: none"> Bakers Bricklayers and plasterers Bus drivers Concrete placers, concrete finishers and related workers Construction installation assemblers Construction joiners and carpenters Construction workers Cooks Earthmoving plant operators and mechanics Electrical mechanics and electrical assemblers 	<ul style="list-style-type: none"> Accounting and bookkeeping clerks Acoustics and sound engineers 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 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 Chefs Chemical engineers and chemists Chemical products plant and machine operators Childminders Cleaners and room service Clearing and forwarding agents 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 Educational counsellors 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 advisers Finance professionals Economists 	<ul style="list-style-type: none"> Finishing work technologists in building trades Hairdressers Handicraft workers in wood and joiners Independent accountants Medical doctors Metal working machine tool setters and operators Motor vehicle mechanics and repairers Nurses and midwives Pavers Physiotherapy technicians and assistants Fishermen Florists Food and nutrition technology professionals Food processing workers Foreign language teachers Forest workers Funeral service workers Gardeners i orchardists Glaziers and window fitters Graphic and multimedia designers Handicraft workers in leather and related materials Household helps Human resources and recruitment professionals Industrial ceramists Insurance agents Internet salespersons 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 engineering technicians Mechanical engineers Medical imaging and therapeutic equipment technicians Metal processing workers OHs specialists Opticians and prosthetics workers Other education specialists Painters and varnishers Paper manufacturing and processing machine operators Paramedical practitioners Passenger car drivers Pharmacists Photographers Physical protection services workers Plant and machine operators and assemblers Political scientists, historians, philosophers Postal clerks Postmen and package deliverers Potters and glaziers Psychologists and psychotherapists Roofers and sheet metal workers in building trades Social work professionals caring for the elderly and disabled Stock clerks Tailors and clothing manufacturers Toolmakers Truck drivers Welders PR, advertising, marketing and sales specialists Pre-school teachers Primary education teachers Printing trades workers Product and garment designers and CAD operators Production managers Production organisation professionals Public administration professionals Quality specialists Railway traffic operators Real estate professionals Receptionists Road construction workers Rubber and plastic machine operators Sales managers Salespeople and POS operators 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 Structural metal workers Surveyors and cartographers Teachers for practical vocational training Teachers of general subjects Teachers of vocational subjects Telecommunications specialists Textile machine operators Tinsmiths and laquerers Trade representatives Translators, interpreters and other linguists Travel consultants and clerks Uniformed services workers Upholsterers Veterinarians Vindicators Visual artists and interior designers Waiters and bartenders Webmasters

The "Occupational Barometer" is a forecast for the demand for employees in 2020. The study was conducted by experts at the turn of the third and fourth quarters of 2019. The situation in some professions may change depending on market conditions. The result for the region include professions assessed in at least half of the counties.



Regional/Province
coordinator



National coordinator



Ministerstwo Rodziny,
Pracy i Polityki Społecznej

The person ordering the study

Occupational Barometer 2020

wielkopolskie region

www.barometrzaszawodow.pl

SHORTAGE

Accounting and bookkeeping clerks	Finance and accounting staff with knowledge of foreign languages	Salespeople and pos operators
Bakers	Finishing work technologists in building trades	Social work professionals caring for the elderly and disabled
Beauticians	Foreign language teachers	Stock clerks
Bricklayers and plasterers	Hairdressers	Structural metal workers
Bus drivers	Handicraft workers in wood and joiners	Tailors and clothing manufacturers
Butchers and fishmongers	Independent accountants	Teachers for practical vocational training
Clearing and forwarding agents	Kitchen helpers	Teachers of vocational subjects
Construction installation assemblers	Machinery mechanics and repairers	Tinsmiths and laquerers
Construction joiners and carpenters	Manual workers in production and simple works	Toolmakers
Construction workers	Medical doctors	Truck drivers
Cooks	Metal working machine tool setters and operators	Uniformed services workers
Database designers and administrators, programmers	Motor vehicle mechanics and repairers	Upholsterers
Earthmoving plant operators and mechanics	Nurses and midwives	Waiters and bartenders
Electrical mechanics and electrical assemblers	Paramedical practitioners	Welders
Electronics technology, automation and robotics specialists	Pavers	
	Roofers and sheet metal workers in building trades	

BALANCE

Administration and office clerks	Finance professionals	Postmen and package deliverers
Agricultural and gardening machines operators	Florists	Potters and glaziers
Analysts, testers and ict system operators	Food and nutrition technology professionals	PR, advertising, marketing and sales specialists
Animal services workers	Food processing workers	Pre-school teachers
Architects and urban planners	Forest workers	Primary education teachers
Archivists and curators	Funeral service workers	Printing trades workers
Assistants in education	Gardeners i orchardists	Product and garment designers and cad operators
Automotive diagnosis technicians	Glaziers and window fitters	Production managers
Biologists, biotechnologists, biochemists	Graphic and multimedia designers	Production organisation professionals
Car wash, laundry and ironing workers	Household helps	Psychologists and psychotherapists
Caretakers, doorkeepers, janitors and custodians	Human resources and recruitment professionals	Public administration professionals
Cement and stone machine operators	Insurance agents	Quality specialists
Chefs	Internet salespersons	Real estate professionals
Chemical engineers and chemists	It technicians	Receptionists
Childminders	Journalists and editors	Road construction workers
Cleaners and room service	Landscape architects	Rubber and plastic machine operators
Concrete placers, concrete finishers and related workers	Lawyers	Sales managers
Confectioners	Librarians and related information professionals	Secretaries and assistants
Construction engineers	Logistics managers	Service managers
Construction managers	Management and business service managers	Social institutions and culture managers
Construction supervision inspectors	Mechanical engineering technicians	Social workers
Construction technicians	Mechanical engineers	Sociologists and social/economic surveys professionals
Contact centre agents, survey and market research interviewers	Medical imaging and therapeutic equipment technicians	Special school teachers
Crane, hoist and related plant operators	Metal processing workers	Speech therapists and audiophonologists
Dental technicians	Ohs specialists	Sport and recreation instructors
Dentists	Opticians and prosthetics workers	Stonemasons
Driving instructors	Other education specialists	Surveyors and cartographers
Economists	Painters and varnishers	Teachers of general subjects
Educational counsellors	Paper manufacturing and processing machine operators	Telecommunications specialists
Educators in educational and care institutions	Passenger car drivers	Trade representatives
Electrical and energetic engineers	Pharmacists	Translators , interpreters and other linguists
Electronic assemblers	Photographers	Travel consultants and clerks
Environmental engineering engineers	Physical protection services workers	Veterinarians
Events, cultural activities and animation organizers	Physiotherapy technicians and assistants	Vindicators
Farmers and animal producers	Plant and machine operators and assemblers	Visual artists and interior designers
Farming and forestry advisers	Political scientists, historians, philosophers	Webmasters
	Postal clerks	

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Regional/Province
coordinator



National coordinator



Ministerstwo Rodziny,
Pracy i Polityki Społecznej

The person ordering the study

Occupational Barometer 2020

zachodniopomorskie region

www.barometrzasowodow.pl

SHORTAGE	BALANCE	SURPLUS
Accounting and bookkeeping clerks Bakers Bricklayers and plasterers Bus drivers Concrete placers, concrete finishers and related workers Construction installation assemblers Construction joiners and carpenters Construction workers Cooks Earthmoving plant operators and mechanics Electrical mechanics and electrical assemblers Finance and accounting staff with knowledge of foreign languages Finishing work technologists in building trades	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 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 Chefs Chemical engineers and chemists Chemical products plant and machine operators Childminders Cleaners and room service Clearing and forwarding agents 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 Educational counsellors 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 Economists	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 Paramedical practitioners Pavers Physiotherapy technicians and assistants Pre-school teachers Farming and forestry advisers Finance professionals Fishermen Florists Food processing workers Forest workers Funeral service workers Gardeners i orchardists Glaziers and window fitters Graphic and multimedia designers Handicraft workers in leather and related materials Household helps Human resources and recruitment professionals Insurance agents Internet salespersons 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 Medical imaging and therapeutic equipment technicians Metal processing workers Miners and mining plant and machine operators OHS specialists Opticians and prosthetics workers Other education specialists Painters and varnishers Paper manufacturing and processing machine operators Passenger car drivers Pharmacists Photographers Physical protection services workers Plant and machine operators and assemblers Political scientists, historians, philosophers Postal clerks Postmen and package deliverers Food and nutrition technology professionals Psychologists and psychotherapists Roofers and sheet metal workers in building trades Social work professionals caring for the elderly and disabled Social workers Stock clerks Tailors and clothing manufacturers Teachers for practical vocational training Tinsmiths and laquerers Toolmakers Truck drivers Uniformed services workers Welders Potters and glaziers PR, advertising, marketing and sales specialists Primary education teachers Printing trades workers Product and garment designers and cad operators Production managers Production organisation professionals Public administration professionals Quality specialists Railway traffic operators Real estate professionals Receptionists Road construction workers Rubber and plastic machine operators Sales managers Salespeople and POS operators Secretaries and assistants Service managers Shipdeck crew, ship and port operators Shoemakers Social institutions and culture managers Sociologists and social/economic surveys professionals Special school teachers Speech therapists and audiophonologists Sport and recreation instructors Stonemasons Structural metal workers Surveyors and cartographers Teachers of general subjects Teachers of vocational subjects Telecommunications specialists Trade representatives Train driver Translators, interpreters and other linguists Travel consultants and clerks Upholsterers Veterinarians Vindicators Visual artists and interior designers Waiters and bartenders Webmasters

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Regional/Province coordinator



National coordinator



The person ordering the study

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 Krakow**.

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:

- Shortage 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 Krakow**, within the framework of project "**Labour Market and Education Observatory of Malopolska**".

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



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

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