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Human Capital Study

UNIVERSITAS JAGELLONICA CRACOVIENSIS

Professional and educational activity of adult Poles in the face of challenges of the modern economy

Summary report of the sixth edition of the Human Capital Study for 2017–2018

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Human Capital Study – Professional and educational activity of adult Poles in the face of challenges of the modern economy – Summary report of the 6th edition of the Human Capital Study for 2017–2018

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ISBN: 978-83-7633-433-2

Project co-financed under the European Social Fund

Warsaw 2019

Fundusze Europejskie Wiedza Edukacja Rozwój
Rzeczpospolita Polska
PARP Grupa PFR
Unia Europejska Europejski Fundusz Społeczny

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Dear Reader,

We are pleased to present the results of the sixth edition of the cross-sectional Human Capital Study (BKL Study) – one of the largest European research projects in the area of skills, employment and the labour market. We are returning to you with study results after more than 4 years to present an evaluation of the situation on the Polish labour market relying on data obtained in surveys conducted among employers, general population and training institutions.

Since 2010, while conducting cyclical BKL Studies, we have been following the trends and challenges facing the Polish economy, with particular emphasis on the quality of human capital. We have also adapted out tools to meet the objectives set for the study – hence several novelties in the 6th edition of the study. These include extending the scope of the study to include panel studies, which allow us to observe the dynamics of selected phenomena at the level of individual respondent groups and enable a better understanding of the correlations between skills development and the labour market.

In population studies, we have extended the spectrum of monitored areas. These new issues include: the situation at the workplace, attitudes towards work, relations with superiors and expectations regarding the retirement age, values that are important in life as a background for attitudes towards work, the assessment of changes in one's own situation on the labour market. The module on educational activity of adults has been reviewed thoroughly. The studies of employers and of the training and development sector are extended to feature the module for management and organisational culture in companies, which enabled gathering some observations concerning the impact of management practices on the innovativeness of companies.

We hope that the conclusions and recommendations presented in the report will constitute a valuable source of inspiration when designing interventions in the area of human capital and devising HR development strategies in companies.

I highly encourage You to read the Report.

Małgorzata Oleszczuk
President
Polish Agency for Enterprise Development

Foreword

Jarosław Górniak

The current report on surveys conducted as part of the BKL Study is based on data from the period of a very good economic situation in Poland and other related national economies, which is reflected in a record-low unemployment rate and growing employment and professional activity rates. In May 2019, the Ministry of Family, Labour and Social Policy estimated the registered unemployment rate at 5.4%, which is 0.7 pp lower than in May 2018 and 0.3 pp lower than in the best months of last year (IX–XI). This also means the unemployment rate in May was the lowest since 1991. What is also important is the fact that the strongest relative decrease in unemployment was recorded in the Warmińsko-Mazurskie Voivodship, where the unemployment rate is the highest in the country (9.2%)[1]. According to Eurostat studies based on a survey of economic activity of the population, the unemployment rate in Poland in April was 3.7% compared to 6.4% in the whole European Union. In light of such a low unemployment rate in the country, in many centres where economic activity is concentrated, we can practically speak of zero unemployment (a certain level of frictional unemployment is related to the processes of switching jobs or professional activation).

In Poland there is still a certain reserve of potential labour resources among economically inactive people. According to Eurostat, the employment rate in Poland was at 72.2% in 2018, compared to a record 82.6% in Sweden and the EU average at 73.2%. However, the factors shaping the level of professional activity typical for a country (people employed + unemployed) are complex and constitute a combination of institutional and cultural factors and factors that are a consequence of the country's regulatory and allocation policies, therefore additional mobilisation of these human resources is difficult.

Although there are signs of weakening dynamics of economic growth and, as a consequence, weakening dynamics of job creation, with employment decreasing in April and May 2019 by 13,000 people, this has not yet been reflected in the general conditions on the labour

[1] Ministry of Family, Labour and Social Policy, https://www.gov.pl/web/rodzina/rekordowo-niskie-bezrobocie-w-maju, accessed on 22.06.2019.

market[2]. This labour market reality is accompanied by an increase in the average level of salaries in companies covered by studies carried out by Statistics Poland (GUS), which is indicative of a pressure of demand for employees. The 2018 Human Capital Study shows an increase in the percentage of companies looking for employees, especially compared to 2013. This increase is even more pronounced for smaller companies. The increase in demand concerns especially blue collar workers, while the percentage of companies, especially large ones, looking for specialists has decreased. Therefore, it is too early to judge whether this is a permanent trend.

Indicators of the situation on the labour market show that we are dealing with what is known as the employee's market. Average values obviously hide a diversity of local realities. We also read press reports about employees who leave after the trial period or during it and ruthlessly look for better employment conditions – an example here is the tourism sector, described in detail in the report summarising the sectoral Human Capital Study in the tourism sector drawn up as part of the BKL project. The share of the unemployed among young people entering the labour market is also falling, although traditionally it is higher compared to other categories.

The answer to the question of whether we are dealing with the employee's market seems to be yes. However, it would be much more interesting to ask whether this situation will persist. What argues in favour of labour shortages continuing in the long term? The economic reality is volatile, although currently we are witnessing a situation where the high growth rate extends beyond the horizon of quite recent forecasts. Demographic trends favour employees in the long term. In 2030, Poland's population aged 25–64 will be smaller than today by about 2 million, and in the whole European Union by about 27 million. Filling these shortages by socially accepted immigration will not be easy, and, in addition, other economies with higher wage levels will compete for attractive migrants.

On the other hand, the labour market will undergo some major structural changes, which are already apparent and will, to a varying degree, affect individual employee segments in the future. The global economy is increasingly undergoing developments caused by the spread of technologies based on artificial intelligence and the robotisation of routine

[2] Biuro Inwestycji i Cykli Ekonomicznych, http://biec.org/ceny-rosna-miejsc-pracy-przybywa/, accessed on 22.06.2019.

intellectual activities. This involves the further development of labour-saving, automated and robotised production technologies. Machines are replacing not only people's muscles and operational efficiency, but also, to an increasing extent, their intellectual activities. Of course, this process is related to investments and organisational changes, but it is already underway and has noticeable consequences for the labour market. The main result is the evolving profile of employees sought after by employers. At the macro level, when analysing aggregated information, this phrase is still masked by the demand for operational employees in the industry, construction or services sectors, under peak economic conditions. However, it comes into play already when we analyse the best performing sectors in terms of technological changes.

An example of such changes is the financial sector, which within the framework of the BKL project was examined by the team of the Center for Evaluation and Analysis of Public Policies of the Jagiellonian University in cooperation with the Sectoral Council for Competencies in the Financial Sector[3]. The studies carried out indicate that in the 3–5-year perspective, we should be expecting a decrease in demand for employees, especially in the following positions: sales workers/advisors/retail customer specialists (and at the same time reshaping the activity of advisors in corporate banking) – the most pronounced decrease; treasury specialists, bank dealers, credit risk analysts, bank operations analysts, HR business partners, debt collection specialists, marketing specialists or quality specialists.

Due to the consolidation and flattening of organisational structures, the demand for managers will also decrease. The nature of work will change within the existing positions due to the progressive robotisation of routine activities. Increased demand in the financial sector concerns positions related to cybersecurity, IT, big data, digitisation and analysis of internet services, product design and user experience, risk management and compliance enforcement. The shift is towards professions that require IT, analytical and numeracy skills and, on the other hand, creativity, problem-solving skills, interdisciplinarity, continuous learning skills, interpersonal skills (e.g. related to sales and consulting). Employers in this and

[3] The results of these analyses are included in the report: „Branżowy Bilans Kapitału Ludzkiego – Sektor Finansowy" ("Sectoral Human Capital Study – Financial Sector"), Center for Evaluation and Analysis of Public Policies of the Jagiellonian University, Kraków 2018, https://www.parp.gov.pl/storage/publications/pdf/branowy%20bilans%20kapitau%20ludzkiego%20w%20sektorze%20finansowym.pdf

other sectors are also emphasising the expectation of honesty, responsibility and integrity, which is unrelated to technological change.

The financial sector is just one example. There is much talk about changing the skills profile of job positions. In the rapidly developing business services sector in Poland, where both companies providing business process management services as well as, above all, business process management centres of many international corporations (which is discussed later in the Foreword), the fast-changing automation processes and the growing importance of talent acquisition and management in companies are pointed out. Competition for talents is one of the key challenges companies face. The importance of "soft" skills, which include skills topping the lists published in the reports on the Human Capital Study (see Chapter V) is emphasised. The increased importance of general, transferable skills, including the skills and motivation related to quick learning, also comes as the consequence of uncertainty about how the future will shape. Those employees whose skills cannot be easily replaced by a machine or computer algorithm will undoubtedly gain advantage on the labour market. Of key importance will be the ability to acquire new skills quickly, to adapt flexibly (the term "agile" is becoming popular) and to cooperate well with others in the process of solving problems and implementing these solutions.

There are fewer and fewer new human resources available on the labour market. The companies have and will have difficulties in finding people with the right skills. Even if the situation on the labour market turns out to be unfavourable for employees, as shown in the BKL studies carried out in 2010–2014, no solution to recruitment problems should be expected. In a situation of significantly higher unemployment level than at present, especially among young people, 3 out of 4 employers indicated anyway that they had difficulties in finding the right employees. Skills are developed during formal education, but this largely takes place in the course of one's career. That is why professional experience is so valued. However, experience alone is not enough. Faced with the pressure of change, it is necessary to develop the skills of the people already employed. It is necessary to motivate them and create opportunities. This is a difficult challenge, because – as Piotr Prokopowicz shows in his chapter – human resource management tools in most companies are rather based on basic measures and it is difficult to talk about planning and developing career paths on a wide scale. Also, additional training as an element of motivation is a solution about a quarter of medium-sized and large companies apply. An additional problem is – as pointed out in the chapter by Barbara Worek, Anna Strzebońska and Anna Szczucka – the problem of the

educational “Matthew principle”, which states that those who are already better educated most often undergo further training, while employees working in lower positions, which may be threatened by automation, participate in educational activities much less frequently.

In the coming 5 years and more, we may face an increasingly clear dual structure of the labour market: on the one hand, employers will be in search for talents and employees who are able to adapt to new technological challenges and their consequences, and – on the other – the number of employees who may have difficulties in finding a job will increase. In Poland, the period of structural unemployment related to the process of economic transformation is over now, so we know how difficult it is to deal with it using the instruments available to the labour market policy. This problem may return as a result of technological changes and accompanying developments in labour relations. This time it will be accompanied by a structural deficit of human resources with the desired skills. The activities prior to this scenario will have a significant impact on the competitiveness of the economy.

This duality is well illustrated by the phenomena taking place in the already mentioned business process management sector. The study by McKinsey & Company entitled “Realigning global support-function footprints in a digital world” shows that the current strategy of building Global Business Services (GBS) centres mainly in emerging markets, which provide a supply of fresh, educated and relatively inexpensive staff, is beginning to be inadequate for the digital transformation that is taking place. The report stresses that there is an escalating competition for talent. “Digital technologies such as automation and advanced analytics are changing the nature of the talent required by GBS centres. In a recent survey of executives, nearly 60 percent said it was harder to source talent for data-and-analytics roles than for other positions. Several of the today’s most popular GBS centre locations are already facing a talent crunch (Chheda, Daub, Mathur, & Silver, 2018, p. 2)”. The authors of the McKinsey study estimate that automation and digitisation will affect approximately 1.5 million jobs in the GBS sector in the coming years. The answer to these challenges is to focus on locations that abound with digital talent. This approach promotes high-cost locations such as: Berlin, Madrid, London, New York, Boston, Seattle, Tel Aviv, Singapore, Sidney, Tokyo or Bangalore. The most popular low-cost locations so far, such as Kraków, face the competition of these emerging centres relying on large talent pools, despite their high labour costs. To cope with this competition, one must break through the barrier of talent exhaustion. This means a huge challenge for secondary and tertiary-level education and

the education of those already employed. There is no doubt that this competition will be difficult. The managers of GBS centres located in Kraków are aware of this and are looking for opportunities to work with schools and universities to jointly work out a solution to this challenge[4]. This is proving to be a very difficult task due to barriers on the side of educational institutions.

Awareness of the emergence of such new challenges is already becoming popular knowledge, although it does not, unfortunately, translate into an approach to teaching in schools and at universities, where the traditional feeding model dominates and the consequences of mass education of the baby boom generation are still difficult to overcome. The social activity of young people, which is excellent training in the area of the above skills, is also weak. The education reform taking into account the demand for 21st century skills is still a task ahead of us. This applies to both education at lower levels and higher education. The reform of the latter has not yet brought about solutions linking the financing of universities with the quality of education, as it is very difficult to find good measures of the effects that could be included in the subsidy distribution algorithm. Therefore, this problem still requires a solution to be devised. There is also poor cooperation with employers in the area of building educational programmes and their implementation, especially in the sector of public universities. Some good vocational schools are a proud exception, which have developed dual study programmes and work closely with employers in the area of education, and especially its practical aspects.

Poland is not a unique country when it comes to skills mismatches. This is a global phenomenon. To some extent, a skills mismatch always exists in the realities of a modern economy. It is a consequence of the dynamics job shedding and new jobs creation, introduction of innovations and divergences in the time needed to build up skills and the time of changes taking place regarding the demand for these skills. These issues are discussed in more detail by Marcin Kocór in his monograph (Kocór, 2019). In Chapter IV of this report, he presents data for Poland concerning the level of mismatch in terms of skills (excluding specialist skills related to specific jobs). The increase in skills mismatch becomes more pronounced when technological changes and the resulting developments in work

[4] An example of an initiative of GBS companies in Kraków is the creation of a specialisation “The future of global business services” at the University of Economics in Kraków, https://gap.uek.krakow.pl/kandydaci/gospodarka-i-administracja-publiczna/the-future-of-global-business-services/

organisation accelerate. The problem is not so much the emergence of mismatches at a given moment, but the inability to respond to them on the part of the available human resources at a time acceptable to the companies. This ability to adapt is one of key factors related to competitiveness. The ability to adapt is backed, on the one hand, by the quality of how educational institutions perform, both those providing formal and non-formal education, and – on the other – the willingness of employees to take up education and adjust their skills. Barbara Worek, Anna Strzebońska and Anna Szczucka write in their chapter about adults' involvement in education processes, especially non-formal and informal education. Adult Poles further their education mainly to improve their professional situation. The correction of the measurement of this phenomenon in the current BKL Study has enabled a more optimistic picture of the Polish population in education, but there is still plenty of room for improvement. Poland is developing rapidly, largely due to the availability of human resources with relatively high level of skills in relation to labour costs. In light of technological changes taking place, it is possible that this growth factor will be in crisis. The contents of the above-mentioned study drawn up by McKinsey's team are a warning sign: it is not the loss of a country's position as a source of low-cost workforce, but the inability to provide a sufficiently large and attractive talent pool that can lead to major GBS investments being relocated to places which will be able to provide access to employees who are attractive skills-wise but more expensive. This risk is not only limited to GBS but also applies to other sectors.

The employees' ability to adapt dynamically to changes requires both – on the part of companies – employees' motivation and potential as well as employers' interest, and the availability of the offer from the formal education system as well as the training and development sector. In this context, as indicated in the chapter by B. Worek, A. Strzebońska and A. Szczucka, what is disturbing is the low activity of companies from the training and development sector in adapting their offer to the evolving needs of customers and the low level of investments in the development of their own human resources. This is usually justified by customers' satisfaction and the consequent lack of need for change. This does not necessarily mean that the training and development sector alone is not efficient, but is also a sign of poor customer dynamics. Public higher education, which has considerable potential, is not a particularly active player in this market. The way public funds, including funds under the European Social Fund, are spent in the area of adult learning has not brought about a clear breakthrough. Adult learning policy requires reflection, new developments, adequate funding and efficient implementation.

Another aspect of change is population ageing. This will lead to an increase in demand for services (medical, care, entertainment, cultural and other) addressed to older people, but only if they could be financed from private or public resources. There is still a lot to do in this area. This type of services also requires a number of general skills: interpersonal, communication, organisational. Both regarding these and all jobs in general, digital skills and the ability to quickly learn new solutions that will emerge in this area will become increasingly important.

Population ageing will bring financial challenges for the state and for families in view of the need to support an increasing number of economically inactive people by a declining cohort of those economically active. This is possible only in the case of a constant, significant increase in labour productivity, which relies on investments in new technologies and development of the skills of working people – their human capital. It is the technological progress and development of human capital that must fill the demographic gap in the growth process. This poses powerful challenges to the education sector at all levels and at all stages of life. Population ageing therefore calls for measures under public policies to promote sustainable economic growth, that is, in other words, such measures that can level up the competitiveness of the economy. Among these measures, lifelong learning comes to the fore, because, as far as institutional conditions are maintained and improved, human resources keep attracting and may continue to attract capital to Poland and thus ensure economic growth.

In this Foreword, I will not discuss the content of individual chapters. This function is fulfilled by the summaries of the most important theses included therein. As you can see, the report touches upon the issues raised above in the Foreword. Our starting point is the analysis of an important segment that has been a source of labour on the market for the last two decades, the millennials. The post-war baby boom generations are leaving the labour market. The place of the largest generation is being taken over by millennials – people born in the last two decades of the 20th century, who entered adulthood already in the 21st century. The peculiarities of this generation are often pointed out, in an attempt to contrast it with the older demographic cohorts. The chapter dealing with this issue, written by Magdalena Jelonek and Krzysztof Kasparek, shows that the reports as to substantial differences between this and older generations are oftentimes exaggerated. As usual, the socio-cultural profile of an age cohort is made up of features related to the life cycle phase, the changes that society as a whole experiences in connection with a given point in history and, finally, the effect of

the generation, so eagerly awaited. It is very difficult to separate these three effects, and it is certainly not possible to do so effectively, based on individual cross-sectional studies carried out at a given time, and such observations often provide a source of theses about the peculiarities of generations, not only in journalism. The second chapter deals with economic inactivity, which, as I mentioned, is important for assessing the potential for the mobilisation of domestic labour resources. The third chapter shows how the managerial teams of medium-sized and large companies operating in Poland approach management, including HR management; it gives an interesting picture. Typical of a BKL report, it cannot do without an analysis of the employment needs of employers and an estimate of the balance of skills expected and available (based on self-assessment) on the market. The report ends with a chapter referring to the key takeaway of these considerations, devoted to human capital investments at the level of companies and individuals, as well as the training and development sector, which, next to formal education institutions, plays an important role in creating conditions for such investments.

I can only express my hope that the next edition of the report from the next wave of the Human Capital Study will be a source of knowledge about the phenomena occurring at the intersection of the labour market and education of use to companies and educational institutions and an inspiration for the public policy in this area.

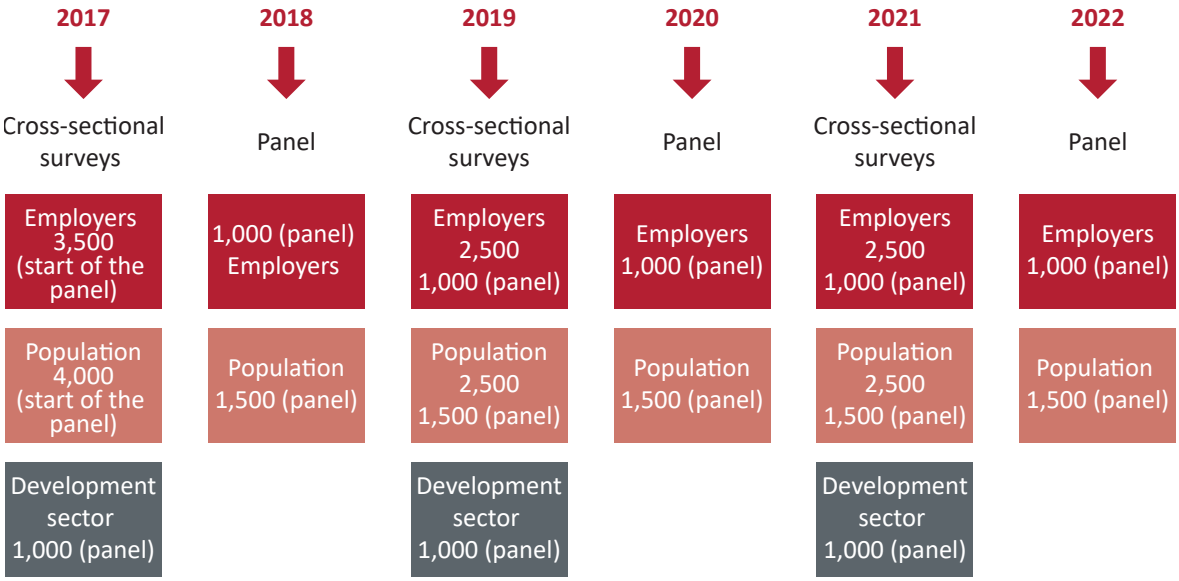
Bibliography

1. Chheda, H., Daub, M., Mathur, M., & Silver, J. (2018). *Realigning global support-function footprints in a digital world*. McKinsey & Company.
2. Górniak, J., Kocór, M., Kwinta-Odrzywołek, J., Maźnica, Ł., Worek, B., & Wróblewski, J. (2018). Branżowy Bilans Kapitału Ludzkiego – Sektor Finansowy. Retrieved from https://www.parp.gov.pl/storage/publications/pdf/branowy%20bilans%20 kapitau%20 ludzkiego%20w%20sektorze%20finansowym.pdf
3. Kocór, M. (2019). *Nadwyżka czy deficyt kompetencji? Przyczyny i konsekwencje niedopasowania na rynku pracy.* Kraków, Wydawnictwo Uniwersytetu Jagiellońskiego

Key takeaways from the 6th edition of surveys carried out under the Human Capital Study

We are pleased to present a summary of two waves of surveys carried out under the Human Capital Study, *i.e.* the wave of 2017, in which cross-sectional research on samples of employers, population and development sector institutions was conducted, and the wave of 2018, under which data for the second measurement point in panel surveys (employers and population) were collected. Depending on the subject matter, the research questions asked, as well as the specificity of the analysed sample, the authors used data from 2017, 2018 or comparatively from 2017 and 2018 in their chapters.

The schedule of surveys under the Human Capital Study in Poland:



We encourage the readers interested in a detailed description of the methodology of the surveys carried out under the BKL Study in Poland to read the methodological report available at http://www.bkl.parp.gov.pl

The Millennial Generation

- The great majority of popular opinions about millennials (otherwise known as Generation Y) are difficult to find justified. Representatives of this generation undoubtedly have their specificities related to the realities in which they grew up comprising, among other things, better living conditions, higher level of average education (both among millennials and their parents) and the progressing technological development, however, there is no hard evidence to indicate a specific set of skills, characteristics and attitudes related to the labour market characterising this group.
- For millennials, work is on average less important than for Gen X-ers; however, these differences are small. Comparing what one values more in life – work or leisure time – delivers an interesting outcome. It turns out that while both Generation X and Generation Y value leisure time more, the differences are more pronounced for millennials.

Millennials vs Generation X

Millennials

9% running own business

7% civil law contract as the main source of income

Generation X

13% running own business

2% civil law contract as the main source of income

- Millennials work based on employment contracts as often as Gen X-ers. The vast majority of representatives of both generations work full-time. Gen Y-ers run their own business less frequently than the representatives of Generation X (13% vs 9%), and when they do, they spend almost the same amount of time on it every week (approx. 50h). Millennials more

frequently indicated civil law contracts as the main source of income compared to Gen X-ers (7% vs 2%), and millennials working based on such contracts declared that they devote on average more time to this activity every week than Generation X (46h vs 37h).

- Millennials working based on employment contracts are satisfied with their working conditions to a degree at least comparable to that of Generation X. The greatest disparities favouring millennials concerned satisfaction with earnings. There were also areas where Gen X-ers were more satisfied than millennials. These include work-life balance opportunities in the case of people in managerial positions and the possibility of showing initiative and independence – among the people working in technical positions and mid-level employees, as well as unskilled workers.
- The millennials surveyed did not differ from Gen X-ers in terms of job search frequency in a situation when they were already employed, as well as in terms of their opinions on how to motivate their subordinates and giving them freedom to perform their tasks. Younger millennials, on the other hand, were much more sceptical than Generation X representatives when it came to believing that most of their employees liked their jobs and that their jobs did not require constant supervision.
- The skills differences observed among the two generations can be explained by two factors: (1) the respondent's education, and (2) the point in career in which the respondent currently is, correlated with age and length of service. Generally speaking, the higher the educational attainment, the higher the skills of the person surveyed and the more frequent use of the internet and computers for professional work. The longer the respondents stay in the labour market, the greater the influence the type of professional work performed has on their skills. However, the use of a computer is not easily correlated with the ability to solve problems using ICT – the dependencies are more subtle in this case and are probably related to the specificity of work tasks (routine vs non-routine). The level of skills related to solving problems using ICT is more closely related to the level of education than to having access to a computer.

Outside the labour market

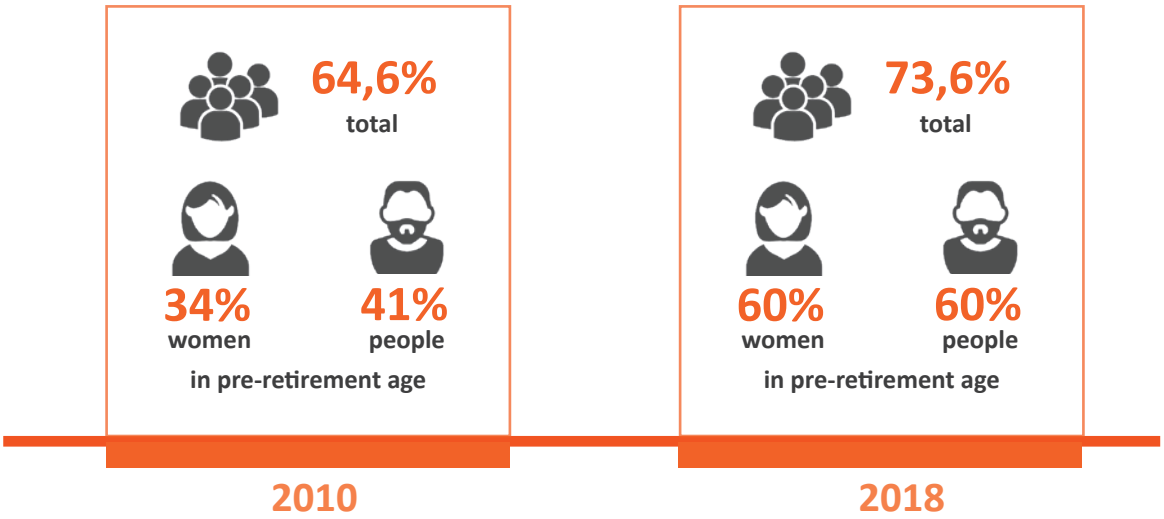
- Between 2010 and 2018, the employment rate among the working age population increased significantly – from 64.6% to 73.6% in total (with a simultaneous drop in the unemployment rate from 9.8% to 4.0%). A particularly strong increase occurred among

people in pre-retirement age (55–59/64) – from 41% to 60%, including among women – from 34% to 60%.

- On average, women enter the labour market later than men, as they more often decide to continue their education at higher level. The gender gap in employment persists in the period related to motherhood and early childhood care, that is until about 40 years of age, when the employment rate for both genders equals about 87%. After this age, the gender gap is again starting to gradually widen due to women exiting the labour market earlier.
- Professional activity is very strongly linked to education: the lower the level of education, the higher the percentage of the economically inactive. This dependency is particularly pronounced among women – for example, in the 25–34 age bracket, 56% of women with under-secondary education, 38% with secondary education and only 20% with higher education do not work. The role of education is clearly visible for both women and men in the older cohorts: the lower the level of education, the sooner one leaves the labour market in near-retirement age.

Labour market

employment rate of the population in working age



- In the group of economically inactive people, men are clearly more likely to look for employment than women. The maximum gender difference is seen in the 25–34 age bracket, which is the time when people get married and children are born.
- Regression analyses show that, when controlling the influence of other factors, such as age, education or health, married men are significantly more likely to be gainfully employed than men who are not married. In the case of women, it is not so much the very fact of being in a relationship that matters, but rather the presence of a child under 6 years of age in the family. Mothers of young children are significantly less likely to work professionally than other women, as well as less likely to look for work when they are not currently employed.
- The employment rate among mothers is significantly related to the age of the youngest dependent child: it is about 50% in the group of women with one-year-old toddlers and is gradually increasing, exceeding 70%, in the group of mothers of seven-year-olds. Fathers are much more likely to be gainfully employed than men without children, with the highest employment rates among the fathers of small children.
- As the greatest difficulties job-seekers indicate lack of job offers in the area as well as lack of appropriate contacts and acquaintances and, coming second, lack of qualifications and sufficient experience. Women between the ages of 35 and 49 also mention childcare. In the case of economically inactive people, age and health come to the fore, and in the case of women up to 50 years of age, also childcare.

Organisational culture, strategy and personnel management

- 60% of medium-sized and large companies make plans for a perspective beyond 3 months. Many companies of these sizes do not have a long-term plan and are not systematic in planning their activities. The situation is particularly critical in the construction and transport sectors, where the majority of companies (51%) do not make plans for the long-term perspective; the situation improved considerably in the specialised services sector, which includes IT and consulting companies, where nearly three quarters of organisations plan their activities.
- In 43% of Polish medium-sized and large companies decisions are made without consulting the employees, in 55% employees are involved in the process of making

important decisions, while only in 2% of companies let their employees make decisions. The ones to have their employees involved in decision-making to the largest extent are managers in the sectors of education, specialised services, as well as healthcare and social assistance.

- The survey analysed the cultural values of companies – of a clan (company is like a big family), an adhocracy (energetic and entrepreneurial company), a market company (culture focused on results) and a hierarchy (company focused on formal procedures). The dominant organisational culture in the companies surveyed is the culture of a clan (33% of companies). However, the dominant values vary depending on the sector in which the companies operate. In the construction and transport sectors, the largest category comprises results-oriented companies (41%), while in other sectors the most common category of values is ‘company as a big family’ (36% for education, 37% for trade, and food and beverage services, 31% for healthcare and 39% for specialised services).

Organisational culture, strategy and personnel management

Decision making in medium-sized and large companies

43%
without consulting employees

55%
involve employees in the process

2%
leave decisions to employees

Plans in medium-sized and large companies

60% have a development plan for min. 3 months

40% don't have a development plan for min. 3 months

75%
of medium-sized and large companies use human re source management tools, including:

57%
praise and promotion

30%
empowerment, that is increasing employee responsibility

28%
additional training

- One of the most important aspects of management examined under the Human Capital Study is the extent to which Polish companies apply tools and practices for HR management, especially the High Performance Work Practices (HPWP). 75% of Polish medium-sized and large enterprises use some tools for human resource management. Major differences in the use of tools can be observed between the sectors in which the analysed organisations operate. HR tools are most commonly used in education (80%), industry and mining, as well as healthcare (77% each). The least developed in that regard is the construction and transport sector (only 66% of companies in that sector use HR tools).

- The most common non-financial incentives used by Polish companies are: praise from a supervisor and promotion. These relatively simple methods are in place in 57% of Polish companies. The methods much more frequently used for that purpose include 'empowerment', that is increasing employee responsibility (30%), additional training (28%), gift vouchers (28%), employee involvement in decision-making (27%) and team-building trips (24%). Less than 20% of Polish companies turn to fitness cards, establishing efficiency goals and additional insurance packages in order to motivate their employees. 8% of companies use no – other than financial – employee motivation mechanisms.
- By far the most popular recruitment tools are résumés, job interviews and cover letters – each used respectively by 78%, 64% and 51% of employers.
- In the current edition of the BKL Study an attempt has also been made to answer the question – does the innovativeness of enterprises depend on management practices? A logistical regression was carried out to provide an answer. The regression was used to answer the following question: what factors increased a company's chances of introducing a product or service innovation in the last 12 months? The factors taken into account in the model were: the organisation's culture, its size, branch, HPWP index (created for analyses) and having a plan in place for a period longer than 3 months. Based on the analysis of the model, it may be concluded that the hierarchical culture of an organisation, HPWP index value and having a plan in place for a period longer than 3 months increase the chances for introducing product and services innovations in a statistically significant way, while an organisation's sector and size do not significantly contribute to undertaking innovative actions.

Employment and skills needs

- In the third quarter of 2018, 35% of medium-sized and large companies (with more than 50 employees) were looking for employees. Compared to 2014, more entities of this size looked for people to work – at that time, 27% of these companies showed recruitment needs.

Employment and skills needs

Most sought after employees

- skilled workers
- machinery and equipment operators
- professionals
- sales workers
- services workers

Most valued skills

self-organisational

responsibility, time management and punctuality, self-organisation of work, good communication skills, ability to express oneself clearly, ability to cope with stressful situations

interpersonal

good communication skills, ability to express oneself clearly, high interpersonal skills, teamwork skills, fluency in Polish

cognitive

learning new things, inventiveness, creativity, ability to analyse information and draw conclusions

- Medium-sized and large companies in healthcare and social assistance sector and with greater development potential – *i.e.* those that have introduced innovations and generated profit in the last 12 months – are more likely to seek employees. Similarly, entities without such potential, as well as those from the education sector, are less likely to look for employees.
- The structure of recruitment needs has not changed significantly compared to the previous edition of the BKL Study from 2010–2014. Employers are still looking for workers from three professional categories: skilled workers and machine and equipment operators, specialists, as well as salespeople and services workers.
- As far as skills requirements are concerned, the following three categories of employee skills are the most valued in medium-sized and large companies: self-organisational

(responsibility, time management and punctuality, self-organisation of work, good communication skills, ability to express oneself clearly, ability to cope with stressful situations), interpersonal (good communication skills, ability to express oneself clearly, high interpersonal skills, teamwork skills, fluency in Polish) and cognitive (learning new things, inventiveness, creativity, ability to analyse information and draw conclusions). These skills are valued regardless of the profession.

- The comparison of skills requirements of employers with the self-assessment of the skills possessed by employees shows quite a characteristic division into intellectual and physical professions. The former are characterised by a slight deficit of self-organisational, interpersonal and cognitive skills, as well as an excess of physical fitness and technical skills. The opposite is true for physical professions. In general, it can be said that after balancing out the needs and skills resources, there is a slight shortage of the most useful skills for given professions.

Employees, enterprises and training providers vs skills development

- The results of the research carried out in 2017 and 2018 confirm that professional activity, and – above all – employment, are the main factors stimulating commitment to developing one's skills. In 2018, 91% of employees developed their professional and non-work-related skills in some way (formal, non-formal or informal), which can be considered a very positive result. The percentage of employees who declared that they developed strictly professional skills is also high (68%).
- Working people learn mainly informally (72%, according to BKL Study 2017) and benefit from various forms of on-job learning (42%). Formal learning is very rare among the working people, which, on the one hand, may indicate low demand for qualifications obtained within the formal education system, and on the other hand, may be treated as an indicator of the poor adaptation of the system to the needs of working people.
- The ways in which working people learn are clearly differentiated by the job – traditional forms of learning such as courses, training, seminars or conferences are used by managers and specialists. Typical forms of educational activity for workers' positions include job instruction training, observation of another worker or participation in mandatory OHS and fire safety training.

- What encourages working people to learn is the possibility to use the possessed and acquired skills at work. The people who are actively pursuing education more frequently than those who do not say that they are using their knowledge and skills at work, that they need to learn new things, and that their job gives them the opportunity to use the knowledge and skills they have acquired through training or other forms of learning.
- The scale of involvement of medium-sized and large employers in the development of knowledge and skills of employees has remained at a comparable level for several years. 89% of medium-sized and 92% of large companies invest in this area. On the one hand, this means that the vast majority of employers recognise the potential and importance of the human factor in an organisation, which is reflected by the investments being made in human capital. On the other hand, it is worth noting that 10% of employers remain completely inactive in this area. About 3.2 thousand medium-sized and large enterprises in the country, first of all, do not implement strategic activities related to human resources development, and, second, their actions do not encourage employees to develop their skills on their own.
- The factor that significantly differentiates the level of companies' involvement in the development of skills in an organisation is the sector in which the company operates. However, some differences in this respect are becoming apparent compared to previous years. In the industry and mining sector, attention is drawn to the share of active companies, which is significantly higher than in previous years, which may be largely attributed to the popularity of using on-job instruction training in the professions of skilled and unskilled workers employed in industry and mining. Thus, mining and industry, with 94% share of companies investing in employee skills, joined the group of the most active sectors, next to healthcare and social assistance (94%) and specialised services (96%) sectors.

Employees, enterprises and training providers vs skills development

Skills development

91% of em ployees develop their professional and non-work-related skills

68% of employees dev elop strictly professional skills

Working people

72% informally

42% benefit from various forms of on-job learning

Pro-quality actions undertaken by entities providing development services to institutional customers

adjusting the offer to customer needs

28%

developing the skills of specialist staff

17%

diagnosis of customers' development needs

16%

improvements in physical infrastructure and facilities

15%

new training methods

15%

- Studies of Human Capital also confirm that in the national context, there is a strong correlation between investments in the skills of staff and the innovative potential and growth of a company. The companies which note significant growth (those that have implemented innovations, plan subsequent implementations and increase

employment) are at the same time the most active entities in the field of improving the skills of their human resources (97%). At the opposite end, there are stagnant entities (not implementing innovations, not planning any such activities and not recruiting employees), which declared development activity the least often (64%).

- Representatives of medium-sized and large companies also see a wide range of effects of their investments in skills, although they are moderately optimistic when it came to assessing the strength of this impact. In most cases, the assessment oscillated around 2 on a scale of 0–4, which corresponds to the answer: *the effect occurred to a moderate degree*. According to the employers, the relatively strongest effects were seen in the area of employee motivation and involvement, as well as cooperation (2.1). In turn, they have the weakest impact on company sales (1.3). It also seems that employers do not see the potential of development activities in human resource management, including in reducing the risk of staff turnover. They believe that the impact of the activities they carry out on this area is rather moderate (average rating 1.7, and, in the case of specialised services, even 1.5).
- The above issues may result from the specificity of how domestic companies function, which apply short-term action strategies (only slightly more than half of them have a plan for a period extending beyond three months) and relatively rarely implement organisational instruments in support of managing skills development, such as training budget (46%) or a training department in the company (30%).
- 78% of medium-sized and large companies carry out the assessment of skills needs, whereby almost half of them do it only occasionally (when there is a need, e.g., resulting from staff turnover). Large companies as well as companies in the specialised services and education sector carry out systematic assessment more frequently than medium-sized companies.
- The results show that the development activity of companies is located primarily within a company and involves its human capital – internal training. This correlation may be observed irrespective of company size, its level of development or sector. We can see a clear upward trend in the use of internal training compared to previous years. In the period considered, their use was only slightly less popular than the external training, which a few years ago was a strongly dominant form. Among the forms of education outside the workplace, the dominant forms used in half of the companies surveyed are conferences, seminars and workshops (49%). The most popular forms implemented within a company and using its own resources are definitely job instruction training (62%) and mentoring/coaching (55%).

- The use of short forms of practical education (job instruction training, coaching, job shadowing) is more characteristic for ‘traditional economy’ sectors and with regard to lower tier workers. In new economy sectors, on the other hand, there is a more frequent use of self-education and participation in conferences and seminars. Such forms of knowledge acquisition and skills development are also more common among senior staff and specialists.
- Employers are an important group of clients of the training and development sector – 83% of entities offering development services for adults in Poland provide such services to institutional customers, primarily in the for-employees-only formula.
- The results obtained indicate that the training and development sector is largely passive in adapting to customer preferences. The standard development services offered are mostly adjusted only upon direct request of a client. This means that companies and institutions offering training services are setting new development paths and methods to a too limited degree, and instead focus more on responding to the current, sometimes briefly analysed, client needs.
- Investing in quality is to behavioural changes in the training and development sector, meaning the transition from reactive actions to conscious, proactive behaviours. The entities that have invested in quality-improving measures are more proactive. They draw up better strategic plans, can better evaluate their management staff and are characterised by higher levels of innovation compared to the sector as a whole.

In search of millennials – Generation Y in light of the Human Capital Study data

Magdalena Jelonek
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Introduction

JOne of the strategies for describing the transformations taking place in the labour market in the context of evolving behaviours, expectations and preferences towards employers and work itself is an approach based on the theory of generations. The approach assumes that persons born and living at a similar time share similar experiences, shaped through factors characteristic for a given moment in history, such as culture, political and legal systems, economy or specific historical events taking place at the time. These experiences form an important context in which expectations, preferences, patterns and styles of action or dispositions, such as attitudes towards work, are created.

The generation that has drawn particular of both researchers and practitioners in recent years is the Millenial generation, which now represents an important part of the workforce. Generation Y (also called millennials, echo boomers, the digital generation or the next generation) most often refers to people born between 1980 and 2000, however, depending on researchers' individual preferences, these starting birth years are moved flexibly a few years forward or back. However, for the purposes of this Chapter, we propose the classic operational definition of this generation, assuming that its oldest representatives were born in 1980 and the youngest – in 2000. The generation will be divided into two groups: (1) younger millennials (born between 1990 and 2000); and (2) older millennials (born between 1980 and 1989).

According to researchers, it is a digital generation (referred to as 'native speakers of the digital language'), familiar with technological novelties, strongly associated with virtual social

networks which they treat as an important element of life, parallel to the real world (Deal, Altman and Rogelberg, 2010; Hershatter and Epstein, 2010; Pyöriä *et al.*, 2017). In literature, millennials are referred to as a generation of socially aware cynics with narcissistic features (Twenge *et al.*, 2008) – Gen Y-ers think highly of their skills, they're convinced about their uniqueness and often show strong aversion to criticism. It is a group of people from what is known as the educational boom, hence they are mostly well educated (Pyöriä *et al.*, 2017). At the same time, according to researchers, these people are more focused on experiences, new challenges, leisure time, family life, rather than wealth and earnings (Twenge *et al.*, 2010).

In the case of millennials, we will be interested in particular in work-related characteristics. According to researchers, millennials do not become too attached to a single employer (hence the term 'disloyal workers'), often switching jobs. In making their decisions they focus on development rather than stability (Broadbridge, Maxwell and Ogden, 2007; Pyöriä *et al.*, 2017), and they do not consider having a stable full-time job as a special privilege and often see it as an unnecessary burden (Cogin, 2012). They expect a lot of freedom and flexibility from their employers. A job is supposed to make it possible for them to have an interesting life outside of work, provide them with the means to spend their leisure time, and not be a goal in itself (Pyöriä *et al.*, 2017). They often need external motivation to perform tasks (Twenge *et al.*, 2010), hence they are called a dependent generation requiring clear instructions at the workplace. At the same time, millennials are a generation which consider as important the social dimension of the work performed, the values presented by the company and the possibility of co-shaping an organisational culture (Twenge *et al.*, 2010).

This Chapter focuses on Polish millennials and its aim is to answer the following three questions: (1) Is it possible to identify significant differences (in the skills-related and professional context) between Gen X and Gen Y in Poland? (2) What are the career strategies and paths of Polish millennials? Are they specific? What is important for this group in the professional context? (3) Is this group internally uniform or are there any clear 'segments' within one generation?

The text was inspired by the controversy related to the (sometimes thoughtlessly) accepted division into generational groups and attributing certain universal characteristics to them (often without taking into account the national context or individual characteristics, such as a certain phase of life).

As shown, for instance, by Constanza's research (Costanza *et al.*, 2012), in the case of professional experience and attitudes towards work, there is no scientific basis for identifying significant differences between the generations. Even if some subtle differences are identified, they lack a sound theoretical rationale, and using the concept of generations in the process of human resource management in an organisation seems quite risky, to say the least (Costanza and Finkelstein, 2015). In this article, as the title suggests, on the basis of data from the Human Capital Study and PIAAC[1], we will search for specific features of Generation Y, while verifying whether the differences between age groups indeed have a generational dimension or whether they can be explained with other characteristics, such as, for example, educational status.

The chapter is divided into three parts. The first part characterises in detail Generation Y, taking into account education and describing the work of the representatives of this group. The second part focuses on millennials' professional strategies and their perception of the work they perform, and the third part concerns their skills.

The study characterises Generation Y in comparison with the previous generation, known as Generation X. For the purposes of this study, we assumed that Generation X comprises people born between 1965 and 1979.

General characteristics of Generation Y

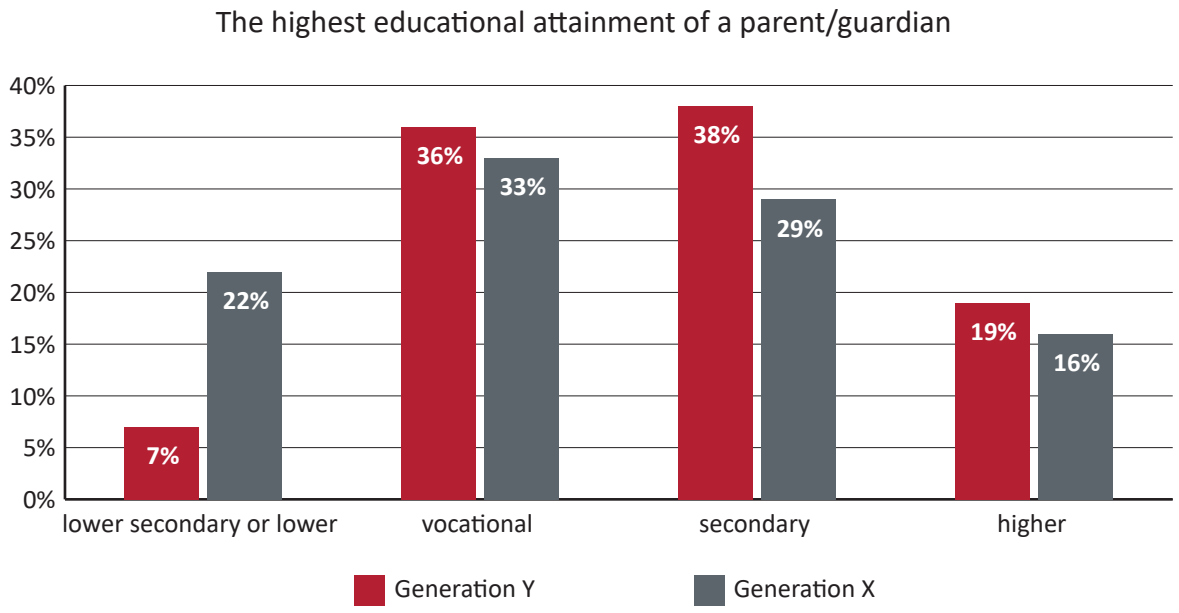
Parents' education

To better understand the generation referred to as millennials, it is necessary to include in the analysis the opportunities to participate in education, which – in this case far – far exceed those of the previous generations.

The best example of this is probably the comparison of educational attainment of the parents of Gen Y-ers (millennials) to that of the parents of Gen X-ers, as presented in the chart below.

[1] PIAAC (Programme for the International Assessment of Adult Competencies).

Figure 1. The highest educational attainment of a parent/guardian in the respondent's household. The chart includes only data from complete families, where respondents were able to determine the education of both parents (Ny = 1,291, Nx = 1,058)



Source: Own study based on the 2017 Human Capital Study data.

Parents' education plays a crucial role in children's development. In addition to the related material status, parents' education also shapes attitudes towards education and influences achievements at school (Kozłowski, 2013), stimulates life aspirations (Dubow, Boxer and Huesmann, 2009) and constitutes a vital element of the cultural capital (Lee and Bowen, 2006). When parents' education in the case of Millennials is compared to the one of the older generations, we can talk – without too much exaggeration – about a real leap forward in civilisation. This is most clearly demonstrated by the percentage of parents with lower secondary education or lower, which occurred in the case of 22% of respondents from Generation X and only 7% in the case of younger generations.

More than half (57%) of millennials and 45% of Gen X-ers had a parent with at least secondary education.

Educated youth

Educated parents themselves shape the attitudes that favour attaining higher and higher levels of education, which is reflected among millennials. The current trend in this respect is illustrated by data in Table 1.

Table 1. Education of those not currently participating in formal education. Millennials vs Gen X-ers

Education	Men X	Men Y	Women X	Women Y	Total X	Total Y
lower secondary and lower	10%	5%	7%	6%	8%	5%
basic vocational	33%	20%	24%	11%	28%	15%
secondary	30%	45%	29%	35%	29%	40%
higher	27%	31%	40%	48%	34%	39%
sample size	457	518	603	641	1,058	1,161

Source: Own study based on the 2017 Human Capital Study data.

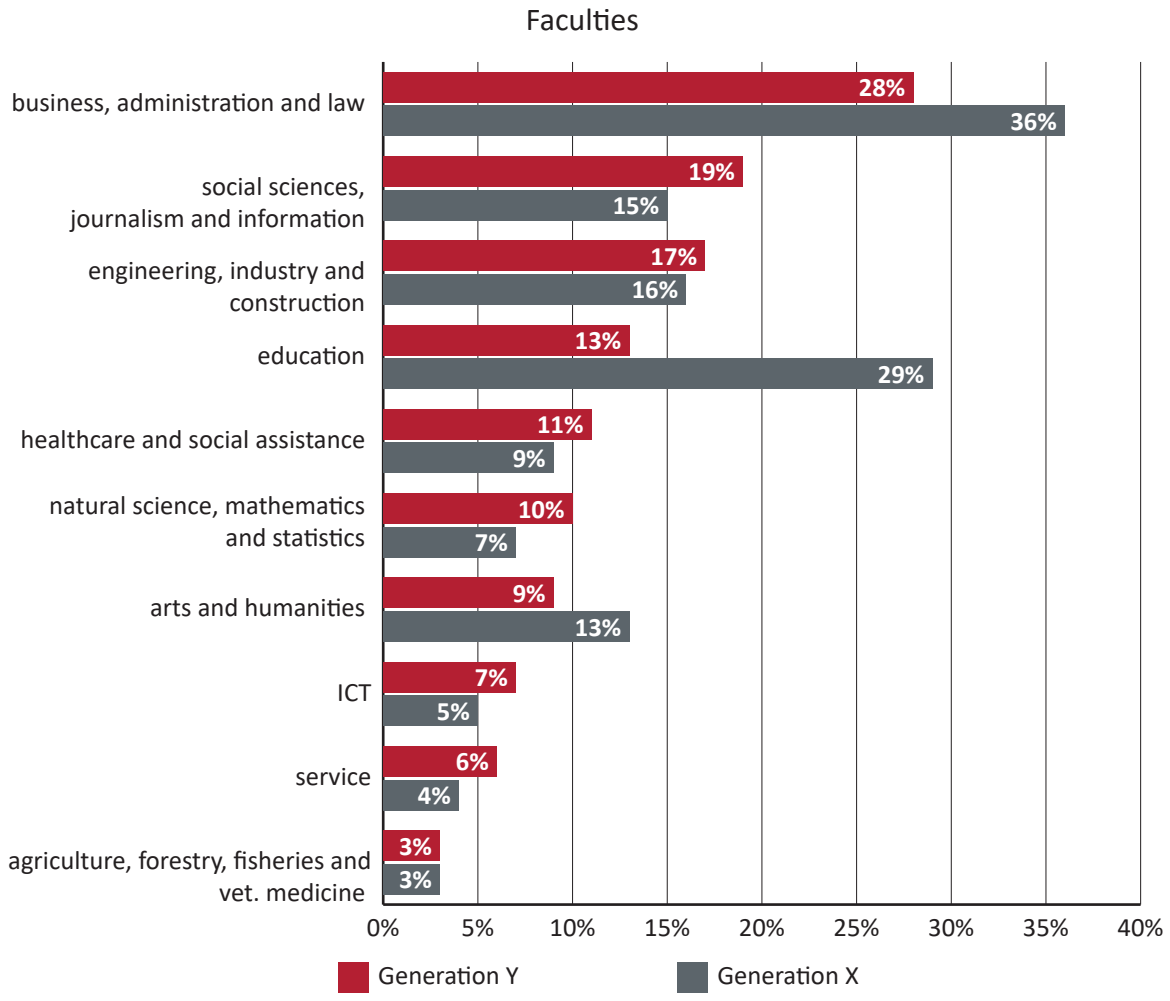
In terms of education levels achieved by millennials vs Gen X-ers, secondary (40% vs 29%, respectively) and higher (39% vs 34%) education was more common, and vocational education (15% vs 28% among Gen X-ers) has clearly lost its popularity.

It is worth noting here the clear disproportion between the increase in the percentage of women with higher education compared to the same percentage among men between Gen X and Gen Y. In the case of Generation X, men with higher education represented 27%, compared do 40% of women. The same difference for millennials has grown to 17 percentage points (31% vs 48%). In the future, this growing disproportion in education may constitute a problem of increasingly divergent aspirations and related lifestyles.

In addition to the percentage of those achieving higher education, the trends relating to the choice of faculties have also changed, as shown in Figure 2. Due to the fact that the research sample was not selected in a way that would be representative of faculties, the percentages presented should be treated rather as an indicator of a certain trend than as an actual percentage of people with such education in the population.

Similar as in the case of Generation X, the most popular faculties among millennials are those in the business, administration and law group.

Figure 2. Higher education faculties completed by individuals who are currently not participating in formal education Ny = 482, Nx = 367



* The percentages do not add up to 100% as some students may be enrolled in several programmes.

Source: Own study based on the 2017 Human Capital Study data.

At the same time, changes of interest in individual faculties between these generations are visible. The most spectacular decline in interest was recorded in the case of faculties preparing for the teaching profession and in the case of faculties from the group of business, administration and law. A slight increase in interest was also observed in the case of faculties in the field of social sciences.

Due to the fact that the research sample was not checked in terms of representativeness for individual faculties, the above chart was verified with GUS data. The results are presented in Table 2.

Table 2. Percentage of students of selected groups of faculties

Group of faculties	1990 (Generation X)	2004 (Generation Y older)	2010 (Generation Y older)	2017 (Generation Y younger)
education	14.2%	10.9%	11.8%	7.2%
humanities and arts	11.5%	8.8%	9.1%	9.8%
social sciences	4.4%	14.0%	13.3%	11.6%
business, administration and law	17.9%	24.8%	25.7%	21.9%
technical	16.9%	21.4%	18.9%	24.3%
sample size	403,824	1,917,293	1,841,251	1,291,870

Source: Own study based on GUS data for 1990, 2004, 2010 and 2017.

GUS data seem to confirm the decline in the popularity of faculties related to education among Gen Y-ers. They also confirm the increased interest in social sciences studies. On the other hand, GUS data do not make it possible to confirm the decline in the interest in business, administration and law study programmes.

An interesting trend was observed while taking into account the gender distribution of the respondents. It is illustrated in Table 3.

The decline in the millennials' interest in enrolling in arts and humanities programmes is much more strongly reflected in the educational choices of women than of men (it was among women where the most pronounced declines were recorded). GUS data may be considered as partially confirming this observation. Women in study programmes related to teaching accounted for 14%, 16% and 10% in 2004, 2010 and 2017, respectively. In the young generation, the percentage of women who graduated from faculties from the engineering and services group has increased – 7%, 8% and 13% in 2004, 2010 and 2017, respectively.

Table 3. Groups of completed faculties among individuals who are currently not participating in formal education, by gender

Group of faculties	Men X	Men Y	Women X	Women Y
business, administration, law	40%	24%	33%	31%
social sciences	9%	17%	19%	21%
engineering-industry-construction	31%	26%	6%	10%
education	19%	9%	35%	17%
agriculture, forestry	2%	6%	14%	14%
natural science	6%	8%	8%	11%
arts and humanities	7%	7%	17%	11%
IT	9%	14%	3%	1%
services	4%	4%	4%	8%
healthcare and social assistance	5%	4%	1%	2%
sample size	119	174	247	307

* The percentages do not add up to 100% as some students may be enrolled in several programmes.

Source: Own study based on the 2017 Human Capital Study data.

It is particularly interesting that, among men, the greatest declines in the percentage of people with specific education were recorded in the group of business, law and administration faculties (16 percentage points). Unfortunately, due to the lack of access to the data concerning the percentage of men enrolled in these programmes in the 90s, the trend observed cannot be confirmed.

However, the largest increase in the percentage of graduates was observed in social sciences and IT.

Another observation worth mentioning is the increase in the percentage of women enrolled in faculties from the group 'engineering-industry-construction'. This phenomenon is confirmed by GUS reports indicating a systematic increase in the percentage of women choosing to enrol in study programmes in this field (6% in 2004, 7.7% in 2010 and 11% in 2017). An increase in the percentage of students of the faculties from this group was also recorded among men (20% in 2004, 25.1% in 2010 and 28% in 2017).

Millennials and distinct values?

Important things in life

As one of the most distinctive characteristic of millennials, it is said that they attach much more importance to the ways of spending their leisure time than to work. One of the methods of verifying this hypothesis is to check whether millennials value their leisure time more than Gen X-ers, and, similarly, whether they attach less importance to their jobs than Generation X representatives.

Table 4. Comparison of the average importance of selected aspects of life among the respondents who completed formal education (on the scale of 1 to 6).
Minimal N_X = 1,062, N_{Yolder} = 790, $Ny_{younger}$ = 353

	Average (standard error) X	Average (standard error) Y older	Average (standard error) Y younger	F	p	Eta²
Work	5.02 (.027)	4.92 (.031)	4.81 (.047)	7.30	0.001	0.007
Leisure	5.09 (.026)	5.10 (.030)	4.97 (.045)	3.33	0.036	0.003
Cohen's d (work vs leisure)	.05	.21	.16	–	–	–

The table includes ANOVA model parameters. Each model included three independent variables: generation (X / older Y / younger Y), education (primary/secondary/higher) and professional situation according to LFS (employed/unemployed/economically inactive). Where: F: value of Fisher's test, p: level of statistical significance, eta2: effect size. Effect size eta² should be interpreted as follows: 0.02 = small effect; 0.12 = moderate effect, 0.26 – large effect. Interpretation of Cohen's d is: .2 – small effect, .5 – moderate effect, .8 – large effect.

Source: Own study based on the 2017 Human Capital Study data.

The ANOVA models in Table 4 confirm that millennials were statistically significantly different from Generation X in terms of how important their work[2] and leisure time[3] are to them. At the same time, in the case of sub-groups of millennials, no significant differences were

[2] $F(4.2200) = 7.30, p < .001$

[3] $F(4.2210) = 3.33, p = .036$

observed. For work, the differences are so small (effect size eta2 = 0.007) that it is difficult to use them as basis for developing a theory about the unique generational characteristics in this area on their basis. Comparing a selected age sub-group of millennials to Generation X provides slightly different conclusions. First of all, the differences for the variable 'leisure' are statistically insignificant for comparing older millennials and Gen X-ers[4], and for comparing younger millennials and Gen X-ers their direction is opposite to the one assumed – it was the younger millennials who pointed to the lesser importance of leisure compared to Gen X-ers[5].

Interesting results are obtained by analysing the differences between the assessments of the importance of work and leisure among Generation X and Generation Y. The effect size of these differences is larger in the case of Generation Y, whereas it is more pronounced in the case of older Gen Y-ers (.21 vs .16).

The result observed is in line with the postulates concerning millennials, but these differences still remain within small effect (Cohen's d = 0.2) and it is difficult to see it as an indicator of a clear generational shift.

Attitude towards work

One of the assumptions constituting the distinctness of millennials is their attitude to work, which – as opposed to the previous generations – is supposed to be only a means for them to achieve their goals, and no longer a value in itself. The statistical data on professional activity presented in the table below can hardly be regarded as clearly supporting this hypothesis.

On the one hand, in the case of younger millennials, we may observe a higher unemployment rate (especially among people with primary education), but this is more a matter of the generally more difficult situation of young graduates with little professional experience than of high selectivity in seeking jobs. It is worth noting that this percentage clearly decreases in subsequent education categories, which is related to the increasing average age of respondents and higher chances of finding a job.

[4] $t(1,856) = 0.13$, $p = .901$

[5] $t(1,478) = 2.42$, $p < .001$

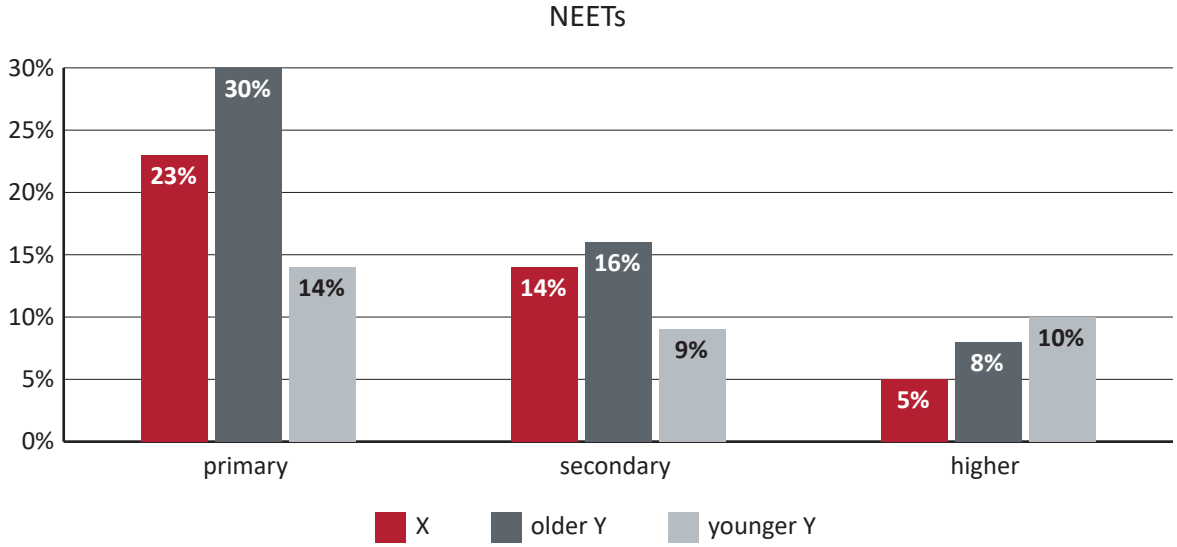
Table 5. Economically active (employed and unemployed) people among those who are currently not participating in formal education

	primary X	primary Y older	primary Y younger	secondary X	secondary Y older	secondary Y younger	higher X	higher Y older	higher Y younger
economically active	80.88	72.8	82.3	89.7	83.7	83.0	96.8	87.9	82.9
employed	75.4	66.0	61.5	84.0	79.2	77.3	94.8	85.6	77.1
unemployed	5.4	6.8	20.8	5.6	4.6	5.8	2.0	2.3	5.8
sample size	417	161	96	310	289	177	339	345	85

Source: Own study based on the 2017 Human Capital Study data.

What is more, in each education category, the unemployment rate among older millennials is clearly lower than the one observed among the younger representatives of this generation. Therefore, it is difficult to interpret the observed unemployment as a unique generational characteristic being present. It should rather be interpreted as a temporary effect related to the relatively low labour market entry age.

Figure 3. Percentage of NEETs by education categories (Generation X vs older and younger millennials) (minimal sample sizes N_X =302, N_{Yolder} = 141, $N_{Yyounger}$ = 90)



People who had a child in the year of the survey or in the year preceding it were excluded from the analyses.

Source: Own study based on the 2017 Human Capital Study data.

An additional answer may be provided by analysing the NEET rate, which refers to the unemployed who are not in any form of formal or informal education or training (Not in Employment, Education or Training).

The NEET category was most often observed among respondents with primary education. Particularly interesting is the fact that despite the relatively high unemployment rate among younger millennials representing this category, they show the lowest NEET rate in relative terms.

The high value of NEET rate among older millennials with primary education may be considered clearly worrying. When combined with relatively low professional activity and low unemployment rates, one may be tempted to say that these may be people who decide to stay at home and at the same time stop raising their qualifications. In light of labour market realities, it is a risky strategy considering the increasing difficulties in entering it at a later time.

Table 6 presents NEET rate values broken down by respondents' gender and educational status. They show that the majority of NEETs in the category of older millennials with primary education are women.

Table 6. Percentage of NEETs in Generation X and Generation Y broken down by age and gender

	X	Y older	Y younger	N_X	$N_{Y\ older}$	$N_{Y\ younger}$
Men – primary	18%	17%	14%	220	61	103
Men – secondary	14%	7%	6%	136	116	154
Men – higher	1%	5%	14%	104	96	25
Women – primary	30%	46%	15%	208	66	61
Women – secondary	14%	26%	11%	192	124	153
Women – higher	7%	10%	9%	234	162	69

People who had a child in the year of the survey or in the year preceding it were excluded from the analyses.

Source: Own study based on the 2017 Human Capital Study data.

Not only full-time employment (*work-life balance*)

What is considered another characteristic of millennials is avoiding full-time employment in favour of more flexible forms ensuring a better work-life balance and enabling development outside of work.

The data in the table below can hardly be regarded as supporting this thesis.

Table 7. Forms of employment of economically active people currently not participating in formal education

Form of employment	Generation X	Generation Y
employment contract (% full-time employment)	72% (93%)	73% (93%)
economic activity (non-agricultural)	13%	9%
civil law contract (as main source of income)	2%	7%
informal contract (as main source of income)	2%	3%
sample size	930	956

Source: Own study based on the 2017 Human Capital Study data.

The millennials surveyed declared being employed based on a contract of employment as often as Gen X-ers. Also, the percentage of people working part-time is identical. On the other hand, millennials declared slightly less frequently that they run their own business, which would in theory give them more freedom.

The element that seems to be in line with the assumptions about millennials is the higher percentage of respondents declaring that their main source of income is work based on a civil law contract. However, in light of the data presented in Table 8, this can hardly be regarded as supporting the thesis concerning the assumed characteristics of millennials.

No differences were observed as regards the estimated number of hours spent weekly by millennials and Gen X-ers performing full-time work and running a business. A very interesting situation may be observed when analysing the working time of millennials employed on the basis of civil law contracts.

Table 8. Average number of hours spent at work by people currently not participating in formal education

Form of employment	Generation X	Generation Y	N_X	N_Y
employment contract	42.9	42.5	693	650
economic activity (non-agricultural)	51.4	49.6	114	67
civil law contract (as main job)	37.0	46.0	14	48
informal contract (as main job)	51.5	48.7	7	15

Source: Own study based on the 2017 Human Capital Study data.

These people declare not only that they spend more hours at work than Gen X-ers, but also on average more than people working full-time. This contradicts the hypothesis that millennials choose to work on the basis on civil law contracts as a way of having more leisure time.

Interesting results are obtained by comparing the average labour market age. Younger millennials with lower and higher education gain professional experience a little faster than older millennials and Gen X-ers. The circumstances that favour such a strategy include good market conditions, that is high demand for employees. The younger representatives of Gen Y encountered such conditions when entering the labour market.

Table 9. Average age of starting the first gainful employment lasting more than 3 months

Education	X	Y older	Y younger	N_X	$N_{Y\ older}$	$N_{Y\ younger}$
primary	20.7	20.2	18.8	402	122	89
secondary	20.6	21.3	20.2	334	253	231
higher	23.3	23.1	23.3	350	330	89

Source: Own study based on the 2017 Human Capital Study data.

Millennials at the workplace

Millennials as employees with a sense of entitlement?

Another popular thesis concerning millennials is that they show entitlement attitudes. Table 10 shows the results of comparing assessments of selected aspects of full-time work as made by millennials and Gen X-ers.

Table 10. The differences between average satisfaction with selected aspects of full-time work of people who have completed formal education (Cohen's d). Millennials vs Gen X-ers

Position	Earnings	Personal development	Work-life balance	Initiative and self-reliance	N_X	N_Y
managers	0.17	0.11	-0.16	0.42	60	45
professionals	0.40	0.31	0.31	0.30	158	132
technicians and associate professionals	0.16	-0.01	0.03	-0.18	86	84
clerical support workers	-0.04	0.06	0.04	0.18	40	61
service and sales workers	0.29	0.10	0.19	0.25	90	103
industry workers and craftsmen	0.37	0.10	0.25	0.21	108	97
operators and assemblers	0.16	-0.01	0.00	0.05	85	69
performers of elementary jobs	0.46	0.39	-0.10	0.22	55	29

Values > 0 indicate a higher average of millennials. Cohen's d is interpreted as follows: .2 – small effect, .5 – moderate effect, .8 – large effect.

Source: Own study based on the 2017 Human Capital Study data.

The main takeaway from the analysis of the data in the table is that millennials are most often satisfied with their working conditions to a degree at least comparable to that of Gen X-ers.

It should be emphasised that this is not an isolated result – similar results pointing to the higher satisfaction of millennials with their work were published, among others, by Kowske, Rasch and Wiley (2010). The biggest disproportions in satisfaction in favour of millennials concerned earnings, especially among specialists, unskilled and skilled workers and services sector employees. The only situations where millennials were less satisfied concerned the possibility of balancing work and personal life in managerial positions and the opportunity to show initiative and self-reliance among people in technical professions and mid-level employees, as well as among unskilled workers. The effect strength regarding the differences observed in all the cases discussed may be described as very low (<0.2).

The above results are in contrast to the popular opinion about the presumed millennials' sense of entitlement, which should be manifested, e.g., in more cautious assessments than in the case of Gen X-ers.

Millennials as disloyal employees?

Another popular opinion about millennials is that they are less loyal to their employers, which is manifested by their greater readiness to change jobs. To verify this opinion, it was examined whether millennials more often than Gen X-ers look for a job while already being employed on the basis of a contract of employment.

In general, there are no differences between millennials and Gen X-ers when it comes to looking for a new job while being employed[6]. To look at the issue in more detail, models have been created and divided into the different ISCO categories of occupations. In models taking account of large professional categories, differences in the percentage of job-seekers – among people currently in employment – proved to be statistically insignificant among all the analysed groups.

Also in this case, the results can hardly be regarded as supporting the presumed disloyalty of millennials. There were no differences either at a general level or regarding individual professional groups.

[6] OR = 1.38, p =.090

Table 11. Probability of looking for a new job, despite being employed on the basis of a contract of employment among people working full-time who have completed formal education (millennials vs Gen X-ers)

	OR	OR(SE)	p	CI 5%	95%	N_X	N_Y
total	1.38	.261	.090	0.95	2.00	662	655
managers	0.79	.641	.770	0.16	3.89	57	46
professionals	0.74	.327	.490	0.31	1.76	153	138
technicians and associate professionals	2.52	1.470	.113	0.803	7.905	79	92
clerical support workers	1.89	1.166	.302	0.56	6.33	37	63
service and sales workers	1.51	.694	.369	0.61	3.72	89	104
skilled workers	2.16	1.128	.139	0.78	6.01	102	104
operators and assemblers	1.40	.703	.500	0.53	3.74	77	79
sales workers	1.27	0.720	.671	0.42	3.86	49	74

The table includes parameters of logit models for rare events (Thomz, King and Zeng, 1999).
Where: **OR**: odds ratio, **OR(se)**: standard error, **p**: statistical significance level, **CI 95%**: 95% confidence interval for OR. OR values > 1 indicate a higher probability of looking for a job while in employment among millennials compared to Gen X-ers. Each model included two independent variables: Generation X/Y and self-assessment of whether a given job is consistent with the respondent's education (on a scale of 1–4). Models for the different ISCO categories were made only for categories comprising at least 100 people and at least 30 people in the sub-group.

Source: Own study based on the 2017 Human Capital Study data.

Table 12. Reasons for looking for a new job by peoples employed on the basis of a contract of employment

Reason for looking for a job:	Generation X	Generation Y
desire to change	75%	79%
finances	34%	26%
other	9%	13%
contract termination	0%	3%
downsizing	3%	3%
relocation	2%	1%
sample size	66	98

Percentages in columns do not add up to 100% (as 2 answers could be selected).

Source: Own study based on the 2017 Human Capital Study data.

Apart from the aspect of how frequently the employed millennials and Gen X-ers look for a new job, the analysis also included the reasons for seeking new jobs.

The reasons are largely similar in both groups, with Gen X-ers declaring financial motivation slightly more often, and millennials more frequently stating answers classified as ‘other’.

Millennials as team leaders

Interesting results brought the comparison of the opinions of millennials and Gen X-ers as regards managing others. Full-time employees managing others were asked to give their opinions on four statements about the attitudes of their subordinates. The results are presented in Table 13.

Table 13. Opinions of full-time employees in team leader positions on the attitudes of their subordinates (older millennials and younger millennials vs Gen X-ers) (minimal values N_X =192, N_{Yolder} = 159, $N_{Yyounger}$ = 58)

Opinion	Y older – beta	Y older – p	Y younger – beta	Y younger – p
To achieve results, the employees must be motivated by money or threat	-0.03	0.568	-0.10	0.069
I may set a goal to be achieved by the employees, give them freedom and trust them to do their job well	-0.02	0.715	0.00	0.939
Most employees like their job	-0.07	0.159	-0.10	0.045
If it was not for the constant supervision, the employees would be idling at work	0.06	0.281	0.13	0.012

The table includes parameters of regression models for ordinal variables (ordinal logit), where the dependent variable was to what degree the respondents agreed with a given statement (on a scale of 1–5). Each model included 2 independent variables: professional group (intellectual work, trade/services and manual labour) and a variable identifying the compared categories (older millennials, younger millennials and Gen X-ers). Where: beta = standardised regression coefficient, p = statistical significance.

Source: Own study based on the 2017 Human Capital Study data.

Both older and younger millennials did not differ from Gen X-ers in their opinions on how to motivate their subordinates and give them freedom to perform their tasks. There were, however, differences concerning the statement 'most employees like their job'. Younger millennials were less optimistic than Gen X-ers in this regard[7]. A very similar result was observed in the case of the statement 'If it was not for the constant supervision, the employees would idling at work'. Again, younger millennials were much more sceptical about their own subordinates than Gen X-ers[8].

[7] beta = -0.10, p = .045

[8] beta = 0.13, p = .012

Millennials' skills

This part centres around characterising the skills potential of Generation Y compared to Generation X. We will look at the potential from two perspectives: from the point of view of objective measurements conducted with the use of psychometric tests in PIAAC study, as well as on the basis of skills self-assessments collected as part of the Human Capital Study. Already at the beginning, it should be noted that both objective and subjective skills assessments are not an indication of simply understood generational differences, but possibly of the age differences between the representatives of both generations at the time of the survey[9]. Older groups are characterised by different life, professional or social experiences compared to the younger groups. This may partially influence the skills differences between the representatives of the generations. Nevertheless, the comparison of the potential of the two groups, interpreted with awareness of their differing experience, may constitute an approximate assessment of generational differences at a given moment in time.

A good proxy indicator of the overall potential of a generation is its level of information processing skills, *i.e.* literacy, numeracy, as well as problem solving in technology rich environment. In literature, these skills are often treated as key elements of cognitive skills (Mateos-Romero and Salinas Jiménez, 2017), hence they indicate not so much specific skills as the overall potential of the examined groups.

A simple compilation of data concerning the skills level of the representatives of different generations indicates some interesting relations:

1. There is a general trend – the younger the generation, the higher the level of skills (usually) it has, while the higher the educational status, the weaker is this dependency. In this case, it is hard to state whether the higher level of skills is a generational indicator or a process of going backwards occurs with the end of education and the beginning of professional activity. This is partially confirmed by the fact that the differences are observed mainly among people with lower educational status.
2. As already mentioned, the above trend is visible mainly among people with primary and secondary education. Among university graduates, the differences seem much smaller.

[9] In other words, in our analyses, we do not use longitudinal data which would make it possible to compare the skills assessments of the representatives of two different generations at a given age (e.g. 20 years old).

In addition, there is a weak dependency of an opposite direction: on average, older generations in this group achieve higher results (especially as regards numeracy).

3. In the case of problem solving in technology rich environment, younger generations usually achieved higher results.

This digital gap is additionally deepened by the fact that a much higher percentage of Gen X-ers did not take the test at all, due to, among other things, technological barriers (47% in total in relation to about 30% in younger generations).

As already mentioned, the factor explaining the above differences is not generational differences as such, but rather the moment in life in which the respondents currently are (left education relatively recently or are during their careers), and, possibly, the specific nature of the work performed (consolidating/developing or reversing the skills already held). The younger generation (millennials) is often treated as a digital generation, acquainted with new technologies and able to use them in practice. This is partially confirmed by the results of PIAAC's study, which at the same time indicate large internal discrepancies in this group. These discrepancies are strongly linked to the respondents' educational status. An example here are younger millennials without secondary education – as much as 48% of them resigned from participating in the skills test concerning problem solving in technology rich environment. At the same time, in the same group, the majority – 96% – of respondents declared that they ever used a computer (compared to 61% of Gen X-ers without secondary education).

Table 14. Average values obtained on the scale of literacy, numeracy and problem solving in technology rich environment (data for people who are not currently studying in the formal education system)

	Average (primary)	Average (secondary)	Average (higher)	Perc. 25 (primary)	Perc. 25 (secondary)	Perc. 25 (higher)	Perc. 50 (primary)	Perc. 50 (secondary)	Perc. 50 (higher)	Perc. 75 (primary)	Perc. 75 (secondary)	Perc. 75 (higher)	N
literacy (Y younger)	246	266	288**	218	242	268**	247	270	294**	274	289	306**	635
literacy (Y older)	238	261	295	203	237	272	238	265	298	271	288	319	2,503
literacy (X)	233	254	294	202	230	269	241	256	295	266	281	320	1,221
numeracy (Y younger)	231	253	272**	207	228	252**	234	255	275**	255	279	289**	635
numeracy (Y older)	226	253	283	194	225	260	225	255	285	259	283	309	2,503
numeracy (X)	223	250	289	184	224	261	239	254	290	258	279	317	1,221
problem solving (Y younger)	251	264	284**	227	237	271**	250	266	291**	273	289	302**	445
problem solving (Y older)	248	263	289	216	234	265	246	266	290	272	290	313	1,774
problem solving (X)	240	252	287	193	220	259	239	251	287	282	286	315	652

* Literacy – text comprehension, numeracy – mathematical reasoning, problem solving (ICT) – problem solving in technology rich environment.

** Marked values should be interpreted with great caution, as numbers in each of these categories are less than 20 (but more than 10).

Source: Own study based on PIAAC bases for Poland.

Young millennials are a group that interacts with computers and digital media, however, this interaction does not necessarily directly translate into increased ability to solve problems using these.

Therefore, let us check whether professional activities involving the use of the internet and computers are conducive to developing digital skills related to solving problems. What is immediately apparent is the absence of generational differences as regards the use of the internet and computers for work (differences among people with primary education should

be interpreted with a great deal of caution due to small sample size in this group) and the presence of very strong differences in this regard depending on the respondents' education. In other words, it seems that in the case of basic ICT skills and using these skills for solving problems, it is not so much generational differences (and greater familiarity of the younger generations with digital innovations) that are crucial, but education and a related chance to work in a position where such skills are used continuously.

Table 15. Frequency of performing given operations at work (calculated as a mean average of evaluations on a five-point scale for people who are not currently participating in the formal education system)

	primary	secondary	higher	N
Internet – e-mail correspondence (Y)	1.9	3.2	4.3	1,194
Internet – e-mail correspondence (X)	2.6**	3.5	4.4	586
Internet – work-related information (Y)	2.3	3.1	4.0	1,194
Internet – work-related information (X)	2.1**	3.4	4.4	585
Internet – transactions (Y)	1.5	1.9	2.3	1,194
Internet – transactions (X)	1.6**	1.9	2.3	586
Computer – spreadsheets (Y)	2.1	2.4	3.3	1,194
Computer – spreadsheets (X)	2.4**	2.4	3.3	586
Computer – Word (Y)	1.7	2.7	3.9	1,194
Computer – Word (X)	2.0**	2.8	4.1	585
Computer – programming (Y)	1.1	1.3	1.4	1,194
Computer – programming (X)	2.1**	1.1	1.4	586
Computer – communicating with others (e.g. chats) (Y)	1.2	1.3	1.5	1,194
Computer – communicating with others (e.g. chats) (X)	1.1*	1.1	1.5	585

* Average values were calculated based on a scale from 1 – never to 5 – every day.

** The marked values should be interpreted with great caution, as the numbers in each of these categories are less than 10.

Source: Own study based on PIAAC bases for Poland.

The above thesis may be illustrated by coefficients of correlation between the frequency of using the internet and computers at work and the level on the scale of skills related

to problem solving in technology rich environment (Annex, Table A1). In this case, it turns out that this dependency is rather weak.

In other words, the frequency of using the internet and computers at work does not directly translate into higher performance in the test concerning the skills in problem solving in technology rich environment. In general, it is only for the frequency of use of spreadsheets that this dependency is worth any attention. However, in this case, one may expect that the higher performance in the test is more a result of the nature of work where professional tasks are partially related to problem solving (in this case, using spreadsheets).

To sum up, the differences in skills between Generation X and Generation Y are to a large extent explained by the differences in the educational status – the higher the education, the higher the skills. At the same time, higher education means more frequent use of the internet and computers at work. However, this use does not directly translate into the level of skills in problem solving in technology rich environment. In this case, the dependencies are more subtle and are probably related to the specificity of professional tasks (routine vs non-routine, solution-oriented). At the same time, the level of skills in problem solving in technology rich environment is more related to the educational status than to having access to a computer, which in part indicates certain universal bases (not necessarily technological) related to the approach to looking for solutions. Furthermore, higher level of access to the internet and computers in the youngest age groups (younger millennials) does not necessarily have to guarantee their preparedness to use technologies creatively. Likewise, work with the use of ICT tools will not necessarily foster the development of problem solving skills using these tools. What seems the most important in this case, both in daily and professional use of the internet and computers, is the aim of using these tools (performing the same operations or looking for new solutions). This is what will foster maintaining/developing skills related to problem solving.

In general, very similar dependencies may be observed in the case of self-assessments of skills collected as part of the Human Capital Study project – the higher the educational status, the higher the self-evaluations. However, in this case, one exception can be noticed. Educational status is negatively correlated with the self-evaluation of the skills in the area of assembly and repair of machines and technical devices.

Table 16. Average self-evaluations of skills (five-point scale)

Skill	primary (Y younger)	primary (Y older)	primary (X)	secondary (Y younger	secondary (Y older)	secondary (X)	higher (Y younger)	higher (Y older)	higher (X)	N (Y younger)	N (Y older)	N (X)
Analysing information and drawing conclusions	3.2	3.3	3.2	3.7	3.7	3.5	4.1	4.2	4.1	664	881	1,136
Learning new things	3.7	3.7	3.4	4.0	3.9	3.7	4.2	4.2	4.1	664	882	1,139
Computer, tablet, smartphone literacy	4.0	3.3	2.6	4.3	3.9	3.4	4.5	4.3	4.1	664	882	1,142
Using specialist computer programmes	2.8	2.0	1.7	3.4	2.9	2.5	3.6	3.6	3.4	664	882	1,142
Ability to operate machines, tools and devices	3.0	3.0	3.0	3.1	3.4	3.2	3.2	3.2	3.1	664	882	1,135
Assembly and repair of machines and technical devices	2.3	2.3	2.5	2.3	2.6	2.5	1.9	2.1	2.2	664	882	1,136
Simple calculation skills	3.4	3.4	3.4	4.0	4.0	3.9	4.2	4.2	4.3	664	882	1,142
Advanced mathematical calculation skills	2.4	2.0	2.1	3.0	2.8	2.6	3.1	3.2	3.2	664	882	1,143
Artistic skills	2.6	2.4	2.2	2.8	2.6	2.6	3.0	2.7	2.8	664	882	1140
General physical fitness	3.9	3.8	3.3	3.8	3.6	3.3	3.7	3.6	3.4	663	882	1140
Ability to cope with stress	3.5	3.4	3.4	3.6	3.7	3.6	3.7	3.8	3.7	664	882	1140
Readiness to accept personal responsibility for performing tasks	3.6	3.7	3.7	3.9	4.0	4.0	4.2	4.1	4.2	664	882	1,142
Inventiveness, creativity	3.6	3.5	3.4	3.8	3.8	3.7	4.0	4.0	4.0	664	882	1140
Time management skills, ability to meet deadlines	3.3	3.5	3.6	3.7	3.9	3.8	4.0	4.0	4.0	664	882	1140
Ability to organise oneself	3.6	3.7	3.8	3.8	4.1	4.0	4.2	4.2	4.2	664	882	1140
Teamwork skills	3.7	3.8	3.8	4.0	4.0	3.9	4.2	4.0	4.0	664	880	1,138
High interpersonal skills	3.8	3.9	3.9	4.0	4.1	4.0	4.2	4.1	4.1	664	882	1,141
Good communication skills, ability to express oneself clearly	3.7	3.8	3.8	3.9	4.0	4.0	4.2	4.1	4.1	664	882	1,142
International cooperation	3.0	2.8	2.8	3.5	3.4	3.1	3.6	3.6	3.4	656	866	1,111
Administrative work and record keeping	2.3	2.2	2.0	3.0	3.0	3.0	3.8	3.8	3.8	662	880	1,138
Coordinating other people's work	2.7	2.8	2.7	3.2	3.3	3.4	3.5	3.6	3.7	660	876	1,131
Conflict handling	3.2	3.0	2.9	3.3	3.4	3.4	3.6	3.5	3.6	663	880	1,133
Fluent use of Polish in speech and writing (linguistic correctness, rich vocabulary, ease of expression)	3.5	3.4	3.3	4.0	3.9	3.8	4.3	4.1	4.3	664	882	1,142

Source: Own study based on the 2017 Human Capital Study.

In general, it is difficult to point to clear generational differences in skills evaluations after having checked the impact of the respondents' educational status on the self-assessment. Differences between the generations are visible only in the self-evaluation of digital skills. Younger generations judge their computer, tablet and smartphone literacy, as well as their ability to use specialist computer programmes higher. The first of these skills received generally higher self-evaluation values.

Conclusions

The aim of this Chapter is to look for an answer to the question whether Polish millennials show the characteristics attributed to them in the media discourse. This concerns different professional strategies related to their system of values and clearly higher skills in using ICT. It also examines whether millennials are a relatively homogeneous generation in terms of their attitudes and skills or, similarly as for other generations, whether it is possible to distinguish clear segments within this age cohort.

One of the main characteristics that was supposed to distinguish millennials from the other generations present on the labour market is giving clear precedence to personal development and the private sphere over professional work. The data collected do not support this view. Millennials are no different from Gen X-ers in terms of average amount of hours spent weekly working. What is more, when flexible forms of employment are their main source of income, they spent on average more time at work than Gen X-ers. A similar situation is observed in the case of attitudes towards work. Although there are, in fact, differences in the average assessment of importance of professional work, they are so small that it is difficult to explain them with the presence of a distinctly different value hierarchy.

The opinions on the alleged sense of entitlement of millennials towards employment conditions are not confirmed either. Their assessments in this regard are at least the same or higher than those formulated by Gen X-ers. Also, the opinion on millennials being less loyal towards their employers remains unconfirmed. In the case of none of the analysed professional groups did millennials look for a new job more often than Gen X-ers. What is more, in the case of managers and specialists, a reverse trend could be observed (also statistically insignificant).

In light of the attitudes and strategies related to labour market participation, millennials do not constitute a uniform category. Similarly as in the case of Generation X, divisions by education, employment, occupation or gender play a huge role in this regard.

In the case of objective skills assessments (based on the PIAAC study), some intergenerational differences can be seen, but these can be explained by taking into account the following two elements: (1) the respondent's education, and (2) the point in career in which the respondent currently is, correlated with age and length of service.

Generally speaking, the higher the education, the higher the skills level. In addition, the higher the education, the more frequent use of the internet and computers at work.

Unfortunately, using computers is not equivalent to being able to solve problems using ICT – the dependencies here are more subtle and are probably related to the specific nature of work tasks (routine vs non-routine). The level of skills related to solving problems using ICT is more closely related to the level of education than to having access to a computer, which in part indicates certain universal bases (not necessarily technological) for solving problems. The same is true for the youngest millennials – access to a computer and the internet alone does not guarantee that they will be prepared to use technologies creatively, just as work with the use of ICT tools will not necessarily foster the development of skills related to solving problems using these tools. The key element in this case seems to be the specificity of typical tasks performed using technologies (performing the same operations or looking for new solutions). If technology is used creatively in everyday life (no matter whether for work-related or personal purposes), it fosters the development of problem-solving skills.

Summing up, based on the data analysed in this Chapter, it is difficult to find the vast majority of commonly shared opinions about millennials justified. This generation undoubtedly has its specific characteristics related to the conditions in which its representatives grew up, that include, e.g., better living conditions, increased average level of education and progressive technological development. However, the analyses presented do not make it possible to state that it translates into a specific set of characteristics, attitudes and skills displayed on the labour market, absent in the previous generations.

Annex

Table A1. Value of the Spearman's rank correlation between the value on the scale of problem solving in technology rich environment and the frequency of using the internet and computers in professional work
(data for people not currently participating in formal education)

	R (secondary)	R (higher)	p (secondary)	p (higher)	N (secondary)	N (higher)
Internet – e-mail correspondence (Y)	0.13	0.15	0.01	0.00	377	573
Internet – work-related information (Y)	0.08	0.12	0.15	0.00	377	573
Internet – transactions (Y)	0.11	0.06	0.04	0.14	377	573
Computer – spreadsheets (Y)	0.24	0.19	0.00	0.00	377	573
Computer – Word (Y)	0.21	0.10	0.00	0.01	377	573
Computer – programming (Y)	0.12	0.03	0.02	0.50	377	573
Computer – communicating with others (e.g. chats) (Y)	0.08	0.18	0.13	0.00	377	573
Internet – e-mail correspondence (Y)	0.20	0.07	0.02	0.23	132	314
Internet – work-related information (Y)	0.09	0.07	0.29	0.21	132	313
Internet – transactions (Y)	0.02	0.13	0.79	0.02	132	314
Computer – spreadsheets (Y)	0.23	0.22	0.01	0.00	132	314
Computer – Word (Y)	0.12	0.06	0.16	0.31	132	314
Computer – programming (Y)	-0.02	0.15	0.79	0.01	132	314
Computer – communicating with others (e.g. chats) (Y)	0.07	0.24	0.46	0.00	132	313

* Due to small sample sizes, people with below-secondary level of education were excluded from the analysis.

Source: Own study based on PIAAC bases for Poland.

Bibliography

1. Broadbridge A.M., Maxwell G.A., Ogden S. M. (2007). *Experiences, perceptions and expectations of retail employment for Generation*. "Career Development International" 12(6): 523–544.

2. Cogin J., (2012). *Are generational differences in work values fact or fiction? Multi-country evidence and implications*. "International Journal of Human Resource Management" 23(11): 2268–2294.
3. Costanza D.P., Badger J.M., Fraser R.L., Severt J.B., Gade P.A. (2012). *Generational Differences in Work-Related Attitudes: A Meta-analysis*, "Journal of Business and Psychology" 27: 875–902.
4. Costanza D.P., Finkelstein L.M. (2015). *Generationally Based Differences in the Workplace: Is There a There There?*. "Industrial and Organizational Psychology". 8(3): 308–323.
5. Deal J.J., Altman D.G., Rogelberg S.G. (2010). *Millennials at work: What we know and what we need to do (if anything)*. "Journal of Business and Psychology" 25(2): 191–199.
6. Dubow E.F., Boxer P., & Huesmann L.R. (2009). Long-term effects of parents' education on children's educational and occupational success: Mediation by family interactions, child aggression, and teenage aspirations. *Merrill-Palmer quarterly (Wayne State University. Press)*, *55*(3), 224.
7. GUS. (2014). Edukacja. Nauka. Społeczeństwo informacyjne [in:] *Dmochowska H. (ed.), Polska 1989–2014. p. 40–47.* Zakład Wydawnictw Statystycznych.
8. GUS. (2011). Szkoły wyższe i ich finanse w 2010. Zakład Wydawnictw Statystycznych.
9. GUS. (2018). Szkoły wyższe i ich finanse w 2017. Zakład Wydawnictw Statystycznych.
10. Hershatter A., Epstein M. (2010). *Millennials and the world of work: An organization and management perspective*, "Journal of Business and Psychology" 25(2): 211–223.
11. Kowske B.J., Rasch R., & Wiley J. (2010). Millennials' (lack of) attitude problem: An empirical examination of generational effects on work attitudes. *Journal of Business and Psychology*, *25*(2), 265–279.
12. Kozłowski W. (2013). Zaangażowanie rodziców a osiągnięcia szkolne uczniów. *Edukacja*, *122*(2), 78–89.
13. Lee J.S., & Bowen N.K. (2006). Parent Involvement, Cultural Capital, and the Achievement Gap Among Elementary School Children. *American Educational Research Journal*, *43*(2), 193–218.
14. Pyöriä P., Ojala S., Saari T., Jarvinen K-M. (2017). *The millennial generation: A new breed of labour?*. "SAGE Open" 7(1): 1–14.
15. Tomz M., King G., Zeng L. (1999). RELOGIT: Rare Events Logistic Regression, Version 1.1 Cambridge, MA: Harvard University, October 1, http://gking.harvard.edu/.
16. Twenge J.M., Konrath S., Foster J.D., Campbel W.K., Bushman, B.J. (2008). *Egos Inflating Over Time: A Cross-Temporal Meta-Analysis of the Narcissistic Personality Inventory* "Journal of Personality" 76(4): 875–902.

17. Twenge J.M., Campbell S.M., Hoffman B.J., Lance C.E. (2010). *Generational differences in work values: Leisure and extrinsic values increasing, social and intrinsic values decreasing*, "Journal of Management" 36(5): 1117–1142.

Passive, active or proactive? Employees, enterprises and training providers vs skills development

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Introduction

There is currently no need to convince anyone about the importance of involvement in developing skills when initial education is over. The knowledge and skills acquired at school or during studies soon become outdated. New technologies, which are constantly being developed, require newer skills, and the skills acquired in the past are no longer enough to address future challenges. Lifelong learning, which originally was a humanistic idea (Hylland 2012, Aspin 2007) highlighting the holistic development of individuals, is currently closely related to the human capital perspective which emphasises the role of education and skills for the broadly defined economic and social development. Numerous studies have shown that engagement in the development of adult persons' skills delivers measurable economic and non-economic benefits, both for learners, enterprises, and for the whole societies (CEDEFOP 2013, McMahon 2004). Economically, attention is drawn to the impact of the educational activity of individuals on wage increases, while in the non-economic dimension it is linked, e.g., to improvements in health and mental health (McMahon 2004). On the other hand, the involvement of enterprises in human resources development is linked, e.g., to increased productivity and innovativeness, as well as reduction in staff turnover and increased loyalty among employees (CEDEFOP 2013). One may expect that the advantage of enterprises which invest in human resources development over those which do not will grow further as the Polish economy will transform into a knowledge-based economy (World Bank 2007) of 4.0 economy (McKinsey 2015).

The development of knowledge-based economy is related to lifelong learning in two ways. On the one hand, investments in educating and developing the skills of adults drive innovativeness, providing a basis for the development of modern economy able to compete through innovations, not efficiency. On the other hand, with the development of the information society and knowledge-based economy, constant growth and updating of knowledge and skills become vital for all participants in the process (Worek and Turek 2015, Worek 2019). However, modern technologies, automation and digitisation not only change the models of how enterprises operate and cause growth of the demand for new skills, but also open new ways of achieving and developing these skills.

Traditional ways of learning, requiring the teacher to meet in person with the student, face growing competition in the form of remote learning, both organised, e.g. online training or courses, as well as organised to a lesser extent, as in the case of searching for information on the internet independently (Piasecki 2017).

In defining the modern trends in adult learning development, the importance of the following is pointed out: on-job learning (Brennan *et al.* 2006, NCEE 2009, Fong *et al.* 2017), micro-learning[1], online learning, as well as the role of modern technologies, not only in facilitating access to information, but also in diagnosing skills and developing learning processes adjusted to participants' needs. Also, the changing roles of learners and trainers are highlighted – from traditional teachers they transform into some kind of knowledge brokers, coaches who support learners in seeking solutions to problems autonomously (NCEE 2009, Fong *et al.* 2017). In the context of transformations which occur in the ways adults learn, universal skills gain more and more importance, e.g. using the internet, being able to search for and select information, as these become a necessary resource for making use of the broad possibilities for developing skills.

In this Chapter, using the results of surveys of the population, employers and entities offering development services carried out in the framework of the BKL Study, we will present the issue of skills development among the working population. This chapter will provide answers to the following questions: What percentage of those who work develop their skills? What are the

[1] Microlearning, otherwise known as microeducation, is a term which describes learning though acquiring tiny portions of information, e.g. though reading blog posts, reviewing websites, watching short tutorials on YouTube, etc. The occurrence and popularisation of these new forms of learning is related to the development of information and communication technologies, and primarily of the internet (see NCEE 2006).

most often used forms of skills development used by working people? What is the function of the sole fact of being employed in supporting educational activity? Then, we will look at these questions from the perspective of employers, considering the role of work environment which can stimulate or hamper skills development. In this part, we will answer the questions concerning the level of employers' involvement in developing their human resources, the factors differentiating this involvement and the development instruments used.

Finally, in the last part of the Chapter, we will concentrate on the activities of the training and development sector, primarily aiming to answer the following questions: To what extent are the activities of the sector adapted to the changing development needs of individual and corporate customers? To what extent is this sector proactive, indicating the directions for action in the area of human capital development in Poland?

The data used in this chapter originate from two editions of the BKL Study: 2017 and 2018. For the population survey, we use data from 2017, and not 2018. Firstly, in 2017, the survey was carried out on a more numerous sample (4,500 respondents aged 18–69, and not 1,500 as in 2018). Secondly, which is even more important, population surveys in 2018 were carried out in a panel sample, so their main objective was not to measure the values of indices and observe trends, but to track changes at the level of individuals. Therefore, in order to estimate the level and nature of the involvement of employed adults in skills development, 2017 data is more relevant.

The data from the survey conducted in 2017 is also used for the analysis of entities offering development services. In this case, it is due to the fact that the surveys of the training sector are organised biannually, not annually, and therefore we do not have the data for 2018. However, analyses concerning employers were carried out using 2018 data, which is primarily due to the fact that we possess better information on the involvement of employers in the development of their employees' skills for this year.

Employees developing their skills

Employment is one of the most important factors influencing the involvement in skills development and upgrading (Szczucka *et al.* 2014, Worek and Turek 2015, Worek *et al.* 2015). Working people have nearly five times higher chances to participate in formal and

non-formal education than those who are economically inactive (Worek 2019). Also, much more often than those who do not work, they learn in informal ways and develop their skills which are not directly related to their job. Taking into account all forms of learning (formal, non-formal and informal), according to 2017 BKL Study, 88% of working respondents declared that they developed their skills in the last year. The 2018 BKL Study confirms this result. According to the study, 91% of working people aged 18–64 declared that they developed their skills in the past 12 months. It should be noted that this value refers not only to all forms of learning, but also to all types of skills, both professional and non-job-related. However, the data shows that organised educational activity focuses primarily on professional development. On the other hand, professional skills are most often developed at the workplace, with the use of such instruments as job instruction training, resolving problems jointly, coaching, mentoring, observing other workers or job rotations. According to the population survey under the 2017 BKL Study, 42% of the working respondents developed their skills in the year preceding the survey using the above methods. Working people often develop their job-related by learning in non-formal ways, participating in courses, training sessions, conferences and other similar development projects. According to the population survey under the 2017 BKL Study, 33% of the working respondents developed their professional skills in the year preceding the survey in these ways. A similar percentage of respondents (28%) developed their non-job-related skills in non-formal ways.

The most commonly used form of learning is informal learning which usually takes the form of acquiring knowledge and information online, from printed materials, radio, television or learning from others (family, friends, co-workers).

72% of the working respondents used these ways to develop their skills in the 12 months preceding the survey. The learning method least frequently used by the working respondents is formal learning, that is at schools for adults or higher education programmes (according to the 2017 BKL Study 2017 – 7.8% in the last 12 months). In the case of working people this result seems obvious, as participation in formal education requires high level of commitment in terms of time (classes last at least one semester, however they are usually held at least through two semesters), which is difficult to reconcile with professional duties. Moreover, to keep the skills of those who completed the necessary process of initial education updated and supplemented, participation in shorter forms of learning, self-study or possibilities to learn from other employees are usually sufficient. Therefore, learning at schools for adults or in post-graduate study programmes is something employees who need to expand their

qualifications or acquire new ones resort to. Figure 1 shows the level of participation of working respondents in selected types of educational activity.

The data presented in Figure 1 may be considered to be very optimistic and showing a positive picture of the involvement of Polish employees in own skills development.

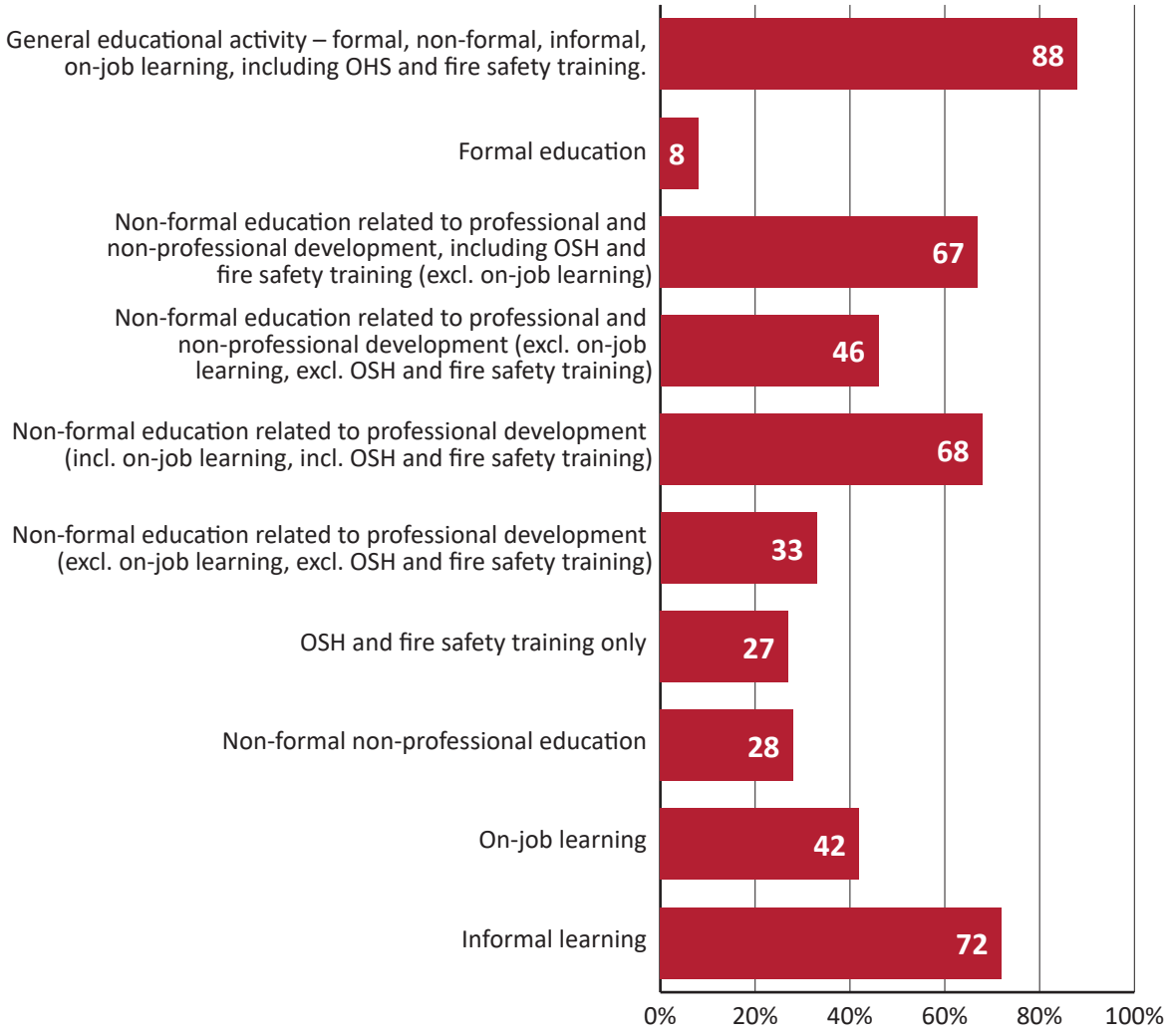
The values of the indices presented are significantly higher than the values obtained in the BKL Study 2010–2014[2] or in the 2016 Adult Education Survey[3]. (GUS 2018). However, the results are similar to the results of the European Working Conditions Survey[4]. According to this survey, in 2015, 34% of employees from Poland declared participation in training financed by the employer. Exactly the same share of the surveyed employees (34%) declared participation in training at the workplace. Therefore, it may be considered that even though the surveys of the 2017 BKL Study show a significantly higher level of employees' involvement in own skills development compared to the previous editions of the BKL Study or surveys carried out by GUS, they are not the only ones that show the educational activity of Polish employees in a slightly better light.

[2] According to the population surveys under the 2014 BKL Study, only 25% of working respondents developed their skills in non-formal ways. Among them, 17% participated in courses and training sessions other than OSH or fire safety training, and 8% participated in OSH or fire safety training only. According to the 2017 BKL Study, participation in voluntary non-formal education (excl. OSH and fire safety training) is at 46%. An increase in the values of indicators in the 2017 BKL Study is primarily the consequence of changes introduced to the set of questions concerning adult learning in the population surveys under the 2017 BKL Study. These changes consisted primarily in simplifying the language, introducing a breakdown into learning for work-related purposes, and learning not directly related to the job, as well as including on-job learning. For more information on the changes in the evaluation of adult learning introduced in 2017, see Worek 2019.

[3] Adult Education Survey is an international survey supervised by Eurostat and carried out in European Union Member States as part of official statistics activity. In Poland, this survey is carried out by GUS. Until now, three editions of the survey were carried out: in 2007, 2011 and 2016. The results of the 2016 survey show that, 33% of working respondents developed their skills in non-formal and formal ways, and 30.8% only in a non-formal way (GUS 2018). These values are higher than in the 2010–2014 BKL Study, as the Adult Education Survey includes on-job instruction training as a form of non-formal learning, while the 2010–2014 BKL Study does not (see GUS 2018, Worek 2019).

[4] Information on this survey as well as publications and results may be found at: https://www.eurofound.europa.eu/surveys/about-eurofound-surveys

Figure 1. Educational activity of working population – participation in selected forms of learning, age: 18–69 (%)



Source: 2017 BKL Study, population survey.

However, one may look at the data presented from another perspective, focusing not on those who develop their skills, but instead on those who remain educationally inactive or do not learn in a specific way. Particular attention should be given to the development of professional skills and to on-job learning which is considered to be one of the most important forms of developing employee skills (Brennan *et al.* 2006). As 2017 data shows, 68% of working respondents develop their professional skills, whereby 58% of them don't treat workplace as the environment where development takes place and which stimulates learning.

Diversification of involvement in the development of skills among working population

The analysis of relations between the job and development of skills shows well the importance of professional work and its nature for the level of adults' development activity. Even though the fact of being employed itself generally significantly affects the level of educational activity, among the people who work, but occupy various positions, considerable variations may be observed (Table 1). In terms of patterns observed, the results of the 2017 BKL Study are the same as those from the 2010–2014 Study and the surveys carried out by GUS (LFS and Adult Education Survey)[5].

The highest percentages of learners will be among professionals, and the lowest among skilled agricultural workers, both among adults in general and taking into account a breakdown by gender. The highest percentages of people participating in obligatory OSH and fire safety training only will be among qualified and not qualified workers and operators. In groups of professions and positions in the category of professionals and managers, the percentages of those participating in obligatory training only are much lower. It should be noted that people performing blue-collar jobs, and in particular unskilled workers, represent not only lower level of non-formal learning for professional purposes, but they also develop their non-professional skills in a non-formal way much less often than professionals, managers and associate professionals. This confirms the thesis repeatedly put forward by the BKL Study team, that both the factors which stimulate the development of skills, as well as those that hamper the process, are especially found in the work environment, organisational culture of companies, and in the nature of the job (Szczucka ***et al.*** 2014, Worek ***et al.*** 2015, Worek and Turek 2015). This is also confirmed by the results of analyses carried out in other countries (see, e.g., Brennan ***et al.*** 2006, Desjardins ***et al.*** 2006).

[5] Results of these surveys are available in publications by GUS (e.g. GUS 2018) and on Eurostat's website.

Table 1. Percentages of working people aged 25–64 who participated in non-formal learning in the past 12 months, by type of non-formal education and job

	Men (%) non-formal total (without OHS and fire safety training)	Men (%) non-formal professional (without OHS and fire safety training)	Men (%) OHS and fire safety training only	Men (%) non-formal, non-professional	Women (%) non-formal total (without OHS and fire safety training)	Women (%) non-formal professional (without OHS and fire safety training)	Women (%) OHS and fire safety training only	Women (%) non-formal, non-professional	Total (%) non-formal total (without OHS and fire safety training)	Total (%) non-formal professional (without OHS and fire safety training)	Total (%) OHS and fire safety training only	Total (%) non-formal, non-professional
1 manag.	60	45	12	41	76	64	11	53	66	53	12	46
2 proff.	73	60	7	46	80	69	5	48	77	66	6	47
3 assoc.	56	45	21	36	53	40	21	33	55	42	21	35
4 cler.	45	29	30	22	55	35	18	31	50	32	24	27
5 serv.	41	21	31	32	37	24	24	20	38	23	26	23
6 agric.	17	10	8	8	17	8	3	11	17	9	6	9
7 skilled w.	33	19	38	19	20	6	48	18	31	18	39	19
8 oper.	33	21	35	21	19	15	57	9	30	20	40	19
9 unskilled w.	25	18	40	10	18	10	44	10	20	13	43	10

All professional groups (first level of ISCO classification): 1– managers, 2 – professionals, 3 – technicians and associate professionals, 4 – clerical support workers, 5 – service and sales workers, 6 – agricultural workers, 7 – craft and related trades workers, 8 – operators (including drivers) and assemblers, 9 – elementary occupations.

Source: 2017 BKL Study – population survey.

Even though the values of learning indicators in the 2017 and 2018 BKL Studies are significantly higher than in the 2010–2014 BKL Study, also these results confirm that

learning and development of skills, both professional and non-professional, remains to be typical for the better-educated and those who occupy positions which are more favourable to development (Desjardins *et al.* 2006, Worek 2019). The data presented in Table 1 show another interesting fact: in each group of jobs, the percentage of people who learn for professional purposes is higher than of those who learn for non-professional purposes. This simple observation confirms once again the importance of the work environment and the specificity of the job performed as important factors promoting skills development.

The role of professional work and its nature as a factor which significantly impacts educational activity is also visible when comparing answers to the questions concerning the possibilities of using one's knowledge at work and the need to learn new things at work in groups of those who work and learn formally and non-formally and those who do not learn (Table 2). Those who are educationally active significantly more frequently indicate that their job requires constantly learning new things and declare that they use their knowledge and skills at work. Those who are educationally active indicate slightly less frequently than those inactive that they often perform tasks at work which are too easy for their skills. The differences between the averages of answers to these three questions are not great between both groups, but they are statistically important.

What strongly differentiates those educationally active form the inactive is the conviction that in the last five years of their work they gained professional experience and developed their skills. Unsurprisingly, those who are educationally active significantly more often felt that they developed their skills and gained new professional experience than those who did not learn in a formal or non-formal way. What is slightly less obvious is the relation between educational activity and the desire to change jobs. The data shows that those who work and are educationally active declare more frequently that they would like to change their job. This result seems to contradict the positive impact of creating opportunities for employees to develop their skills on the reducing staff turnover, which was indicated in many studies (e.g. Bishop 1991, 1994). However, it may indicate that in Polish enterprises, the employees who develop their skills do not have enough opportunities to use their skills and receive a return on investment in their development, which is why they declare willingness to change their job slightly more frequently than those who are educationally inactive.

Significant differences between those who are educationally active and those who are not may be observed also when it comes to opinions on the possibility to use one's knowledge

and skills at work: those who are active significantly more frequently indicate that their job does not offer them such possibilities. Even though this conclusion cannot be considered to be particularly revelatory, as a similar correlation was observed when analysing the results of the PIAAC survey (OECD 2016), it constitutes another argument confirming the importance of the work environment for fostering the educational activity of adults.

Table 2. Assessment of selected working conditions vs educational activity (only working population)

Assessment of selected working conditions	Formal or non-formal learning in the last 12 months (without OSH and fire safety training)	Sample	Average
I would like to change my job (1–5)	yes no	1,317 1,230	2.49* 2.31*
I constantly have to learn new things at work (1–5)	yes no	1,307 893	3.67* 2.97*
I feel that I use my knowledge and skills at work (1–5)	yes no	1,310 892	4.17* 3.89*
I often have to perform tasks that are too easy for my skills (1–5)	yes no	1,309 890	2.97* 3.19*
I sometimes have to perform tasks that are too difficult for my skills (1–5)	yes no	1,307 889	2.49 2.44
Do you feel that in these five years you gained valuable professional experience and significantly improved your skills? (1–4)	yes no	1,324 956	3.20* 2.67*
To what extent is it possible for you to use the knowledge and skills you gained in your current professional situation? (1–6)	yes no	1,216 300	4.61* 3.86*

*Statistically significant differences, Mann–Whitney U test, materiality level: 0.05.

Source: 2017 BKL Study – population survey.

Those who are educationally active and those who are inactive do not differ significantly as for their opinion on whether or not they perform tasks that are too difficult for their skills.

Companies investing in human resources development

The data presented in the first part of this Chapter clearly indicates that in order to better understand the determinants of human capital development in Poland, it is necessary to take a closer look at the strategies governing companies' actions, the methods they use for human capital management as well as the tools used to improve it. Even though there is a lot of evidence that investments in human resources development are beneficial for companies (see e.g. CEDEFOP 2013), its efficiency depends on many factors, including the characteristics, structure and organisational culture of the company, the type of development activities, personnel profile, the level of expenditure on development and the methods of integrating the training system with other activities in the area of human resource management (CEDEFOP 2013).

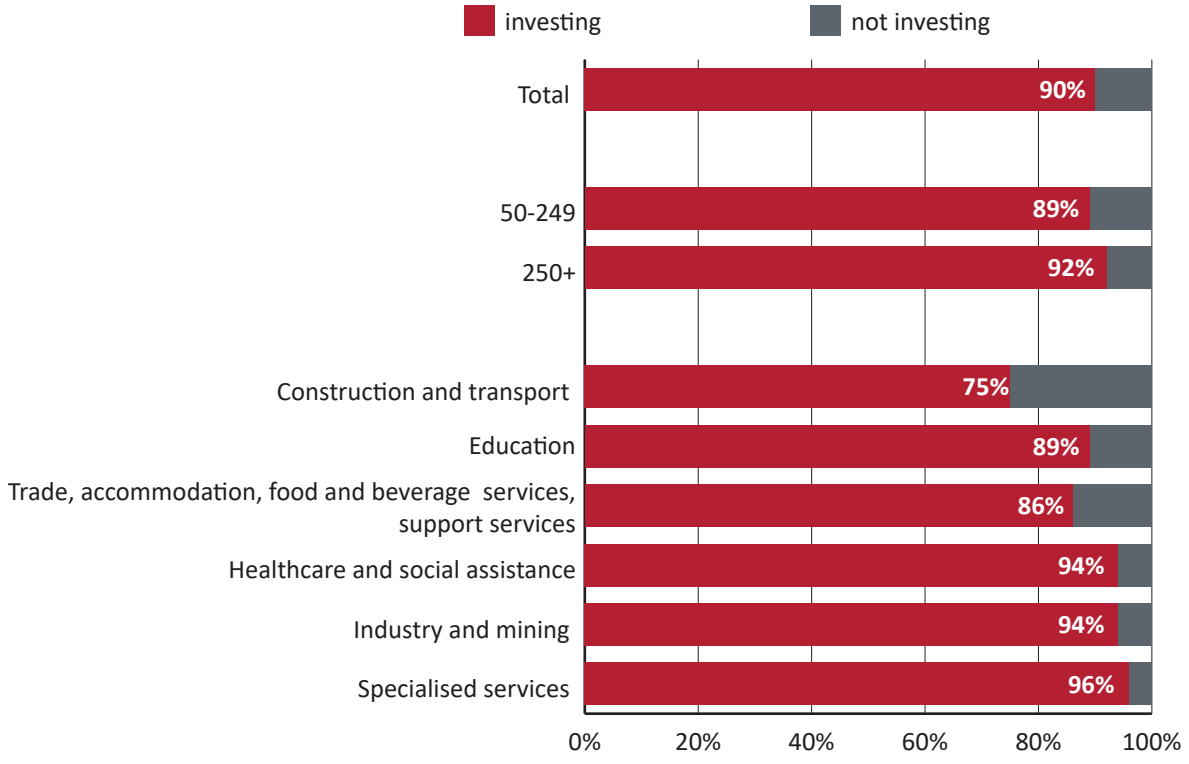
Employer surveys under the BKL Study give a better picture of what kind of development activities are used by those companies which employ the most employees in the country, that is medium-sized and large employers. The analysis presented in this sub-chapter focuses on this particular group of employers.

This part presents data illustrating the involvement of these companies in employee development, as well as the characteristics that most differentiate this involvement.

Analyses carried out in the last decades have shown that human capital and its quality are not only a resource which is assigned to an individual and determines their well-being, but it also undoubtedly constitutes one of the key factors which also generates company growth. There are several empirical studies in this field which show positive impact of training on company productivity (Barrett and O'Connell, 2001), generating better financial results (Glaveli and Karassavidou, 2011) and increasing companies' innovative capacity (e.g. Beugelsdijk, 2008). This means that the more a company engages in development activities in the area of staff skills, the better are its results in general. A question worth asking is: to what extent do Polish entrepreneurs see this correlation and do they take advantage of it?

The results of the BKL Study show that the vast majority of medium and large companies (90%) carry out activities to develop their staff's skills[6] (Figure 2).

Figure 2. Entities investing in the skills of their staff among companies in general, by size and sector (%, N = 1,035)



Source: BKL Study 2018 – Employer survey.

Even though the intensity of those investments among employers varies in many aspects, the attitude of complete passiveness in this field is the case with some 10% of companies only. However, it must be borne in mind that this percentage concerns larger employers employing over 50 employees among which the values of indicators are typically higher than in groups of small employees. Greater number of employees employed by them automatically

[6] As in previous editions of the survey, the study did not ask directly whether a company undertakes any activities to improve the skills and skills of its employees, and instead included a set of questions concerning specific forms of supporting employee development. As a novelty, this edition includes a breakdown into activities at the workplace and outside it as well as a broadened scope of answers, e.g. through incorporating such forms as instructions or coaching. Assenting to at least one form meant being included in the group of employers involved in development activities. Therefore, the inclusive character of the indicator has increased to an even greater extent compared to previous editions.

causes the expectations to increase as regards the pro-development activity in a company, conducted in any company. Therefore, it can be concluded that 10% of passive employers constitute quite a potential – it is approximately 3.2 thousand medium and large companies in the country, which, firstly, do not manage skills appropriately, and secondly, do not generate relevant incentives for their employees to develop their potential on their own.

The results of the survey also show that the general trend which indicates that activity aimed at development of employees' skills and qualifications being undertaken more frequently by larger entities, regardless of the sector in which an enterprise operates, remains unchanged, even though variability while comparing medium and large companies only is not large. For medium companies, it was 89% on average, and for large employers – 92% (Figure 2). The value of this indicator of activity does not deviate significantly from that of previous years.

A factor which significantly differentiates investment activity of companies in the field of skills is also the sector in which they operate.

However, the previous breakdown into traditional sectors (construction and transportation, trade, accommodation, food and beverage services, as well as industry and mining), characterised by much lower activity in terms of employee training, and "new economy sectors" (education, healthcare and social assistance, and specialised services) which are characterised by a high share of employers investing in their staff, is slightly different. In this area, what primarily draws attention is the lower general indicator of activity for the education sector, which in 2018 was 89%, while in previous years, it was around 100% among medium and large employers (Figure 2). This difference results e.g. from the fact that currently, the survey covered only enterprises, and not educational institutions.

In the industry and mining sector, attention is drawn to the share of active companies, which is significantly higher than in previous years, which may be largely attributed to the popularity of using on-job instruction training in the professions of skilled and unskilled workers employed in industry and mining. This means that making the activity indicator more inclusive by coming up with an expanded list of potential forms in which to develop staff skills proved successful in offering a better characterisation of the sector where job instruction training is among the most commonly used forms of matching skills to the needs of the workplace. Thus, mining and industry, meaning 94% of companies operating in the

sector, joined the group of the most active sectors, together with healthcare and social assistance (94%) and specialised services (96%).

Construction and transport are at the other extreme. Among the analysed sectors, these are where the activity indicator is the lowest, with only 75% of companies in this group actively investing in skills.

Figure 3. Company development index

The index which includes recruitment and innovation activity of businesses takes three values: strong development – moderate development – stagnation.

Significant development means that:

1. **a company implemented innovations in the last year (innovative products/services or other forms of innovation)**

and

2. **plans to implement innovations next year; and**
3. **recruited employees in the last year.**

Stagnation:

1. **a company DID NOT introduce ANY innovations in the last year**

and

2. **IS NOT planning to implement innovations next year; and**
3. **DID NOT recruit employees last year.**

Moderate development: other companies.

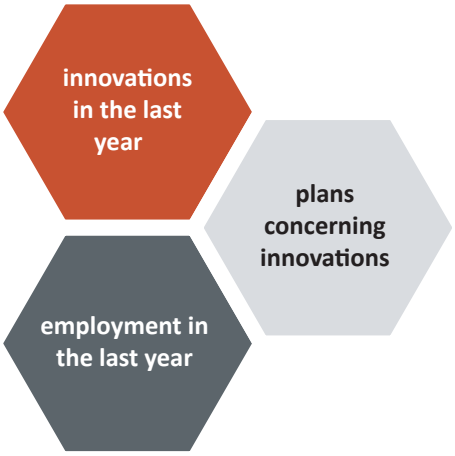
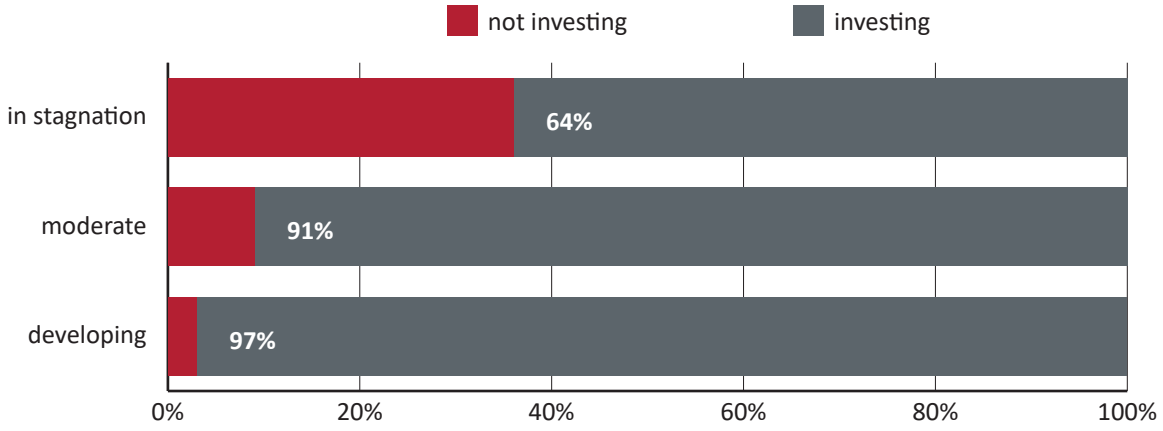


Figure 4. Educational activity of companies depending on their level of development (%, N = 1,035)



Source: BKL Study 2018 – Employer survey.

Company's development (Figure 3) is the third factor which introduces significant diversity to its activity in the area of skills, confirming that the aforementioned relationship between investments in the skills of staff and the potential to innovate coupled with company growth, is apparent in the national context as well. Large and medium companies that experience significant growth are also among the most active when it comes to making their staff more competent. Almost all employers in this group claimed to have taken such measures, i.e. 97% (Figure 4). This indicator was at a significantly lower 64% in the group of companies in stagnation, meaning those that do not innovate and do not recruit employees.

Diversification of staff investment policies broken down by company type and sector of operations

Apart from the impact of development activities, which extends to positively affecting the company's economic performance, other surveys also show the effects that investing in human capital has on employee motivation (Castellanos and Martín, 2011). The latter point leads to adopting a more comprehensive view of the effects brought on by investing in development, also as regards policies for individuals and the policies for managing human capital in companies. Overview of this perspective follows below.

Why do employers undertake development activities? The results of the BKL Study show that employers see the impact of development activities extending to a wider range of effects in their companies as well. The employers claim that activities aimed at developing employee skills in a company serve to boost motivation and engagement of their workforce. Representatives of companies are of the opinion that this area, alongside with cooperation, is where their development activities yield the most tangible results. The average rating for this dimension is 2 (result occurred to a moderate degree) on a scale of 0–3, irrespective of the size of the company's size and sector of operation.

The potential for a development policy to impact employee motivation and engagement is particularly important in the era of growing competition to entice employees on the national market, as well as the companies' management going to greater lengths to protect their valuable human resources. An example of a sector where deficits and competition to entice employees grow on an unprecedented scale, is the IT sector (Szczucka, Lisek and Strycharz, 2019), but this trend is horizontal and manifests (to different degrees) across all sectors of the economy. Therefore, the competitive position on the market will be determined by the companies' ability to face the challenges of the 'employee market', such as increased staff turnover, growing expectations, salary and otherwise motivated, with opportunities for development, professional or even personal, ranking high on the list.

Table 3. Average assessment of impact that conducted development activities had on various areas of a company's operations, broken down by sector

Impact of development activities on	Construction and transport	Education	Trade, accommodation, food and beverage services, support services	Healthcare and social assistance	Industry and mining	Specialised services	Total
employee motivation and engagement	2.0	2.1	1.9	2.0	2.0	1.9	2.0
cooperation	2.0	2.2	2.1	2.0	2.0	2.0	2.1
company sales	1.5	0.7	1.6	0.8	1.4	1.3	1.3
employee creativity	1.8	2.2	1.8	1.9	1.9	1.9	1.9
company prestige	1.9	2.1	1.6	1.9	1.9	1.8	1.9
job rotations	1.8	1.6	1.8	1.6	1.7	1.5	1.7
company's potential to innovate	1.7	2.0	1.7	1.6	1.7	1.7	1.8
employee productivity	1.8	2.1	1.9	1.9	1.9	2.0	1.9
N	73	186	157	63	286	127	892

Assessment on a scale of 0–3, where 0 means: no effect in this area, 1 – the effect was small, 2 – the effect was moderate, 3 – the effect was substantial.

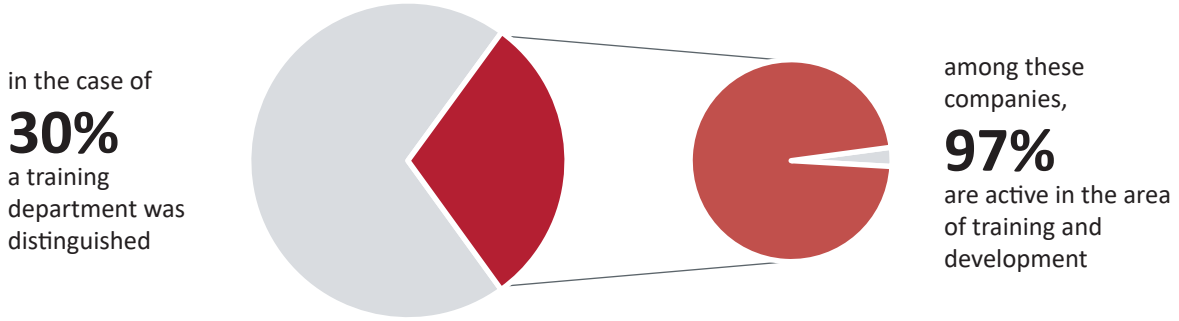
Source: BKL Study 2018 – Employer survey.

As previously indicated, people who actively develop their skills are less prone to change their job. However, employers do not consider training and development activities to be an important tool for reducing the company's staff turnover. They believe that the impact of the activities they carry out on this area is rather moderate (average rating 1.7, and, in the case of specialised services, even 1.5). This may be due to an inconsistent development or personal policy in which development activities tend to be more of a knee-jerk reaction to current needs rather than part of a long-term strategy which allows development activities to produce more robust effects. This interpretation is supported by the fact that only a little more than half (56%) of the companies have an action plan for a period longer than three months.

The companies' organisational environment also determines whether they tackle development needs in a strategic way. Those include having a training department or budget as well as some organisational practices, including assessment of employee skills needs or using custom development plans.

When analysing organisational environment, one may conclude that despite the fact that these are medium or large entities, that have at least several dozens of employees on their payroll, solutions in this area are not applied universally. The data also show that entities which do apply those solutions, are more frequently engaged in developing their employees' skills than companies from the other group.

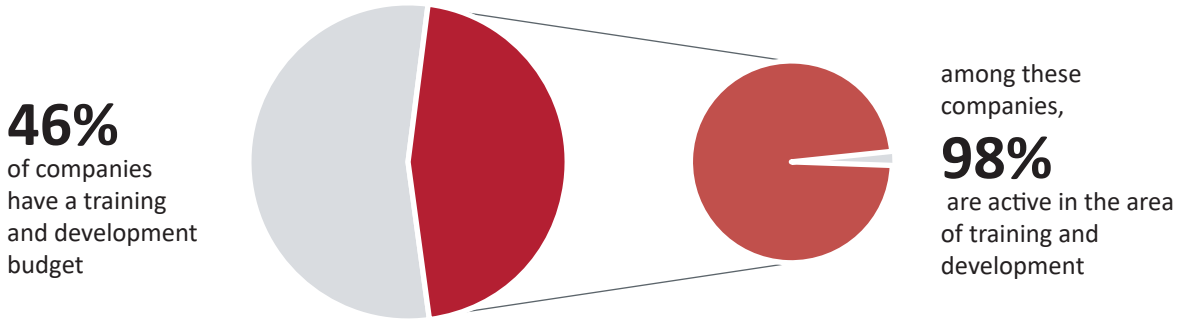
Figure 5. The percentage of companies which have a training department and pursue development activities



Source: BKL Study 2018 – Employer survey.

Of the companies surveyed, 30% declared having a training department, almost all of which were also engaged in developing the skills of their employees (figure 5). The percentage of active entities in the group which did not have such a department was lower (87%). However, having a training department is more frequently typical for larger companies (almost half of them have such a department) rather than medium (every fourth medium company has one), which may contribute to the higher percentage of training entities.

Figure 6. Percentage of companies with a budget for company development and actively pursuing development activities



Source: BKL Study 2018 – Employer survey.

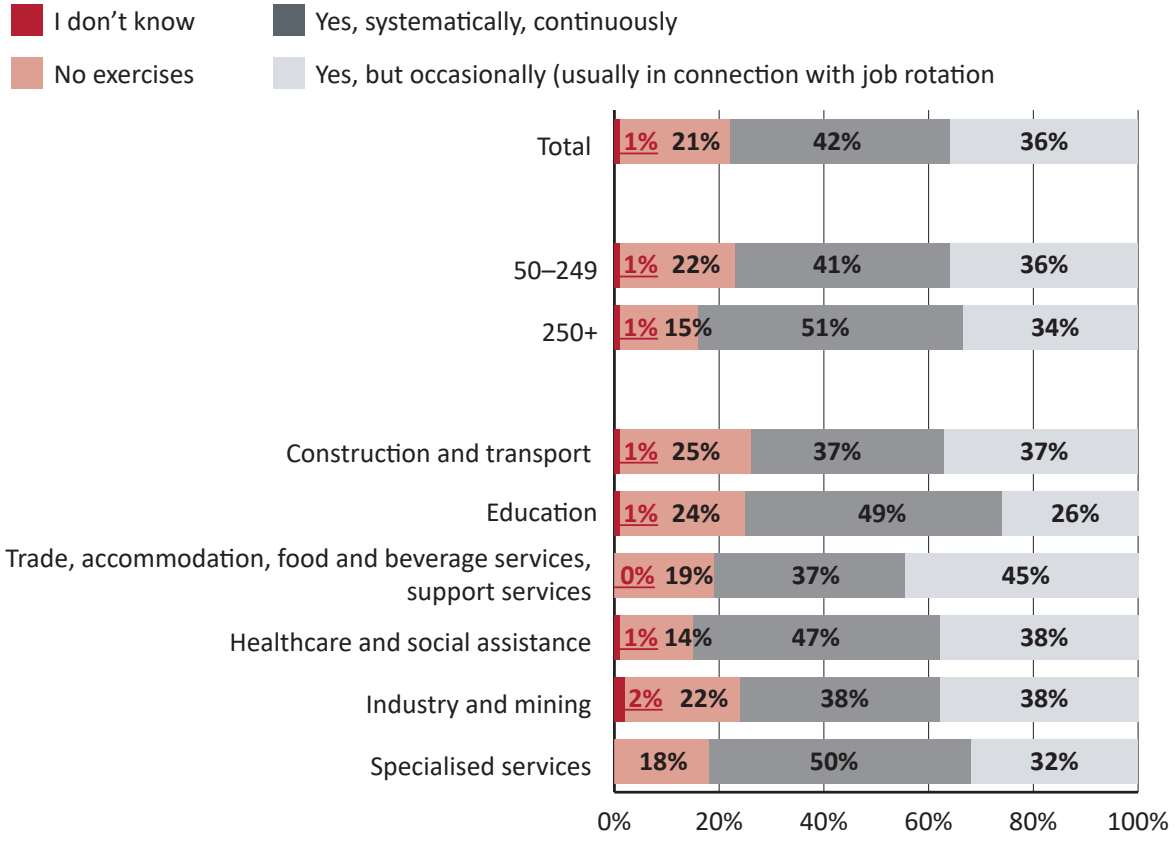
Less than a half of the companies surveyed have a separate development budget. Almost all companies in this group invest in development (Figure 6), while 20% of companies in the other group are inactive in terms of development.

As is the case with training departments, large companies (56%) more frequently than medium-sized companies (45%) choose to create a separate budget for development activity. What definitely stands out in sector terms are specialised services – companies representing this sector most often use both solutions. At the opposite end of the spectrum are companies from the construction sector, which most rarely use support from the relevant department and allocate separate budget resources for development activities.
An interesting example is the education sector, where mixed approach is used in the sense that a development department is rarely an independent entity (19%), but, more frequently than in other sectors, there is budget for development (51%).

78% of medium-sized and large companies use skills need assessments, with almost half of the companies in this group doing it only occasionally (when a need arises, e.g. resulting from job rotation). Large companies as well as companies in the specialised services and education sector carry out systematic assessment more frequently than medium-sized companies. At the same time, companies from the education sector have the largest, next to the construction sector, group of companies which do not assess the skills needs of their employees at all (24–25%) (Figure 7).

On the other hand, only 15% of the companies surveyed use tools for long-term human resource management, such as individualised development plans for employees. Such tools are more frequently used by companies characterised by strong development (26%) than those in stagnation (7%).

Figure 7. Assessment of skills needs of employees depending on company size and sector (%, N = 1,035)



Source: BKL Study 2018 – Employer survey.

Internal and external training as well as other forms of staff development in companies

Having compared the popularity of various forms of investing in skills in companies, it may be concluded that activities carried out in the workplace are definitely more common than other courses and training sessions, which were distinguished as a separate category in Table 4 below. Courses and training sessions, in any form, are used by 70% of employers,

while other forms of development in the workplace (such as job instructions, coaching, job rotation, etc., analysed below in detail) by as many as 85% of companies.

Therefore, it is clear that the development activity of companies is located primarily within a company and is carried out using the company's human capital. This correlation may be observed irrespective of company size, its level of development or sector. Education is an exception. Here, a similar group of companies uses both forms (82% and 80%).

Table 4. Carrying out various types of development activities, by company size, development and sector (%)

	Training sessions / courses*	Forms of development outside the workplace	Development in the workplace	Sample
Total	70%	62%	85%	1,035
50–249	69%	61%	84%	887
250+	73%	64%	88%	147
development	91%	80%	95%	224
moderate	68%	62%	85%	708
in stagnation	39%	23%	62%	104
Construction and transport	53%	37%	72%	103
Education	70%	80%	82%	220
Trade, accommodation, food and beverage services, support services	65%	52%	83%	189
Healthcare and social assistance	78%	71%	86%	72
Industry and mining	76%	61%	90%	315
Specialised services	72%	61%	91%	137

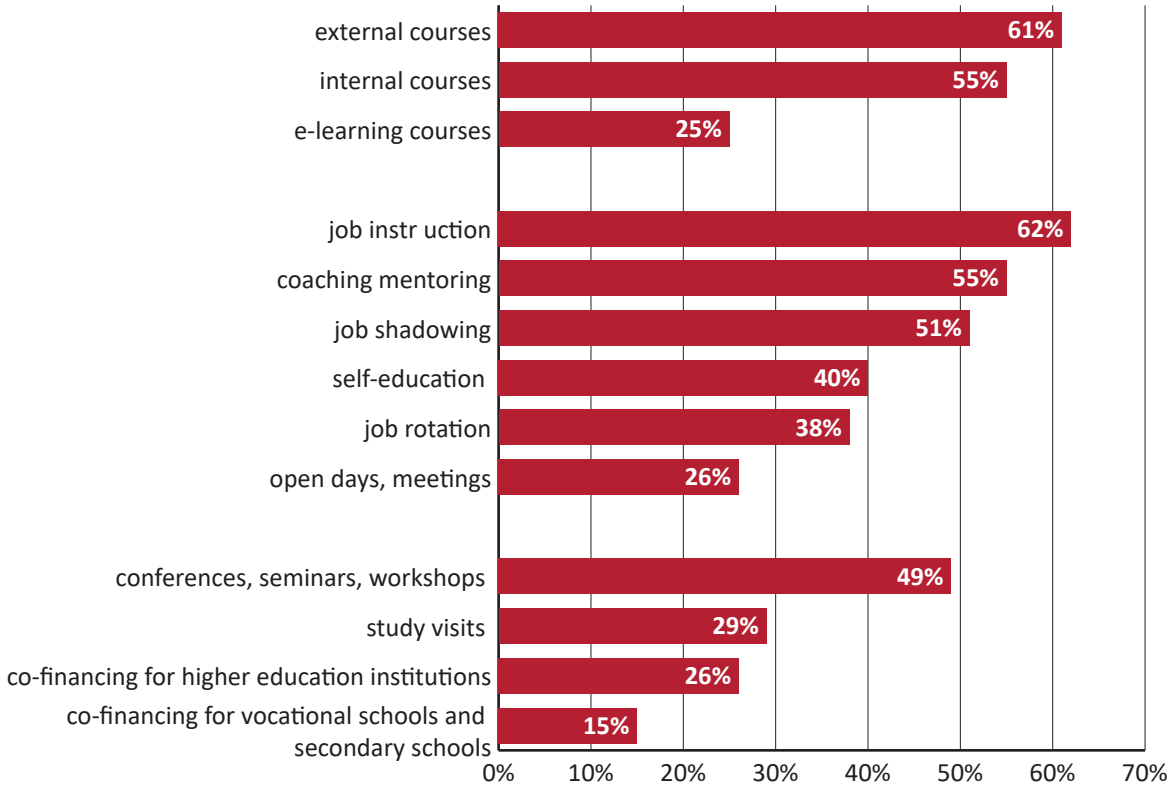
*External, internal and e-learning training and courses BKL

Study 2018 – Employer survey.

The same trend is also indicated by the growing popularity of internal courses compared to courses conducted by external companies or training institutions. The difference between these forms, which only a few years ago was several dozen percent, decreased in this edition of the survey to only 6%. Courses and training sessions were conducted internally by 55% of

companies, and externally by 61%. E-learning courses, used by every fourth company in the group of medium and large companies, are still relatively unpopular.

Figure 8. Companies implementing different forms of education (%, N = 1,035)



Source: BKL Study 2018 – Employer survey.

The most popular form of education outside the workplace, used in half of the companies surveyed, are conferences, seminars and workshops. They are popular in particular in education and healthcare sectors, which is consistent with the intuitive view on the manner of promoting knowledge within these sectors. This form of skills development is also more popular among developing companies. It is followed by study visits and co-financing for higher education institutions (29% and 26%, respectively) which, apart from the above-mentioned sectors, are relatively popular also among companies providing specialised services. All external forms are the least frequently used by companies in the construction sector (the lowest result also as concerns co-financing for vocational and secondary schools) and entities in stagnation (Figure 8).

Table 5. Application of training forms in companies by development and sector

Learning forms	developing	moderate	in stagnation	Construction and transport	Education	Trade, accommodation, food and beverage services, support services	Healthcare and social assistance	Industry and mining	Specialised services	Total
co-financing for vocational schools and secondary schools	25%	14%	1%	12%	17%	12%	15%	17%	12%	15%
co-financing for higher education institutions	41%	23%	7%	12%	52%	10%	26%	23%	23%	26%
conferences, seminars, workshops	59%	50%	22%	23%	69%	38%	63%	47%	49%	49%
study visits	41%	27%	12%	18%	37%	26%	31%	26%	32%	29%
coaching, mentoring	61%	54%	45%	47%	43%	65%	56%	57%	62%	55%
job rotation	49%	38%	14%	37%	15%	45%	36%	50%	38%	38%
job shadowing	62%	50%	36%	34%	47%	66%	45%	51%	54%	51%
job instruction trainings	71%	62%	42%	52%	48%	62%	63%	74%	64%	62%
open days, meetings	44%	22%	14%	16%	44%	23%	22%	18%	28%	26%
self-education	55%	39%	20%	27%	61%	29%	45%	34%	43%	40%

Source: BKL Study 2018 – Employer survey.

The most popular form of skills development implemented within a company and using its own resources is definitely job instruction training (62%). Another popular form of improving or adjusting employees' skills to the needs of a company is learning under the direction of another person, coach or supervisor aimed at completing ongoing tasks or long-term development possibilities, that is coaching or mentoring (55%), followed by direct observation of another person performing this job, or job shadowing (51%). 40% of companies declared also support for employees' self-development, which shows the growing popularity of this form compared to recent years.

Despite the popularity of similar forms of development, in sector-specific terms, it is possible to observe some differentiation of options to combine the different forms. In traditional economy sectors, that is industry and mining, construction and transport and trade, short and practical forms of learning are dominant, in a practical form, most frequently in direct contact with the teacher: job instruction training, coaching and job shadowing.

In new economy sectors (education, healthcare and specialised services), employees' self-development is supported more often than in other branches (from 43% in services up to 61% in education, while in other branches it is 27–34% of companies). Moreover, also external forms of knowledge acquisition are more popular – conferences and seminars (most often related to acquiring specialised knowledge), as well as co-financing studies in higher education institutions (popular in particular in education: 52% of companies declared this form of employees' education) (Figure 5).

Forms of human capital development v job positions – employee and employer perspective

To make the above information complete, it is worth noting how the ways of developing skills are adapted to the nature of the work performed, which is better implied by the position occupied. BKL Studies allow for analysing this question both from the employee and employer perspective. Population surveys show how people employed in different positions develop their professional skills, while employer surveys show what forms of human capital development employers consider to be appropriate for a given job position.

According to the population surveys the 2017 BKL Study, skills development through on-job learning is typical for blue-collar workers: job instruction trainings, support from more experienced workers or job rotation. On the other hand, the spectrum of learning forms addressed to managers and professionals is much wider – it covers both on-job learning, and learning outside the workplace. It should be noted that over ¼ of professionals and managers develop their skills through e-learning, while among the people employed

in blue-collar jobs, this form of development is used by no more than 2% of people. This outcome is not surprising if we take into account the nature of the job specific for these two categories, but it is worth taking into account while considering, e.g., factors affecting the level of digital skills among people with different level of education or employed in various positions. The nature of professionals or managers' job favours using electronic tools for for obtaining information, becoming an impulse for developing such universal skills as digital skills.

People with a lower level of education, employed in blue-collar jobs and performing work requiring other skills, although they develop their professional skills in the workplace, this development is different from that of professionals or managers.

Also employers adjust their development strategies to job positions to which they are dedicated. This is indicated by clearly differentiated employer assessments concerning the efficiency of the different forms of employee education depending on the group in which a need to develop skills is observed. They see different activities as effective for management staff, professionals and lower tier workers[7].

Employer surveys of 2017 (Prokopowicz *et al.* 2018) show that, in relation to the managerial staff, the development forms most frequently used are those outside the workplace. In particular, the best effects are achieved by participating in conferences or seminars (29% responses in reference to this group of employees) and as a result of training for managers in post-graduate study programmes, MBA or other organised by higher education institutions (21%). On the other hand, the most effective forms of on-job learning with regard to managers are mentoring and coaching (14%) (Table 6).

[7] Results as regards the diversification of education forms efficiency depending on the job are given based on 2017 surveys, as this question was not included in the panel study covering medium and large companies only. As the whole Chapter, the results concern companies employing 50 people or more.

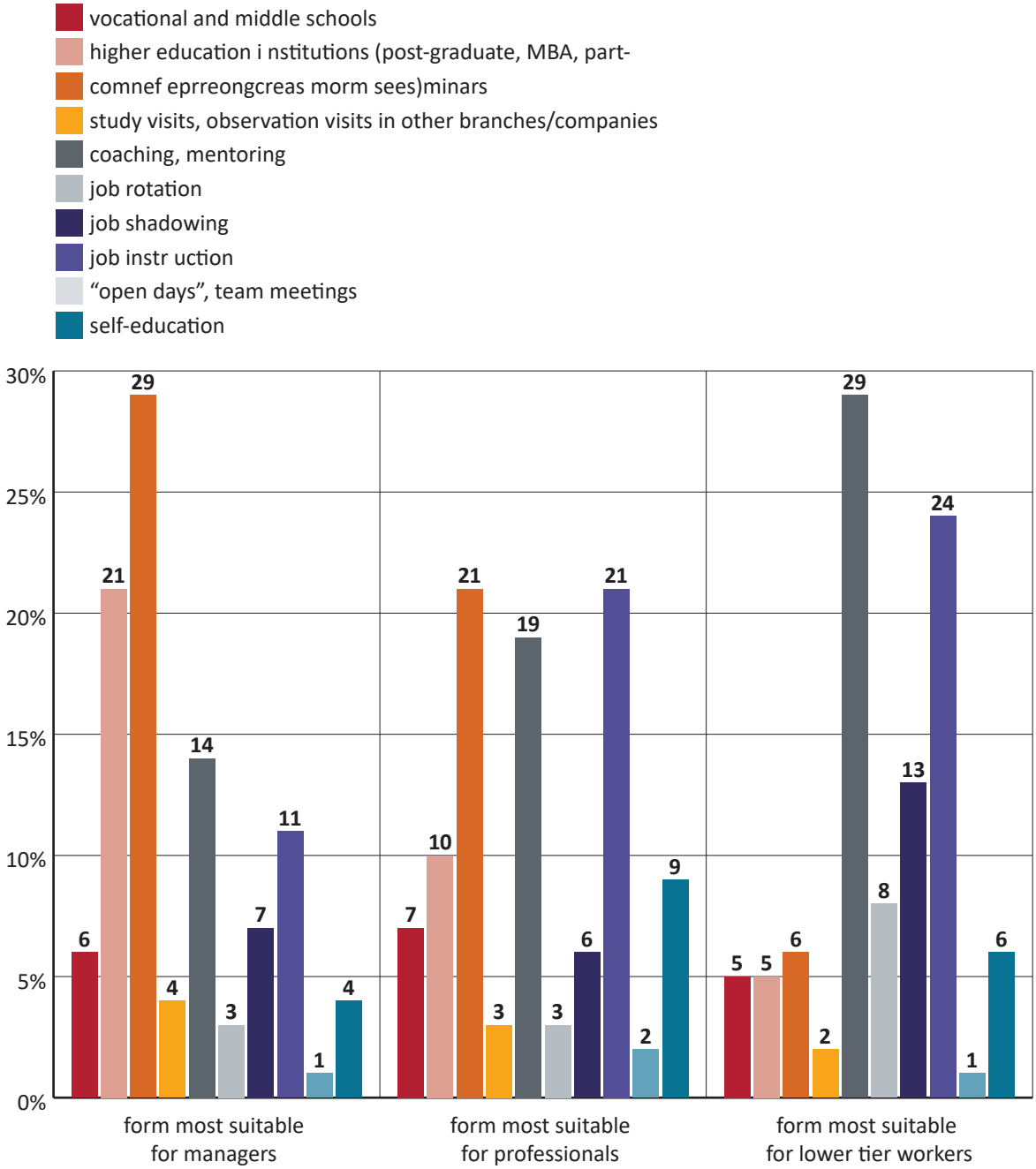
Table 6. Participation in various forms of job-related skills development. Last 12 months, working people aged 25–64, data in %.

	1 manag.	2 prof.	3 assoc.	4 cler.	5 serv.	6 agric.	7. skilled w.	8 oper.	9. unskilled w.	total
OHS and fire safety training	62	48	65	72	74	42	80	83	83	66
On-site courses and training, excl. OSH and fire safety training	51	48	40	28	27	28	20	24	14	34
Job instruction training concerning e.g. the use of new equipment, machines and software	42	30	30	40	28	23	34	38	25	33
Performing tasks at work with another person's support, e.g. a supervisor or co-worker (mentoring, coaching)	33	30	26	32	27	17	27	24	18	27
Conferences, seminars	52	51	31	8	4	9	2	1	2	24
Cross-panel meetings aiming to share knowledge about other teams' work	48	40	25	9	14	3	7	7	6	22
Periodical observation of another employee's work (job shadowing)	24	20	16	17	16	11	12	17	5	17
Online courses and training (e-learning)	26	26	15	9	12	2	2	1	2	14
Temporary performance of duties in a different position for training purposes (job rotations)	13	10	14	17	8	8	16	22	11	13
Study visits, observation visits in other companies, institutions	18	7	8	0	1	6	2	0	1	5
Post-graduate studies, part-time programmes, MBA studies	6	9	6	2	1	0	1	1	0	4
Internships, work placements	3	7	3	5	5	2	3	2	2	4
Schools for adults	2	2	1	4	2	0	3	0	3	2
N	147	416	217	111	179	46	244	159	92	1,610

Major groups of professions (first-level -ISCO classification): 1– managers, 2 – professionals, 3 – technicians and associate professionals, 4 – clerical support workers, 5 – service and sales workers, 6 – agricultural workers, 7 – craft and related trades workers, 8 – operators (including drivers) and assemblers, 9 – elementary occupations. The percentages do not add up to 100, as more than one answer could be indicated.

Source: BKL Study 2017 – Population survey.

Figure 9. The most efficient forms of development by job type (in %, N = 309).



Source: BKL Study 2017– Employer survey.

Similar forms of education apply to professionals as in the case of managers, however, with differing emphases. In the case of external forms, the largest benefits are also expected to come from participating in conferences and seminars (21%), however, higher education

institutions are indicated far less often (10%). This results from the fact that this level of qualification is most often expected from the beginning, at the time of recruitment for specialist positions, and there is hardly any need for complementing it in this manner.

On-job development and qualification adjustment forms are used much more often – job instruction trainings are considered the most effective with respect to professionals (21%), along with learning under the direction of another person, coach or superior for performing day-to-day tasks or creating long-term development opportunities, that is through coaching or monitoring (19%). What is noteworthy is that with respect to this group self-education was most often indicated as an effective form of raising skills (9% vs 4% for managers and 6% for lower tier workers).

In the case of lower tier workers, the following forms are considered the most effective: on-job learning directly from another person (29%), job instruction trainings on how to use equipment, machines or software (24%), direct observation (13%) and job rotations (6%) (Figure 9).

Having compared the efficiency of individual forms for the different groups of workers, we can clearly state that in the case of more senior functions, developing skills outside the company is the most effective and in the case of lower-tier positions – definitely at the workplace, using own know-how. In the case of professionals emphases are distributed similarly between external and internal forms of skills development.

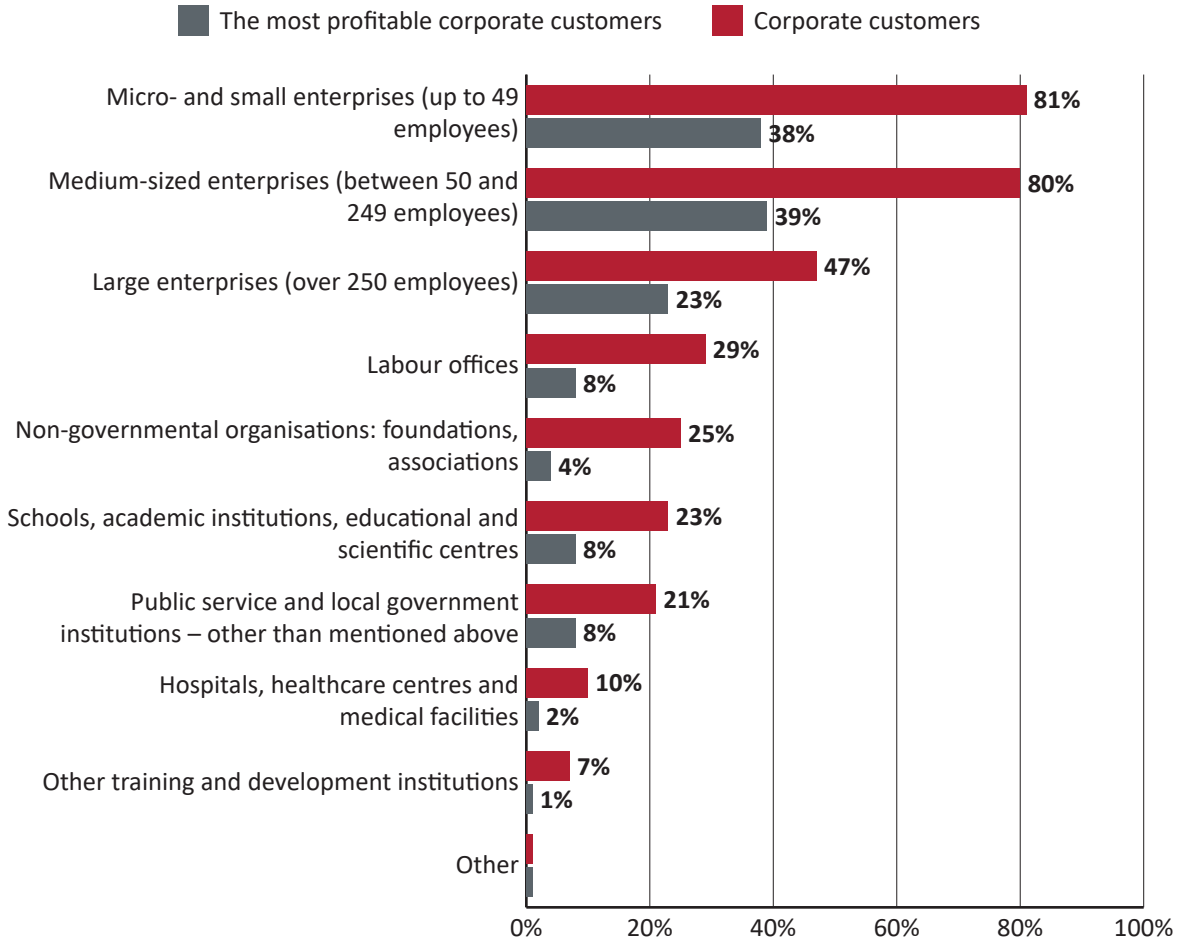
Reactive or proactive training sector?

Employers, referred to as institutional or corporate customers, constitute an important group of clients of the training and development sector (T&DS). In 2016, 83%[8] of entities offering development services for adults in Poland provided services to institutional customers. This group of customers comprised mainly micro- and small enterprises employing up to 50 people, and medium-sized enterprises with 50–250 employees – both customer groups were provided

[8] Data based on Badanie sektora szkoleniowo-rozwojowego w ramach Bilansu Kapitału Ludzkiego 2017 [Study of the training and development sector under the 2017 Human Capital Study]. The sample size was 1,004, the weighted population size is 5,433. The number of entities providing development services to institutional customers is 836 (83% of respondents).

services by 80% of entities providing services to corporate customers (Stec *et al.* 2018). The categories of institutional customers mentioned were also the most profitable – their share in the turnover of the entities surveyed was the highest in annual terms (Figure 10).

Figure 10. Institutional customers of entities providing development services in 2016 (in %, N = 632)



Source: Stec *et al.* 2018.

Large fragmentation of corporate clients should be reflected in the flexibility of the T&DS's offer, stemming from the need to adapt to the preferences of the entrepreneur to whom services are provided. Such "tailor-made" services are provided in

a for-employees-only formula[9]. Therefore, it is not surprising that only 10% of entities providing services to employers did not provide training and development services in the for-employees-only formula in 2016.

Adapting the forms of human capital development to the specific needs of entrepreneurs is, therefore, a reality in the adult learning sector. When assessing the capacity of the training and development sector to set and implement strategic objectives, it is worth investigating whether the T&DS – in its communication with employers – has a proactive attitude, understood as taking initiative, introducing innovative services and consciously adjusting to the changing development trends, or a rather passive, reactive outlook, changing its standard offer of service form only upon a direct request of a customer.

The data collected under the Human Capital Study indicate that the process of continual self-improvement through constantly aligning forms of development with corporate customers' needs is not common in the analysed sector. In the last 12 months preceding the survey, only 28% of companies/institutions providing development services to corporate customers adjusted their offer to accommodate the changing needs of employers (Figure 11). When presenting this information in reference to the SUS 2.0 Training and Development Services Standard recommended by the Polish Chamber of Training Companies (PIFS), and in particular to Standard 2.1: *The company's activities are based on the results of the analysis of the Customer's training and development needs or it examines its needs independently based on own, proprietary diagnostic methods or methods recommended by PIFS*[10], the diagnosis of the state of the adult learning sector proves even more pessimistic. Only 16% of entities providing services to entrepreneurs in 2016 based their actions on an analysis of the development needs of employers conducted in the last 12 months of their operation.

The dominant, reactive method of communicating with employers contributed to the low level of investments in the potential of training and/or advisory staff – only 17% of entities

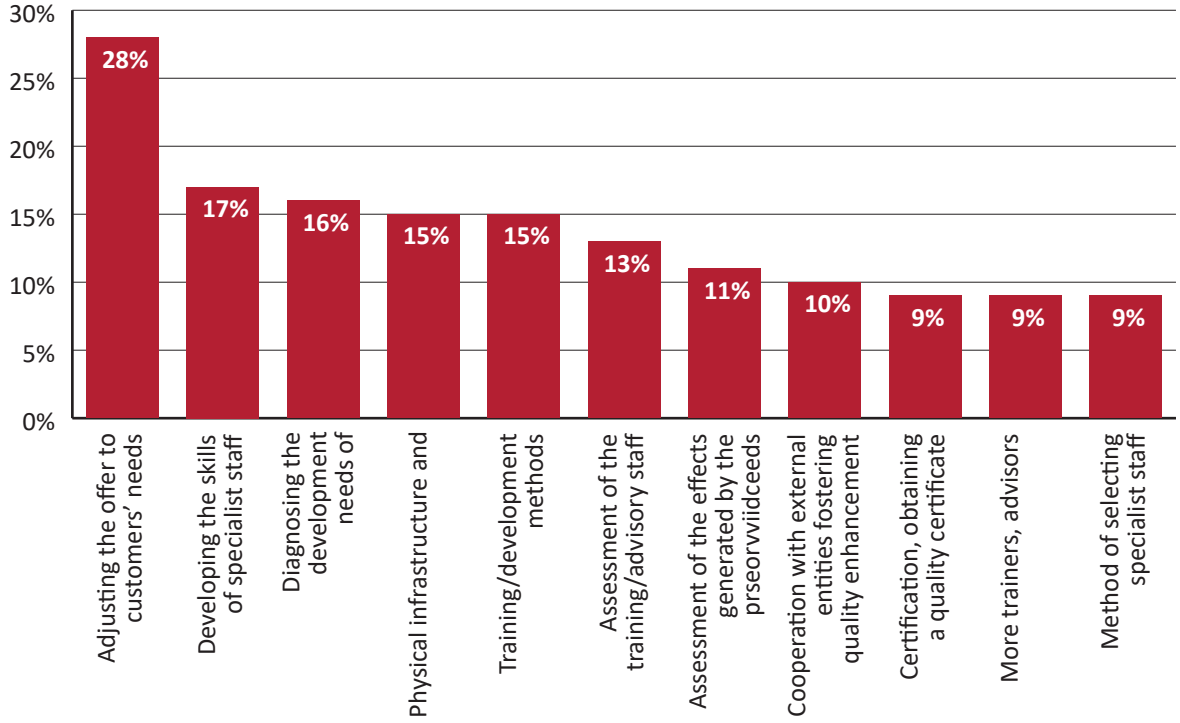
[9] According to the SUS 2.0 Training and Development Services Standard, a for-employees-only training and development service means a service designed for people from one organisation, allowing for adapting the programmes, their duration, educational methods and organisational means to the needs of the procurers (PIFS, SUS 2.0).

[10] The SUS 2.0 Training and Development Services Standard is available at https://pifs.org.pl/pliki/SUS/Standard-SUS-2-0.pdf

providing services to corporate customers in 2016 increased the skills of specialist staff within a year, while 15% developed the training or development methods offered (Figure 11).

It is worth mentioning here that in 2016, 1 in 10 entities specialising in training and development services introduced assessment of results of the implemented development forms to their activities. This activity, important for conscious development, is recommended by PIFS in the framework of the SUS 2.0 Standard mentioned above (Standard 2.14[11]).

Figure 11. Quality-enhancing activities* undertaken in the last 12 months by entities providing development services to institutional customers in 2016 (in %, N = 836)



*The values do not add up to 100 as more than one answer could be selected.

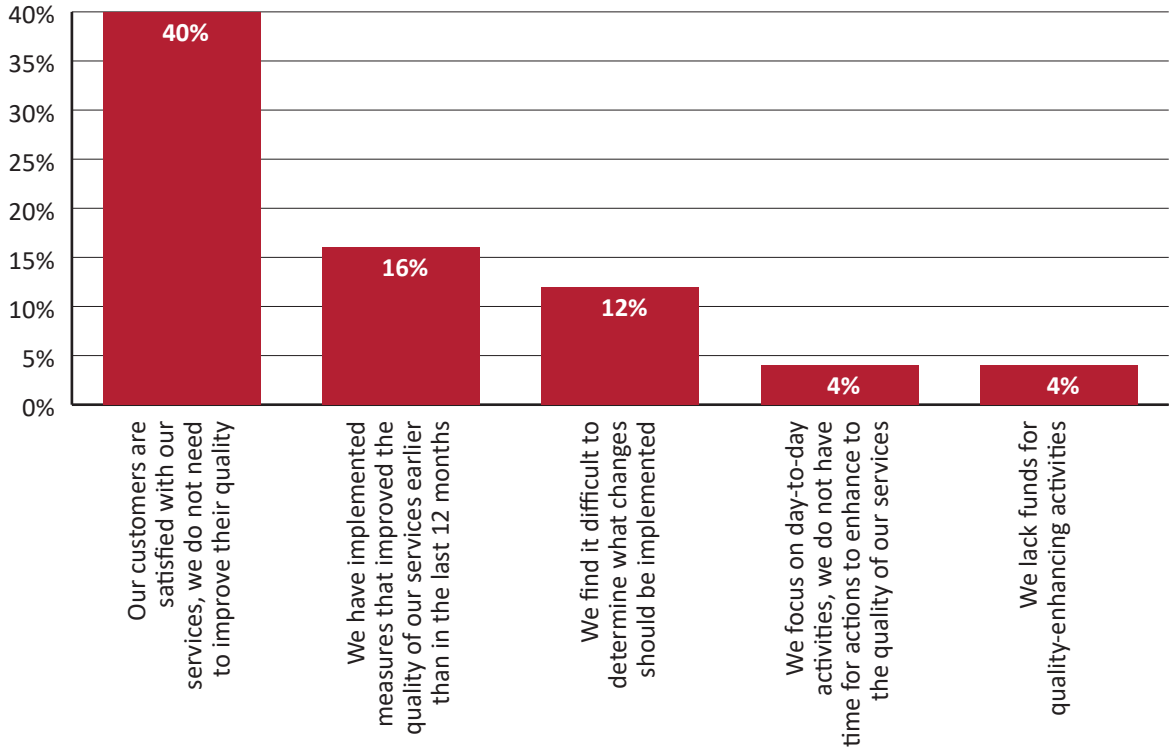
Source: BKL Study 2017 – Training and development sector survey.

[11] The SUS 2.0 Training and Development Services Standard is available at https://pifs.org.pl/pliki/SUS/Standard-SUS-2-0.pdf

As the realised need for continuous self-improvement is the key factor in the development of the adult learning sector and in determining the level of investments in quality-enhancing activities, it is important to learn the reasons for not taking actions to improve quality.

The data from the BKL Study indicate that 10% of entities providing services to corporate customers did not have any knowledge on any activities to enhance the development forms they offered in the 12 months preceding the survey. On the other hand, 40% of the surveyed representatives of the T&DS did not consider it necessary due to their conviction that there was no need to invest in improving the quality of services as their customers were already satisfied, while 16% declared having implemented quality-enhancing activities in the past, prior to the most recent 12-month period (Figure 12). Still, 12% of entities providing services to corporate customers indicated simultaneously the two of the aforementioned reasons of lack of quality-enhancing activities, that is high customer satisfaction and having undertaken quality-oriented actions in the past.

Figure 12. Reasons for not investing in the quality of the services provided in the last 12 months among the entities providing services to institutional customers in 2016 (in %, N = 836)



*The values do not add up to 100 as more than one answer could be selected.

Source: BKL Study 2017 – Training and development sector survey.

Interestingly, there were as many entities which realised that there was a need to develop and improve their activities as companies/institutions convinced there was no such need to self-improve. Therefore, such quality-enhancing activities should be monitored regularly to see which of the analysed groups of entities will have a higher market share in the T&DS in the future.

Special attention should be paid to the group of 12% entities providing development services to the employees of those companies which lack of knowledge on the scope and direction of investments in the quality of their services. Having such declarations proves the need to increase the level of knowledge in the adult learning sector with respect to the methodology for diagnosing customer needs and the process of translating the identified expectations into development objectives of a company/institution in the T&DS.

Skills of managers in the sector

Knowledge and skills of managerial staff are, therefore, another key factor behind the development of the adult learning sector and investments in quality-enhancing activities. Let us analyse data from the BKL Study with respect to diagnosing the skills of managers regarding various dimensions of company/institution management[12], together with the assessment of significance of the impact of those dimensions on the T&DS's activity.

To assess the level of significance of investments in quality-enhancing activities, the analyses will be carried out in two groups of entities providing services to institutional customers: those investing (in the last 12 months and earlier) and those not investing in quality of provided services.

The results are not surprising: the entities, which have invested in activities to improve the quality of services provided, rated both the skills of their managers and the significance of the impact of those skills on the adult learning sector slightly higher in each of the nine assessed dimensions of management (Figure 13 presents the distribution of average ratings of the respondents[13]). The largest differences in average ratings between the analysed groups may be observed with respect to ***Managing human capital, staff, recruitment, employee development as well as Building and implementing company strategy, managing product development and innovation.***

[12] The 9 analysed dimensions include: 1. Managing sales, customer service, marketing, 2. Managing human capital, staff, recruitment, employee development, 3. Financial management, controlling, 4. Familiarity with legal aspects of the economic activity pursued, 5. Ability to make decisions based on information from different sources, 6. Building and implementing company strategy, managing product development and innovation, 7. Managing performance, work organisation, improving activities within the company/institution, 8. Project management; and 9. Leadership skills, e.g. exerting influence, motivating.

[13] The rules for interpreting the matrix data are as follows: a) green colour indicates values for entities investing in the quality of their services, while blue indicates those not investing, b) the higher the points representing the dimension of management are, the more impact they have on the T&DS in the opinion of the respondents, e.g. Managing sales, customer service, marketing are more important than Ability to make decisions based on information from different sources, c) the more to the right the points representing the dimension of management are, the higher the rating of the managers is in the opinion of the respondents, e.g. lower ratings are reported for Familiarity with legal aspects of the economic activity pursued relative to Project management skills.

From the perspective of the diagnosis of the T&DS's capacity to set and implement strategic objectives, it is debatable why the rating of the impact of strategic planning on the sector and the rating of managers' skill level for that aspect of management are the lowest. Let us recall that a proactive attitude is determined by consciously adapting to the changing development trends and being able to introduce innovative solutions. Does this mean that reactive management is dominant in the T&DS?

BKL Study data shows that over 56% of entities providing development services to institutional customers[14] had an action plan in place going beyond the next 3 months. Still, the time horizon adopted for strategic actions is short: the action plan most frequently covered a period between 6 months up to one year (23% of entities providing services to corporate customers) and a period over one year but no longer than 2 years (20% of entities). The situation is slightly more optimistic for the group of entities investing in the quality of services provided (over the last 12 months, before the survey and earlier)[15]: 86% did have the strategic document, 32% planned tasks over a one-year perspective and 31% – over a two-year perspective.

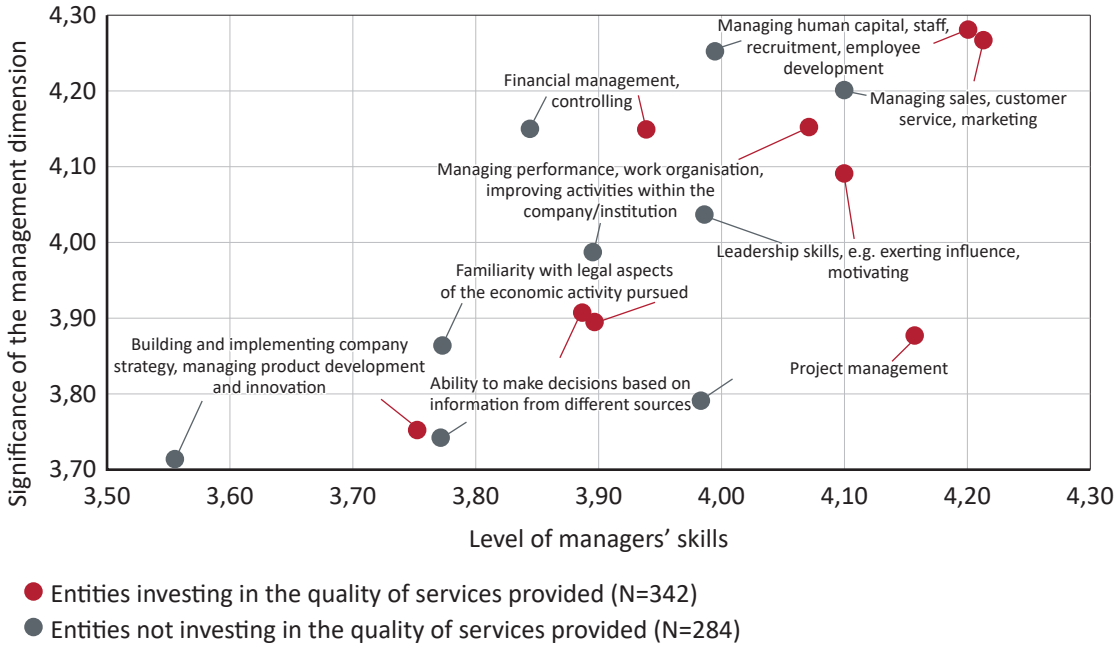
As far as innovative activity is concerned, in the part of the T&DS providing services to employers, only 24% of entities declared in the BKL Study that they introduced new and/or significantly improved services within the last year of their operations. The majority of innovations covered one development form. On the other hand, 11% of entities introduced improvements in the way development forms are provided[16] and with regard to their promotion and sales, while 18% improved the way their company/institution functioned. 32% of entities plan to implement such innovations in the year to come.

[14] Let us recall that: N = 836.

[15] N = 342.

[16] These improvements involve new ways of providing services, equipment or software facilitating the provision of services, other processes streamlining the provision of services.

Figure 13. Average ratings of managers' skills with respect to dimensions of company/institution management, with average ratings of the significance of the impact of those dimensions on the activity of T&DS, by entities that invest in the quality of their services and those that do not (5-grade rating scale, where 1 means the lowest rating and 5 – the highest).



Source: BKL Study 2017 – Training and development sector survey.

Similarly to strategic planning, the level of investment in new, improved ways of functioning is higher among the entities that invested in quality compared to data for the entire T&DS providing serviced to corporate customers. Hence, 43% of entities introduced new and/or significantly improved services, 21% improved the way these services are provided, 19% invested in new promotion and sales methods for the development forms offered, and 33% of entities introduced innovations with respect to how the company/institution functioned. What makes us even more optimistic are plans of those entities – more than half (54%) declared plans to implement significant improvements or new solutions.

The data presented prove that the training sector operates rather reactively and is insufficiently active in determining development directions or adjusting its offer to the changing needs of companies and development trends in the adult learning sector.

Investments in quality are key for changing the attitudes in the T&DS – entities that have invested in quality measures are more proactive. They plan more strategically, better evaluate their managers and have a higher level of innovation compared to the whole T&DS providing development services to corporate customers.

Conclusions

Adult learning indicators are – according to the 2017 and the 2018 BKL Study – much higher than those calculated based on GUS's Adult Education Survey or the labour force survey (LFS). In the case of the broadly understood educational activity, covering also informal learning, as many as 88% of working adult Poles should be considered active in the area of skills development, according to the 2017 BKL Study. Although it can be argued that not all activities they indicated have to contribute to raising skills, especially those significant from the perspective of the labour market, the results do not let Polish employees be described as developmentally passive. Special attention should be paid to the diversity in the ways employees in different positions develop their skills. From the perspective of working people, the most important is especially on-job learning, which is one of the most fundamental forms of developing professional skills, particularly for lower tier positions. Not including this form of skills development in surveys does not allow to capture the real scale of human capital development in Polish companies.

On the other hand, the results of employer surveys carried out under the 2018 BKL Study indicate that among medium-sized and large companies, involvement in personnel development is common – 90% of those companies undertake activities related to the development of employee skills using different instruments and to a varying extent. Companies representing the new economy sectors and the developing companies (those introducing innovations and planning to introduce them, those increasing employment) are more likely to engage in this type of activities. Although it is difficult to assess whether it is the innovativeness which is the reason for involvement in personnel development or whether the developing employees are the source of innovation, the results clearly show that there is a strong relationship between those two. The results of employer surveys also confirm the increased scale and significance of on-job learning and internal training which, in the case of medium-sized and large companies, largely rely on the skills of the already employed staff.

Comparing the employer perspective to the results of the population survey also confirms the diversity the applied forms of skills development and their adjustment to a given job. Employers' opinions on the efficiency of a given form of skills development for the different work positions (employer surveys) are compatible with the ways in which individuals employed on these positions develop their skills (population survey). Therefore, skilled workers or operators learn primarily at the workplace and employers consider such form of development as appropriate for them. Although it is difficult to question the validity of such an approach, it should be born in mind that on-job learning may not be sufficient when it comes to developing or updating universal skills – such as the ability to employ modern technologies or communicate effectively. Substantial shortages are identified for those skills, particularly among individuals with lower educational attainment.

At the time of evolving adult learning models, the training sector must also change to be able to fulfil functions that support and encourage development. The results of BKL surveys and quality audits conducted in connection with the certification of training services point to some difficulties in fulfilling this function. Although undoubtedly there is a large potential in the sector and many entities set new directions in adult learning and staff development in companies, BKL surveys shows that it would be difficult to describe the dominant action strategies of the majority of them as proactive. One of the arguments confirming that thesis may be that managers representing that sector received the lowest rating with respect to skills in the area of strategic management and, importantly, the skills from this area were considered of relatively little importance to company development.

Bibliography

1. Aspin D. (ed.). (2007). *Philosophical Perspectives on Lifelong Learning.* Springer. Dordrecht.
2. Barrett A., O'Connell PJ. *Does training generally work? The returns to in-company training.* Industrial and Labor Relations Review. 2001;54:647–662.
3. Beugelsdijk S. *Strategic human resource practices and product innovation.* Organization Studies. 2008;29:821–847.
4. Bishop J.H. (1991). *On-the-job training of new hires*, [in:] D. Stern, J.M.M. Ritzen (ed.). *Market* Failure in Training: New Economic Analysis and Evidence on Training of Adult Employees. Springer Verlag, New York.

5. Bishop J. (1994). *The Incidence of and Pay off to Employer Training: A Review of Literature with Recommendation for Policy.* Working paper, No. 94–17. Cornell University.
6. Björklund A. (1994). *Evaluations of labour market policy in Sweden.* "International Journal of Manpower", 15 (5): 16–31.
7. Brennan J., Little B., Connor H., de Weert E., Delve S., Harris J., Josselyn B. (2006). *Towards a strategy for workplace learning: Report to HEFCE by CHERI and KPMG*. Higher Education. Funding Council for England, Bristol, UK.
8. Castellanos RMM. Martín MYS. *Training as a source of competitive advantage: Performance impact and the role of firm strategy, the Spanish case.* International Journal of Human Resource Management. 2011;22:574–594.
9. CEDEFOP (2013). *Benefits of Vocational Education and Training in Europe for People, Organisations and Countries*. Publications Office of the European Union, Luxembourg.
10. Desjardins R., Rubenson K., Milana M. (2006). *Unequal Chances to Participate in Adult Learning: International perspectives.* UNESCO, Paris.
11. Glaveli N., Karassavidou E. *Exploring a possible route through which training affects organizational performance: The case of a Greek bank*. International Journal of Human Resource Management. 2011;22:2892–2923.
12. Fong J., Halfond J., Schroeder R. (2017). *The Changing Landscape for Professional and Continuing Education in the U.S.* Center for Research and Strategy, UPCEA. https://upcea.edu/wp-content/uploads/2017/11/The-Changing-Landscape-for-Professional-andContinuing-Education-in-the-U.S.whitepaper.feb17.v2.pdf [access 30.04.2019].
13. GUS. (2018). Adult Education Survey 2016. GUS, Gdańsk.
14. Hyland T. (2012). *Lifelong Learning, Mindfulness and the Affective Domain of Education*, [in:] D.N. Aspin, J. Chapman, K. Evans, R. Bagnall (ed.). *Second International Handbook of Lifelong Learning*. Springer, London: 209–226.
15. McKinsey. (2015). *Industry 4.0. How to Navigate Digitization of the Manufacturing Sector* McKinsey Digital. Munich.
16. McMahon W.C. (2004). *The social and external benefits of education*, [in:] G. Johnes, J. Johnes (ed.). *International Handbook of the Economics of Education.* Edward Elgar. Cheltenham.
17. NCEE (National Center on Education and the Economy. (2006). *International Trends in Adult Education and Lifelong Learning. https://jfforg-prod-prime.s3.amazonaws.com/media/documents/Adult_Ed_International_FINAL.PDF* [access 30.04.2019].

18. OECD (2016). *Skills Matter: Further Results from the Survey of Adult Skills.* OECD Skills Studies. OECD Publishing, Paris; http://dx.doi.org/10.1787/9789264258051-en (access: 10.12.2018).
19. Piasecki P. (2017). *Biała księga usług rozwojowych.* Warszawa, PIFS.
20. Prokopowicz P., Kocór M., Szczucka A., Antosz P. (2018). *Raport z badania pracodawców w obszarze zarządzania kapitałem ludzkim, PARP, Warsaw.*
21. *Stec K., Strzebońska A., Worek B., Antosz P. (2018). Rozwój kompetencji – uczenie się osób dorosłych i podmioty oferujące usługi rozwojowe.* PARP, Warsaw.
22. Szczucka A., Turek K., Worek B. (2014b). *W ogonie Europy – uwarunkowania i strategie rozwoju kompetencji dorosłych Polaków.* [in:] J. Górniak (ed.). *Competencies of Poles vis-a-vis the needs of the Polish economy* PARP, Warsaw: 77–143.
23. Worek B. (2019). *Uczące się społeczeństwo. O aktywności edukacyjnej dorosłych Polaków.* Cracow. WUJ.
24. Worek B., Turek K. (2015). *Uczenie się przez całe życie – „akcelerator" rozwoju. [in:] J. Górniak (ed.). Polski rynek pracy – wyzwania i kierunki działań na podstawie badań Bilans Kapitału Ludzkiego 2010–2015.* PARP, Warsaw.
25. Worek B., Turek K., Szczucka A. (2015). *Problemy i dylematy rozwoju polskiego systemu uczenia się przez całe życie.* „Edukacja", 1 (132): 151–167.

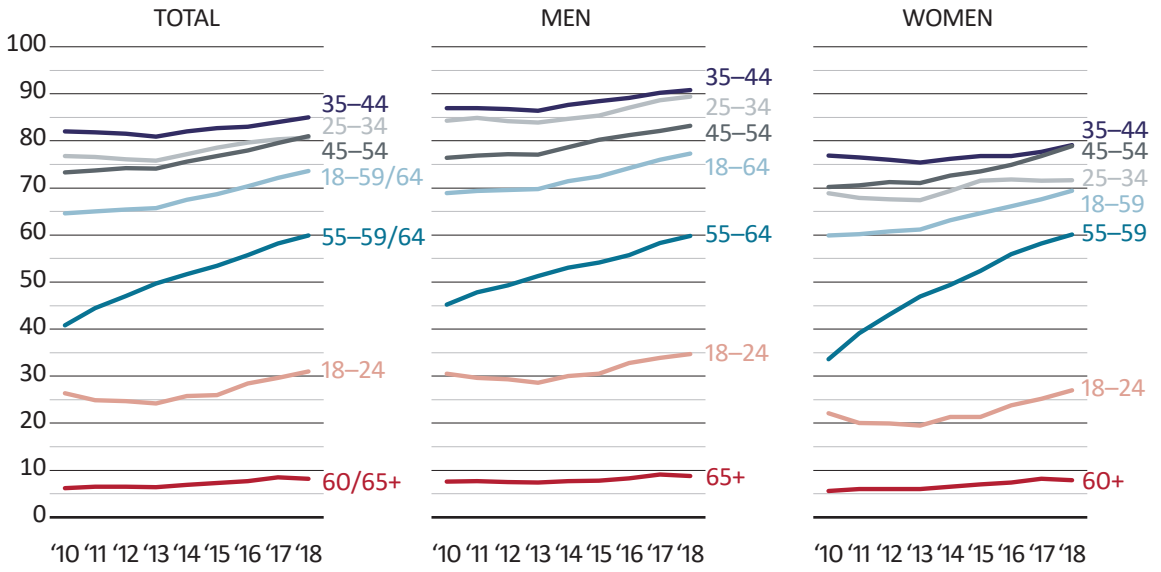
Outside the labour market. Determinants of professional activity of Polish women and men

Szymon Czarnik
Katarzyna Lisek

The scale of economic activity and inactivity has undergone major changes in the last decade. Between 2010 and 2018, GUS observed a significant increase in the employment rate of the working-age population – from 64.6% to 73.6% in total (with a simultaneous drop in the unemployment rate from 9.8% to 4.0%). This increase concerned both men and women, however, the changes proceeded differently in each age category (Figure 1). There was a slight decline in the employment rate in the 18–44 age bracket in the period 2010–2013, followed by an increase in the years 2013–2018, while the two older age groups (45–54 and 55–59/64) saw an increase throughout all these years. What stands out the most is the surge in the employment rate for people in pre-retirement age (55–59/64) – it rose from 40.8% to 59.9% in the analysed 10-year period. Particularly impressive are almost doubled values of the rate (from 33.6% to 60.1%) for women aged 55–59, which caught up in 2018 with those for men aged 55–64. Activation of older generations occurs to a large extent due to demographic pressure related to accelerated population ageing. Another catalyst for this growth was certainly the increase in retirement age under the Act in force between 2013 and 2017 and the related heated social debate concerning this reform, which was later withdrawn by the next government.

In this Chapter, we shall focus on the determinants of economic activity based on data collected under the Human Capital Study project between 2017 and 2018. We will present the analysis in three sections. The first one will concern general characteristics of people not in employment; the second part will focus on individuals below 50, in particular women whose break in economic activity is usually the result of a maternity leave and taking care of small children; and, finally, the third section will concern people aged 50 and more whose economic activity becomes limited and ends in connection with reaching retirement age.

Figure 1. Employment rate by gender and age



Source: Own study based on GUS data[1]

Determinants of economic activity

Figure 2 shows the characteristics of the economic activity[2] of men and women for the different age groups according to the BKL data for 2017. In the case of men, employment rate increases quickly once they turn 25, from almost 50% to almost 90%, and reaches the maximum (92%) in the next age category (30–34). It remains at the level of over 80% until the age of 50–54 and subsequently begins to fall distinctly for older age groups. For women, entry into the labour market is significantly slower. Until the age of 30, about 70% women work and this state persists throughout the child-bearing period until they are approx. 40. After exceeding this age limit, employment rate increases distinctly in the 40–44 age group,

[1] https://stat.gov.pl/en/topics/labour-market/working-unemployed-economically-inactive-by-lfs/labour-force-survey-in-poland-iv-quarter-2018,2,32.html

[2] Due to their professional situation, the respondents were divided into those in employment, unemployed and economically inactive. The 'in employment' category includes individuals who declared working full- or part-time, who at the time of the survey ran their own business, did unpaid work for a family business, were employed based on a contract of employment (and performed it in the last three months) or were employed under a civil law contract. The 'unemployed' group included individuals who did not work but were actively seeking jobs in the last 30 days and were ready to take up employment within a week. Other individuals – those not in employment and not unemployed – were considered economically inactive.

reaching the maximum (over 80%) and practically catching up with the employment rate for men.

Figure 2. Percentage of people in employment, unemployed and economically inactive, by gender and age

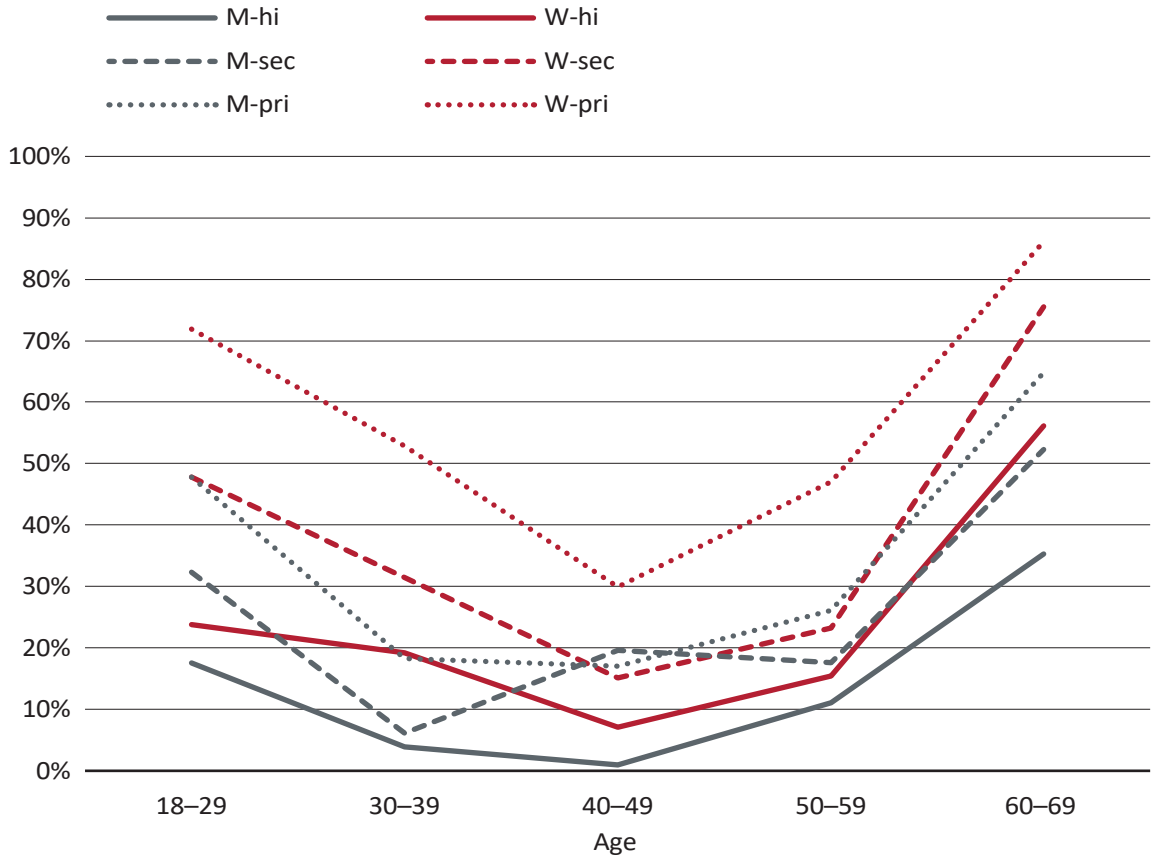
Gender M – men, W – women.
Total N = 4,057. The smallest sub-group: men aged 50–54, N = 145.
Economic activity: in empl – in employment, unempl – unemployed, inac – economically inactive.

Source: Own study based on the BKL Study 2017.

Percentage of the unemployed is the highest in the youngest age group, however, it is distinctly higher for men who quit formal education earlier and start seeking their place in the labour market. Meanwhile, most women continue their studies and, therefore, remain economically inactive.

In the case of both genders, the professional situation strictly depends on educational attainment, although this dependence is more pronounced for women (Figure 3).

Figure 3. Percentage of the unemployed, by gender, age and educational attainment



Gender M – men, W – women.
Education: pri – primary (below secondary), sec – secondary, hi – higher.
Total N = 4,059. The smallest sub-group: men aged 50–59, higher education, N = 45.

Source: Own study based on the BKL Study 2017.

It is fairly easy to define a general trend: the lower the level of education, the higher the share of the unemployed. This dependence is true, without exception, for all age cohorts and the differences between primary, secondary and higher educational attainment are massive. The unemployment rates for women aged 18–29 are 72%, 48% and 24%, respectively, for subsequent education levels, while for those who have reached retirement age (60–69 category), the rates are: 86%, 76% and 56%.

In the case of men this clear dependence becomes visible after they reach 50, when men with secondary or lower education begin to leave the labour market, while those with higher education stay longer on the market.

Figure 4 gives a slightly more detailed insight into the dynamics of economic activity with respect to educational attainment. Positive percentage values (bars above the 0% line) represent individuals in gainful employment[3], while the negative percentage values (bars below the 0% line) represent individuals not in gainful employment. Among those not in employment people seeking jobs were singled out[4], and among people in employment – those wishing to change jobs (looking for another job). Therefore, each respondent may find themselves in one of four possible situations (from the lowest to the highest segment of a given bar):

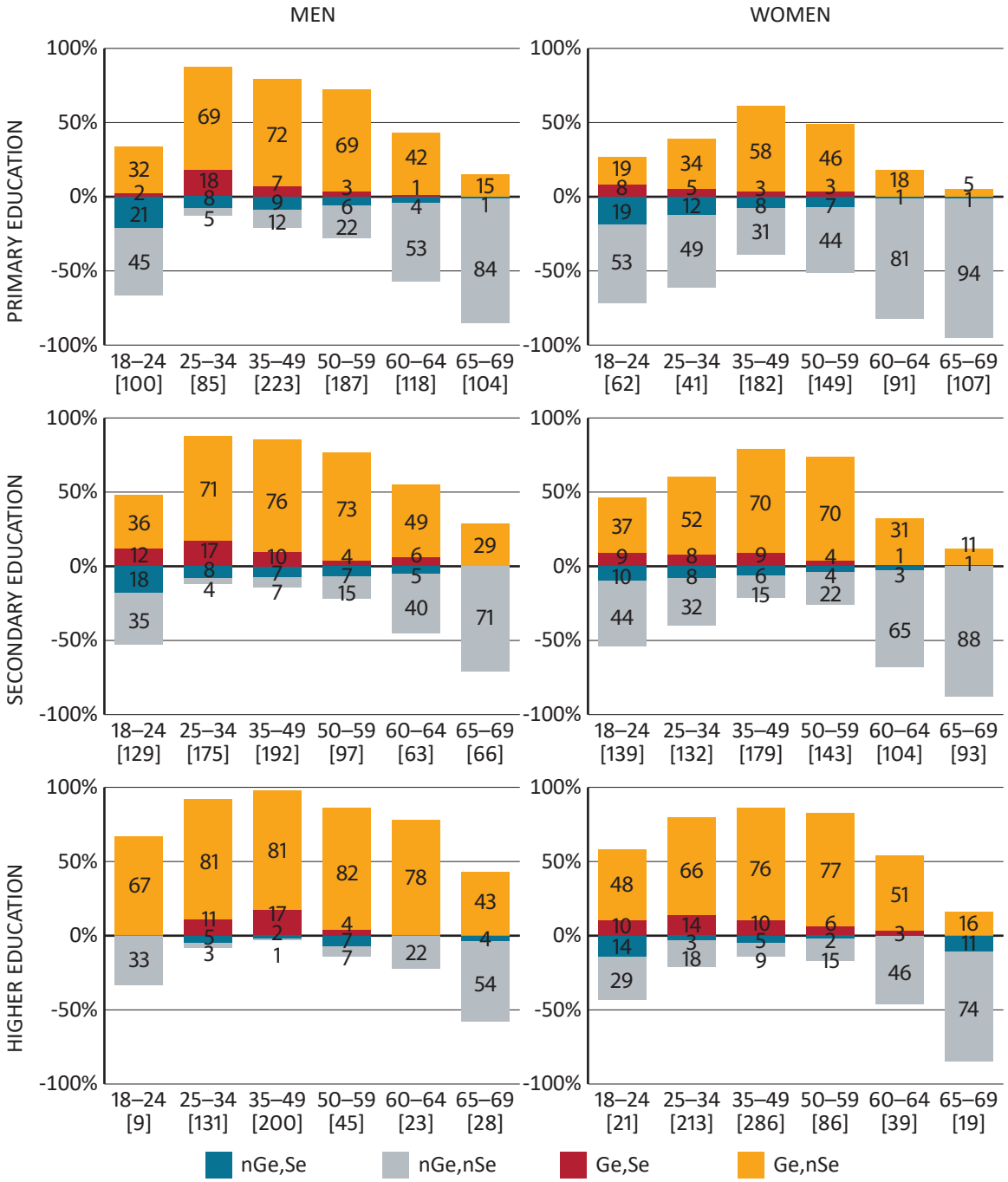
- not in gainful employment and not searching for a job – [nGe,nSe];
- not in gainful employment but searching for a job – [nGe,Se];
- in gainful employment but still searching for another job – [Ge,Se];
- in gainful employment and not searching for another job – [Ge,nSe].

One could say that this set of categories represents an idealised sequence in an individual's professional life, whereby they are initially naturally economically inactive, then they begin to search for work and once they find it, they keep looking to check if they could find a more suitable job, only to finally reach professional stability. Eventually, the cycle turns full circle and people naturally return to the state of economic inactivity.

[3] This category does not include individuals who did unpaid work for a family business and who qualify as working according to the LFS methodology.

[4] These are not necessarily unemployed individuals according to the LFS definition as they might not have searched for work in the last 30 days or not have been ready to undertake it in the nearest week.

Figure 4. Being in gainful employment and searching for work, by gender, age and educational attainment

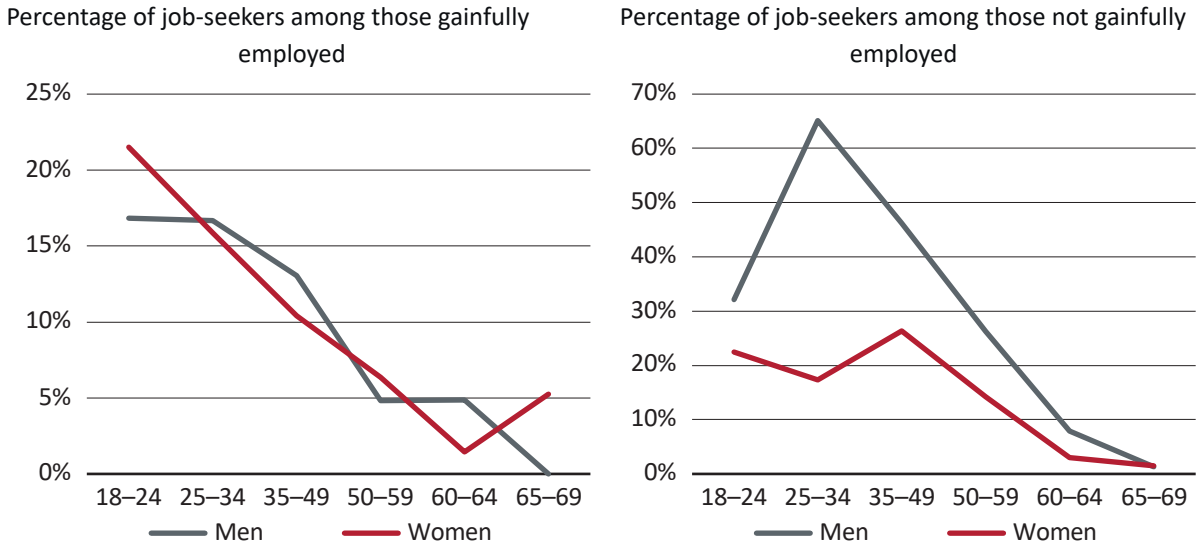


The size of individual groups is given in square brackets. Designations: nGe/nSe – not in gainful employment and not searching for employment, nGe/Se – not in gainful employment but searching for employment, Ge/Se – in gainful employment but searching for another job, Ge/nSe – in gainful employment and not searching for another job.

Source: Own study based on the BKL Study 2017.

The data presented in Figure 4 should be supplemented by two types of auxiliary charts showing the percentage of job-seekers among those employed and among those not gainfully employed[5].

Figure 5. Percentage of persons seeking employment among those gainfully employed and those not gainfully employed



Total N = 1,385.
The smallest sub-group: women aged 65–69, N = 19.
Other sub-groups: N ≥ 47.

Total N = 590.
The smallest sub-group: men aged 25–34, N = 43.
Other sub-groups: N ≥ 78.

Source: Own study based on the BKL Study 2017.

Focusing on professionally active individuals, we may observe the progressing process of people finding their place on the labour market. The percentage of those who search for another job (implicitly a more satisfactory one) is relatively the highest in younger age groups and systematically decreases for older age groups. This is equally true for women and men. In the case of people not in employment, men are clearly more likely to seek employment than women. One characteristic aspect is that the maximum difference between the genders is in the age group 25–34, that is when people get married and have children.

[5] In line with the adopted designations the proportions are Ge,Se/(Ge,Se+Ge,nSe) and nGe,Se/(nGe,Se+nGe,nSe), respectively.

The difference in this age group is mainly due to the increased mobilisation of non-working men towards finding a job, while among non-working women there is a slight decrease in such activity.

As for the data in Figure 4, it is worth looking at job-seekers in the context of their current professional situation. Interestingly, a big share here are not the unemployed but individuals seeking to change the job which they currently have. This is particularly visible for people with higher education in the 25–49 age bracket. Companies recruiting employees with such characteristics cannot count on an easily accessible workforce pool – both among women and men, the majority of job-seekers are those who already have work. For the age category 25–34 the situation is as follows: among the male candidates with higher education there are two already employed men per each one unemployed, while for the 35–49 category – as many as eleven. For women with higher education applying for a job: in the age group 25–34, there are five employed women per each unemployed, and in the 35–49 age bracket – over two[6]. This illustrates well the so-called 'employee's market', where the recruiting companies have to compete not as much for the unemployed but for people employed elsewhere.

Who is economically active?

To answer this question, we applied logistic regression models, where performing professional work (see footnote 2) was projected based on variables such as: gender, age, place of residence (village/town), educational attainment (primary/secondary/higher), participation in formal education, self-evaluation of health condition (good or very good / below average), being married or in an informal relationship and being a parent of a child up to six years old. Two separate models were prepared: one for men and one for women (Table 1). The advantage of a regression analysis is the assessment of the so-called net influence of particular factors, that is the influence exerted by a given factor with the other factors being controlled for.

[6] The figure shows data rounded to the nearest whole number; calculations are based on data showing up to one decimal place. More detailed proportions [Ge/Se]/[nGe/Se] for tertiary education are the following: men aged 25–34: 10.7%/5.3% = 2.0; men aged 35–49: 17.0%/1.5% = 11.3; women aged 25–34: 13.6%/2.8% = 4.8; women aged 35–49: 10.5%/4.5% = 2.3.

This statistical control means that we will be comparing individuals who do not differ with respect to any of the factors included in the model, except for the one – which is the subject of interest for us. For instance, we will estimate the difference in probability of performing work between two women who are both the same age, have the same educational attainment, rate their health condition equally, etc., but one is married and the other one is not. This type of control allows to determine the 'pure' influence of marriage on the fact of performing professional work by a woman – if it was not for this type of control, it would be justifiable to suppose that the difference between married and single women derives, e.g., from the fact that married women are on average older by a dozen or so years and hence rate their health condition lower. Presence of a statistically significant net effect means that the factor (e.g. marriage) has greater influence than could be derived from linking it to other factors (e.g. with higher average age). Of course, when interpreting the results one should bear in mind that the effect of a given factor may be linked to any of the other features which were not explicitly included in the model.

Overall, 73.2% of men and 59.3% of women (see the first line in Table 1) were gainfully employed at the time of the survey. For each of the aforementioned variables the probability of gainful employment in the reference category was provided first (data in bold) and then compared with the probabilities for other categories of that variable with the other factors being controlled for.

Men living in the countryside were slightly more often gainfully employed than men with comparable characteristics living in a town. If the general employment rate for men in towns was 72.3%, then for men of the same age, with the same educational attainment, the same health condition rating, etc. but living in the countryside, it was on average 5.3% higher and amounted to 77.6%. Women's employment was not significantly differentiated by their place of residence. Data for age indicates that the previously observed differences between men and women persist to a large extent also when we account for the differences in educational paths and the different effect of parenthood.

Table 1. Percentage of working people estimated on the basis of separate logistic regression models for men and women

		Men	Women
Total		**73.2**	**59.3**
Place of residence	**town**	**72.3**	**59.5**
Place of residence	**countryside**	*77.6	60.7
Age	**18–24**	**48.6**	**43.3**
Age	**25–34**	***74.4	**62.4
Age	**35–49**	***71.2	***72.9
Age	**50–59**	*64.9	**60.8
Age	**60–64**	41.7	***23.4
Age	**65–69**	***13.5	***9.3
Currently in a relationship	**no**	**65.4**	**53.9**
Currently in a relationship	**yes**	***77.2	58.5
Dependant child aged up to 6 years old	**no**	**69.4**	**59.8**
Dependant child aged up to 6 years old	**yes**	76.6	***26.7
Health condition	**good / v. good**	**80.1**	**68.0**
Health condition	**below average**	***63.7	***51.1
Studies in formal system	**no**	**76.1**	**60.9**
Studies in formal system	**yes**	***42.9	**41.2
Completed education	**primary**	**62.8**	**40.6**
Completed education	**secondary**	***73.7	***60.5
Completed education	**higher**	***86.0	***75.3

N for men = 1,790. N for women = 2,260.
Nagelkerge's R^2 = 0.379 (men) and 0.380 (women).
Asterisks indicate the significance of a logistic regression coefficient comparing a given category to the reference category (in bold): * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.
For regression coefficient values and detailed levels of significance of the coefficients, see Annex: Logistic regression 1.

Source: Own study based on the BKL Study 2017.

The maximum employment rate for men is recorded already for the age group 25–34 (74.4%) and for women – for the age group 35–49 (72.9%). The different effect of marriage and parenthood on each gender indicates a relatively frequent division of roles between women and men in relationships during the reproductive period. While it is the woman who devotes more time to caring for new family members, the man makes a greater effort to provide for the family. In the case of men, the very fact of being in a relationship with a woman increases the probability of employment from 65.4% for single men to 77.2% for married men. The increase in the employment rate linked to being a father to a child aged up to six years old turns out to be statistically insignificant. The situation is quite different for women: the very fact of being in a relationship does not significantly affect employment, while the effect of having a small child is significant: 26.7% of mothers taking care of children up to six years old are gainfully employed compared to 59.8% of women with comparable characteristics but not having children of that age. In the case of both genders both poorer health and continuation of formal education are factors which significantly decrease the probability of professional employment. The analysis of the effect of education confirms earlier conclusions: higher education is associated with being gainfully employed more frequently for both men and women.

Who from among the non-working population is looking for a job?

We have conducted analyses, similar to the above, for men and women based on the data for the non-working population (according to the LFS definition), seeking to determine the factors increasing or decreasing the probability that a person will be trying to find a job (Table 2)[7].

Among men, statistically significant effects were found only in the case of age and the fact of studying in the formal system. It is worth noting that the percentage of job-seekers falls with age and we do not observe any radical jump in the 25–34 age category which is visible in Figure 5.

[7] Therefore, the analysis was conducted on a group of people who, according to LFS terminology, are either unemployed or economically inactive. For this group, we estimate the probability that an individual is unemployed (that is actively looking for a job rather than being completely economically inactive).

This is due to the fact that in the current analysis we measure the net effect of age, while adjusting for, among other things, whether someone is continuing education (a situation typical for people under 25 years of age) or has completed education (people aged 25 and above).

In the case of women, apart from age and the fact of continuing education, the net effect is exerted also by family circumstances: both the very fact of being married and having a small child decrease the percentage of women actively searching for gainful employment (with other features included in the model being controlled for).

Table 2. Percentage of job-seekers (among the non-working population) estimated based on separate logistic regression models for men and women

		Men	Women
Total		**18.4**	**9.2**
Place of residence	**town**	**16.7**	**9.6**
Place of residence	**countryside**	22.4	8.1
Age	**18–24**	**29.3**	**12.7**
Age	**25–34**	20.8	9.8
Age	**35–49**	16.6	15.5
Age	**50–59**	***6.4	7.4
Age	**60–64**	***1.8	***1.0
Age	**65–69**	***0.4	***0.8
Currently in a relationship	**no**	**27.1**	**13.0**
Currently in a relationship	**yes**	20.9	**5.3
Dependant child aged up to 6 years old	**no**	**17.9**	**9.4**
Dependant child aged up to 6 years old	**yes**	10.2	**3.0
Health condition	**good / v. good**	**26.0**	**12.3**
Health condition	**below average**	17.0	*6.0
Studies in formal system	**no**	**18.5**	**9.5**
Studies in formal system	**yes**	***2.3	***1.3
Completed education	**primary**	**14.9**	**7.6**
Completed education	**secondary**	*23.6	7.7
Completed education	**higher**	19.5	12.8

N for men = 521. N for women = 939.
Nagelkerge's R^2 = 0.360 (men) and 0.241 (women).
Asterisks indicate the significance of a logistic regression coefficient comparing a given category to the reference category (in bold): * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.
For regression coefficient values and detailed levels of significance of the coefficients, see Annex: Logistic regression 2.

Source: Own study based on the Human Capital Study.

Professional work and family situation

Much has been said on the topic in the previous sub-chapters. Now let us take a closer look at how having dependent children – depending on the age of the youngest child – affects professional work (Figure 6). The difference in family roles of mothers and fathers becomes particularly apparent when there are small children in the family.

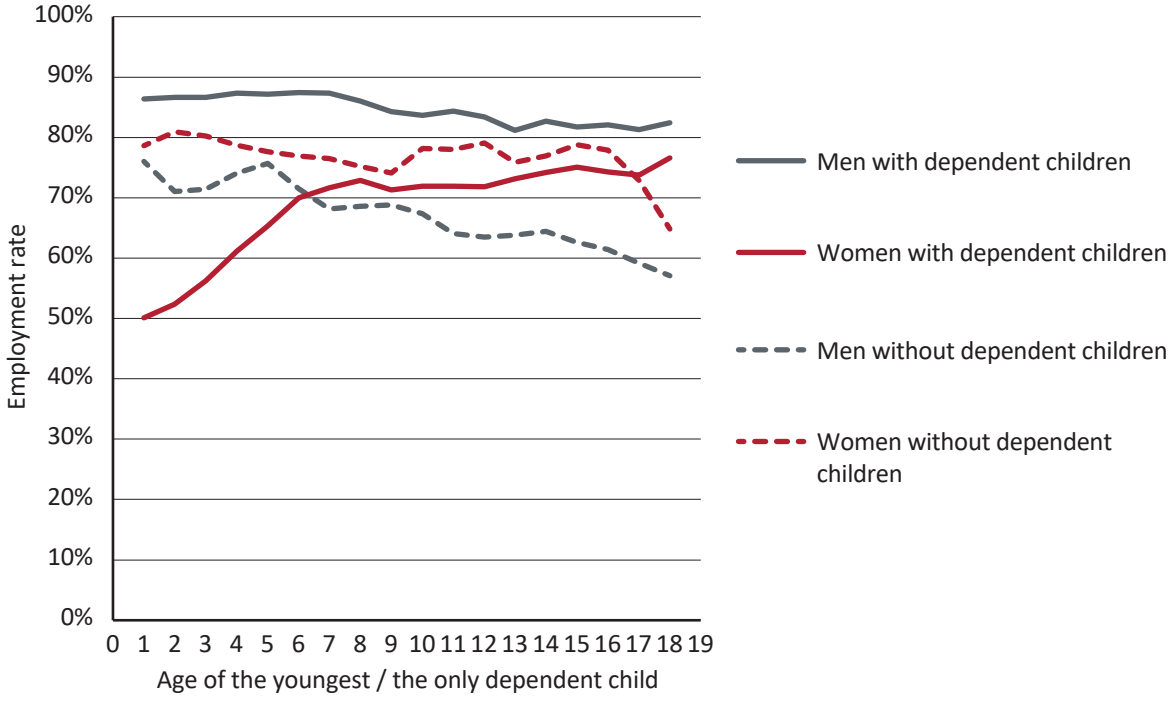
It is worth noting, however, that this difference is by no means absolute – even in the case of the youngest children, about half of mothers work professionally. However, this is the time when the difference between the genders is the greatest, with the employment rate for fathers close to 90%. While the rate remains at a similarly high level among fathers approximately until the child is seven years old and subsequently declines slightly, there is a steady gradual increase in employment among mothers, until it exceeds 70% when the youngest child starts primary school. Unlike men, employment among women does not start to fall as children grow up. Up until their children come of age, the share of women who are economically active remains at a high level and even increases slightly.

It is worth comparing the professional 'trajectories' of mothers and fathers to the 'trajectories' of childless individuals of a comparable age[8]. Firstly, it becomes immediately apparent that childless women are more likely to work professionally than childless men. This is the case regardless of age, but the discrepancy is particularly large when women are 39–46 years old and men are 42–49 years old, that is when their peers have children aged about 10–17. Childless men are the only group for which the employment rate has a systematic downward trend. Once they turn 40, the employment rate falls below that of mothers of 7-year-olds and the discrepancy becomes more and more apparent as they become older. Secondly, comparing mothers with childless women, it can be seen how big the initial difference in the period of care of mothers for young children is quickly dwindling, to be reduced practically to zero when the children come of age. Thirdly, comparing fathers with childless men, we can observe the greatest disparity in employment data.

[8] For individuals without dependent children, the employment rate is quoted for people who are the same age as the average age of the parents whose youngest dependent child is of a given number of years old. For example, women whose youngest child is two years old are on average 31 and men with a child this age are on average 34. Therefore, for the age of the youngest child, that is 2, the percentage of working people among childless 31-year-olds and 34-year-olds is given. The analysis uses data from the BKL Study 2012–2014 (smaller survey sample in the years 2017–2018 made it impossible to conduct such analyses).

The employment advantage of fathers in the whole period considered reaches from a dozen or so to over 20 percentage points.

Figure 6. Employment rate for parents according to the age of their youngest child and for people without children who are of an age similar to the parents



Three-period moving average Total N = 26,625.

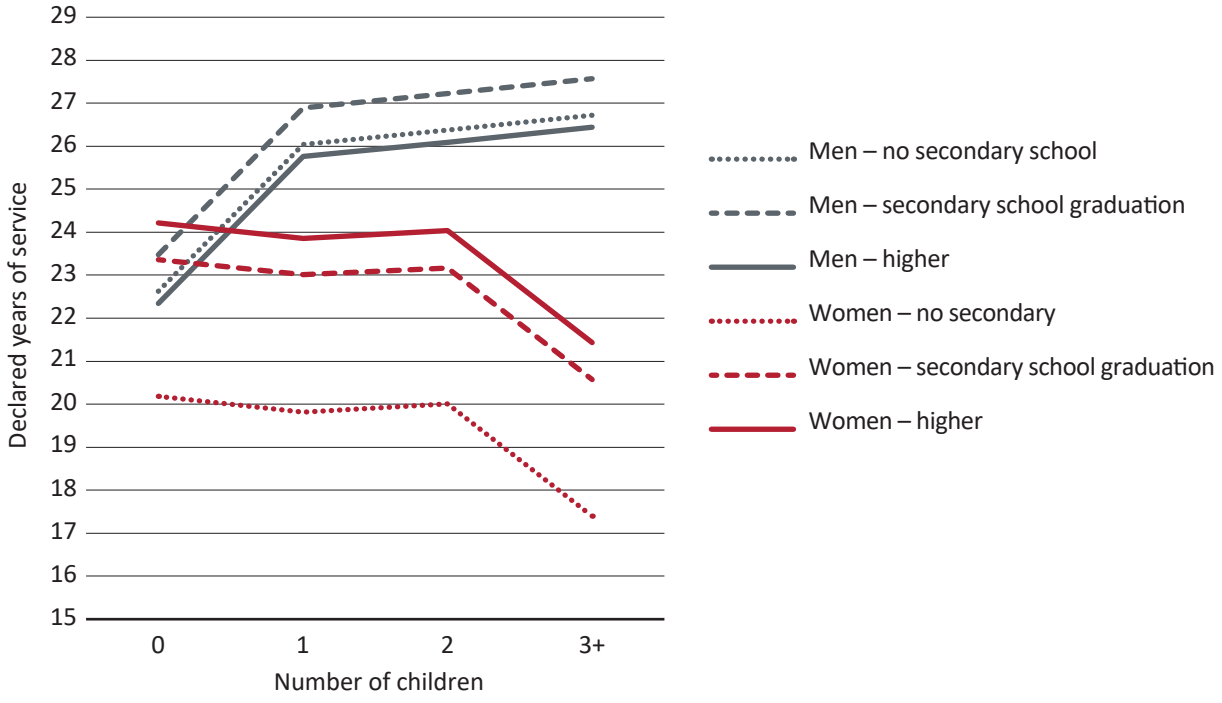
Source: Own study based on the Human Capital Study 2012–2014.

The link between professional activity and parenthood responsibilities is reflected in the total number of years worked (years of service) until children become of age. To analyse these dependencies, two linear regression models were developed (again one for men and one for women), in which working years were forecast based on age, number of children (divided into four categories: people without children, those having one child, two children, or three or more) and educational attainment (categorised by two variables: whether they have a secondary school graduation certificate and whether they have higher education degrees)[9].

[9] Moreover, the model also takes into account the interactions between age and the number of children, and age and having a secondary school graduation certificate and higher education degree.

The results of this analysis allowed us to develop Figure 7 which presents estimated years of service for women and men aged 50.

Figure 7. Years of service at 50, estimated based on respondents' declarations, by gender, educational attainment and number of children



N for men = 1,942. N for women = 2,069.

Source: Own study based on the BKL Study 2017.

As may seen, both educational attainment and the number of children have a completely different impact on the professional lives of women and men. Among 50-year-old women, women with higher education have on average the most years of service, slightly less – women who completed their education with a secondary school graduation certificate and by far the least – those without a secondary school graduation certificate. This is all the more paradoxical as graduating from a study programme usually delays entry into the labour market by several years. To a large extent this difference has to derive from the fact that women with different educational attainment have differing motivations for work. For example, as many as 85% of women with higher education and only 56% with primary education declare that they would like to work professionally, even if they had enough money to support themselves for the rest of their lives. Linking women's years of services

to the number of children translates primarily into an average less years of service in the case of women who have raised at least three children.

In the case of 50-year-old men, we see that years of service are positively correlated with the number of children, where the considerable jump occurs among childless men and fathers of at least one child. Once again, supporting a family is a significant factor motivating fathers to undertake gainful employment. We also note that men with higher education who join the labour market the latest, have, therefore, the least years years of service. The difference is, however, much smaller than could be expected based on the difference in the duration of education. It is also a rule among men that those with higher education derive more satisfaction from work.

Factors hindering the process of finding and taking up jobs

We asked non-working people about the main factors hindering the process of finding or taking up employment. A scale from 0 to 3 was attached to the list of factors, determining the degree of difficulties related to a given factor:

0 – does not hinder
1 – hinders to a small extent
2 – hinders to a moderate extent
3 – hinders to a large extent

Average values of these difficulties were calculated for groups distinguished by gender and age.

The results are broken down by people who are searching for employment and those who are not (Table 3 and Table 4).

Table 3. Main factors hindering the process of finding a job (according to those not gainfully employed but looking for jobs)

	Men (M) 18–34	Men (M) 35–49	Men (M) 50–69	Men (M) Total	Women (W) 18–34	Women (W) 35–49	Women (W) 50–69	Women (W) Total	Difference W – M 18–34	Difference W – M 35–49	Difference W – M 50–69	Difference W – M Total
lack of job offers in the area	1.25	2.18	2.01	1.66	1.78	1.84	2.08	1.87	0.53	-0.35	0.07	0.21
lack of connections	0.87	1.69	1.50	1.22	1.54	1.47	1.94	1.61	0.67	-0.22	0.45	0.39
lack of certificates and qualifications	0.98	0.71	1.06	0.93	1.34	1.09	1.24	1.23	0.36	0.38	0.18	0.31
insufficient experience	1.15	0.77	0.56	0.92	1.38	1.23	0.88	1.22	0.23	0.46	0.32	0.30
educational attainment	0.69	0.79	0.79	0.74	1.13	0.64	0.91	0.92	0.44	-0.15	0.12	0.18
poor health	0.14	0.71	1.31	0.56	0.36	0.37	1.46	0.62	0.23	-0.33	0.15	0.06
looking after a child	0.13	0.11	0.21	0.15	0.80	1.38	0.26	0.89	0.67	1.27	0.05	0.74
studies or supplementary studies	0.71	0.22	0.44	0.53	0.65	0.22	0.13	0.40	-0.06	0.00	-0.30	-0.13
age	0.05	0.48	1.47	0.47	0.09	0.36	1.14	0.42	0.04	-0.12	-0.33	-0.05
looking after a household	0.20	0.13	0.44	0.24	0.29	0.64	0.27	0.40	0.08	0.51	-0.17	0.16
looking after a family member	0.10	0.13	0.39	0.18	0.11	0.11	0.42	0.18	0.01	-0.02	0.03	0.00
looking after an agricultural holding	0.08	0.17	0.06	0.10	0.08	0.06	0.11	0.08	0.00	-0.11	0.06	-0.02
N (min)	57	30	24	111	42	29	22	94	42	29	22	94

Source: Own study based on the BKL Study 2017.

Job-seekers of both genders face difficulties primarily related to the lack of job offers in the area and lack of and connections. Second comes the lack of qualifications and sufficient experience (the latter mainly concerns younger people). In the case of older people, poor health naturally comes into play as a significant factor. Comparing both genders, we may observe that young women emphasised practically all significant hindrances. The biggest and quite predictable difference concerns looking after a child, a factor which becomes apparent in the 35–49 age category. It is also worth noting that women from this age category who often return to the labour market after a period of looking after small children

place more emphasis on the hardships of insufficient experience and lack of certificates and qualifications compared to men.

Table 4. Main factors hindering taking up employment (according to those not in gainful employment and not looking for a job)

	Men (M) 18–34	Men (M) 35–49	Men (M) 50–69	Men (M) Total	Women (W) 18–34	Women (W) 35–49	Women (W) 50–69	Women (W) Total	Difference W – M 18–34	Difference W – M 35–49	Difference W – M 50–69	Difference W – M Total
poor health	0.47	1.44	2.00	1.58	0.50	1.04	1.84	1.38	0.03	-0.40	-0.16	-0.21
age	0.18	0.27	1.73	1.21	0.18	0.43	1.87	1.21	0.00	0.16	0.14	0.00
lack of job offers in the area	0.97	0.91	0.78	0.84	1.37	1.20	1.30	1.30	0.40	0.30	0.51	0.46
lack of connections	1.01	0.68	0.66	0.75	1.15	1.17	1.04	1.09	0.14	0.49	0.38	0.34
lack of certificates and qualifications	1.10	0.94	0.64	0.78	1.04	1.06	1.04	1.04	-0.06	0.12	0.40	0.26
insufficient experience	1.40	0.69	0.36	0.66	1.34	1.07	0.79	0.98	-0.06	0.38	0.43	0.33
educational attainment	1.04	0.89	0.50	0.67	1.01	0.81	0.92	0.93	-0.03	-0.08	0.42	0.25
looking after a child	0.17	0.54	0.18	0.21	1.67	1.87	0.43	0.99	1.49	1.34	0.25	0.77
studies or supplementary studies	1.35	0.32	0.34	0.62	1.08	0.46	0.50	0.66	-0.27	0.14	0.16	0.04
looking after a household	0.46	0.56	0.33	0.39	0.75	1.11	0.72	0.79	0.28	0.56	0.39	0.40
looking after a family member	0.23	0.55	0.33	0.33	0.39	0.70	0.62	0.57	0.16	0.15	0.28	0.24
looking after an agricultural holding	0.36	0.33	0.18	0.24	0.15	0.31	0.25	0.23	-0.21	-0.02	0.07	-0.01
N (min)	86	32	225	345	150	83	318	552	86	32	225	345

Source: Own study based on the BKL Study 2017.

The people who are not gainfully employed and are not looking for a job are mainly older individuals. No wonder that health issues and age as such become significant factors. In the case of women aged below 50, looking after a child is the dominant factor.

Professional activity of older people

People over 50 years of age represent almost 40% of the adult population. They represent a quarter of people in working age. As life expectancy increases and birthrates fall, which is observed in almost the whole of Europe, the proportion of older people on the labour market will grow in the years to come and so will their importance for the entire economy.

In the group of older people in working age almost 70% of individuals are professionally active. This result is 3 percentage points higher than the outcome for the whole working age population. The percentage of working women and men is almost equal in this group, which is not true for the population as a whole, where this disproportion reaches 13 percentage points.

Among the post-working age individuals 25% of the respondents are still professionally active.

Men remain professionally active slightly more often. Still, the difference between the genders remains at only 5 percentage points. As many as 25% of people in post-working age did not have a job five years ago.

Among the older people in working age (50–60 for women and 50–65 for men), only 4% work and receive retirement benefits at the same time (Table 5). Pensioners who do not combine receiving benefits with gainful employment represent 8% of this group. A much higher percentage of pensioners in this group can be observed among men. This could be a result of the retirement privileges for professions which are culturally considered male, such as coal miners or uniformed services.

Among the people in post-working age, three-fourths of the respondents receive retirement benefits. 13% of the respondents in post-working age combine retirement benefits with professional activity and 11% work, not receiving any benefits.

Table 5. Combining work with receiving retirement benefits by individuals aged over 50

	50+ working age individuals*	Post-working age individuals**	Total individuals aged 50+
Working and not receiving retirement benefits	65%	11%	42%
Working and receiving retirement benefits	4%	13%	8%
Not working and receiving retirement benefits	8%	63%	32%
Not working and not receiving retirement benefits	24%	14%	19%
N	843	651	1,494

* Working age for women is 18–59, for men 18–64.
** Post-working age for women begins at 60, for men at 65.

Source: Own study based on the BKL Study 2017.

Table 6. Forms of employment of people in working age and post-working age

	All working people in working age working age*	Working people aged 50+ in working age	Working people in post-working age**
Currently self-employed in business/agriculture	20%	24%	24%
Currently employed based on an employment contract	74%	70%	46%
Currently employed based on a civil law contract	8%	7%	20%
Currently employed based on an informal contract	3%	2%	2%
N	2,646	575	152

* Working age for women is 18–59, for men 18–64.
** Post-working age for women begins at 60, for men at 65.

Source: Own study based on the BKL Study 2017.

Similarly to the data for for the total working population in working age, seven out of ten older employees aged 50+ are employed based on an employment contract (Table 6). Almost all work full-time. Among the working people in post-working age a little less than half has an

employment contract, while three-quarters work full-time. In the younger group it is women who are employed based on this type of contract more often. In the case of people in post-working age, the proportions between the genders are relatively similar.

Every fourth individual aged 50+ is self-employed, whereby half work in agriculture. In the case of non-agricultural activity, two-thirds of companies represent the form of self-employment.

Trade, accommodation, food and beverage services are the most common non-agricultural business areas of activity of older people – almost a third is active there. In the group of older respondents both in working age and in post-working age, this form of employment is by far the most common among men.

Employment based on a civil law contract is not particularly common among older employees in working age, however, it is gaining in importance in the older group (of people in post-working age). A considerable percentage of individuals employed based on such contracts and being in post-working age combines this form of employment with retirement benefits.

It is worth noting that one-fifth of the working respondents in post-working age helped a family business and agricultural activity with no pay in the last 12 months prior to the survey. For a third of them, this was their only means of subsistence.

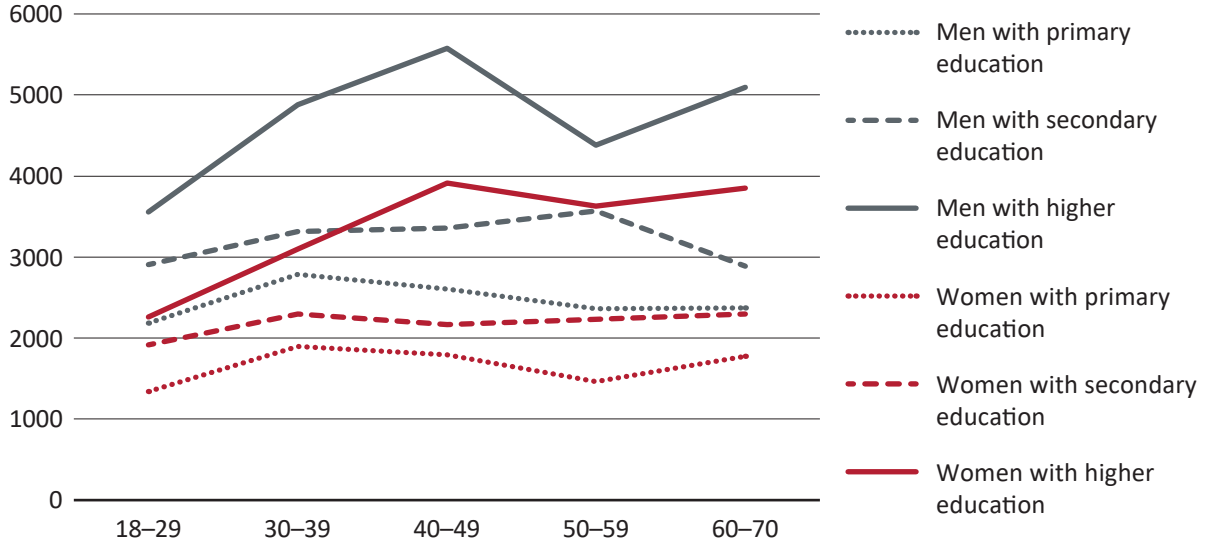
The largest percentage of older working individuals (50+) perform physical work – they make up 44% of this group. More manual workers may be found among older employees in working age (47%), while their percentage declines in the group of employees in post-working age (33%). Significantly more men than women perform physical work: among older working age population, it was almost two thirds of men, and among post-working age population – almost half. Men over 50 are usually machine operators or industrial workers – 40% represent these occupations.

Women over 50 perform white-collar work much more often than men (54%). 25% work in specialist positions and further 18% as associate professionals. They also often work in trade and services (17%). This last profession is particularly popular among women in post-working age (25%).

Average monthly income of individuals aged over 50, as in the case of other age groups, varies across groups determined by gender or educational level. People with higher education have the highest income in the oldest age groups. Their average income is also the most differentiated among the successive age groups and they are the ones to experience the largest income drop as their representatives get older.

Another group, in which age significantly differentiates earnings, are men with secondary education – the difference between average income of 50-year-olds and 60-year-olds is almost PLN 1,000. For the other gender and educational attainment groups the differences between age groups are not so radical. It should be noted that, as is true for each age group, the average earnings of women are lower than those of men (Figure 8).

Figure 8. Average monthly income of respondents in different age groups by gender and educational attainment



Total N = 1,940. Smallest sub-groups: men with higher education, aged 60–70 and women with primary education, aged 18–29 and 60–70 (N = 19).

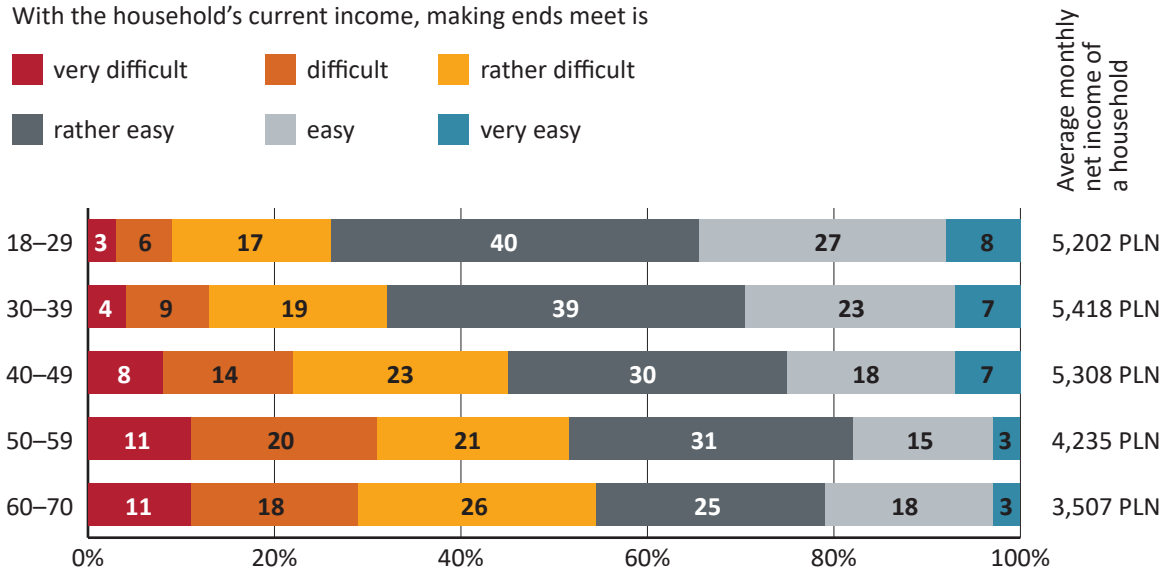
Source: Own study based on the BKL Study 2017.

Reasons why older people are or are not taking up employment

According to a 2012 survey by GUS, a considerable majority of working older people receiving social benefits remain active for economic reasons. Only less than one fifth of respondents declared their reasons for working being other than financial (e.g. related to professional satisfaction) (GUS, 2013).

In fact, older people live in households with much lower average monthly income than younger people. They also rated lower the sufficiency of their budget relative to their needs. More than half of the respondents aged over 50 claim that they find making ends meet each month difficult (Figure 9).

Figure 9. Assessment of household budget adequacy across the age groups (in %)



Making ends meet: the smallest sub-group: age 40–49, N = 751.
Average income: the smallest sub-group: age 18–29, N =573.

Source: Own study based on the BKL Study 2017.

In all age groups there is a disproportion between the average income of women's and men's households, and while for 40- and 50-year-olds that difference does not exceed 6%, in the

oldest group, women's households receive an income 18% lower than income of households represented by men.

Both in the group of people over 50 in working age and in the group of people in post-working age, the employed live in households with higher average income. In the case of the retired, individuals combining receiving benefits with work live in households that are on average 39% richer than individuals who are economically inactive. This surge is higher among households represented by women (+38%) than by men (+34%) and among households of individuals with lower education (+36%) than with secondary education (+29%) or higher education (+30%). It should also be noted how important the income of the older working people is for their households.

Nearly one-fifth of working respondents aged over 50 are the sole earners in a household, 39% of whom provide for other members of their family. In the other cases, 50% of working respondents are individuals with the highest income in a household, with 5% earning the same as their spouse. Therefore, it can be said that in many cases the income of older working people weighs not only on their well-being, but also on the well-being of their families.

The fact that work is a necessity for some of the older respondents is confirmed by one-fifth of them continuing gainful employment, despite their current health making it challenging to perform work. Feeling unwell is more often a burden for manual workers than for white-collar workers. At the same time, one-third of respondents in post-working age feel that their work has a negative impact on their health, with 38% admitting that they have to perform tasks at work which could potentially be detrimental to their health.

In spite of strong economic implications of work taken up by the older people, it ought to be underlined that the majority of respondents aged over 50 are content with the work they perform. Most of all, they value interpersonal relationships, both with co-workers and supervisors, stability of employment and the merit aspects of their work. They are least satisfied with promotion opportunities, which for obvious reasons are limited at their age, and with earnings. Even though in the majority of aspects older employees appear less satisfied than their younger peers, it is worth pointing out that average satisfaction scores for all elements of employment aside from promotion opportunities were at a level much higher

than the midpoint of the scale, potentially signifying positive attitudes in this occupational group.

As much as 92% of working respondents in post-working age believe that their work has meaning. In this group, 85% of working individuals feel that they apply their knowledge and skills at work. Over half of them have the opportunity to implement their own ideas at work. Nearly all evaluate the atmosphere in their working environment as friendly.

Work occupies a high rank in the hierarchy of values of older employees. The employed older people both in working and post-working age consider health and family to be by far the most important. Slightly lower, but still high average scores were given to work, free time and friends. These scores do not differ much depending on the gender or education level of respondents.

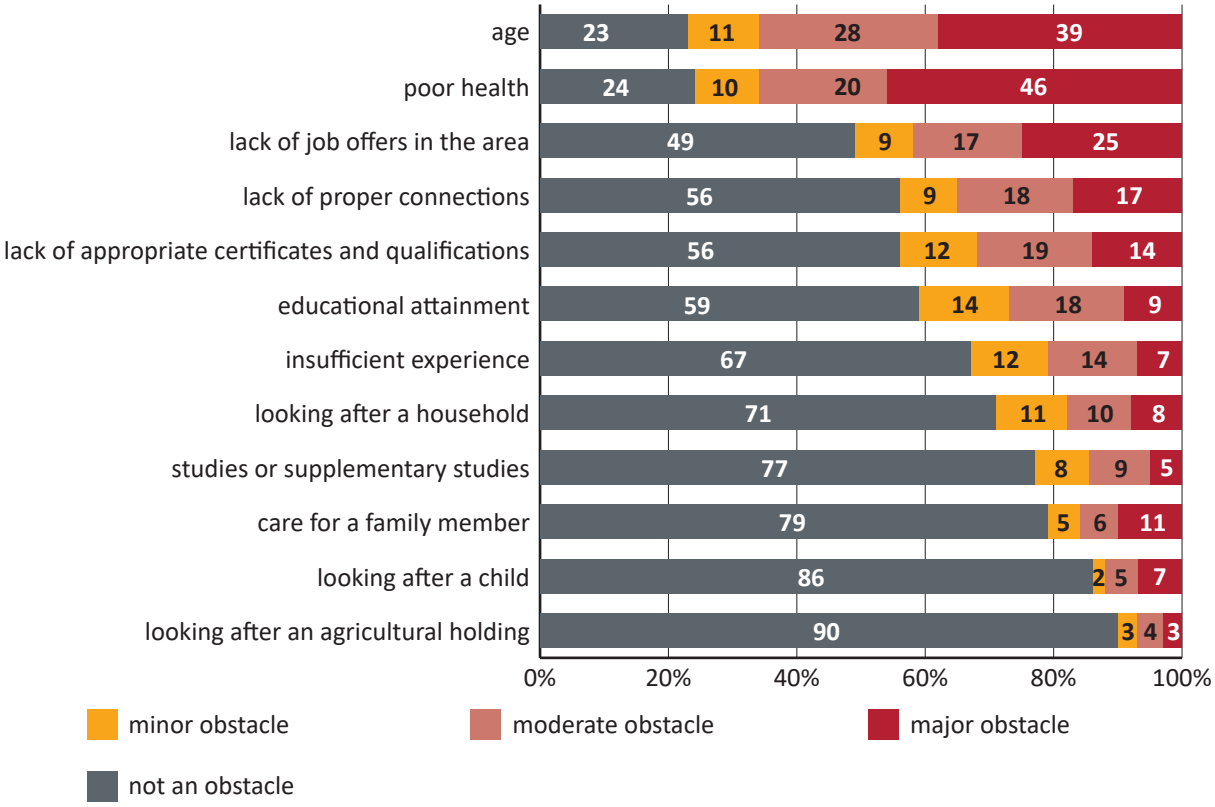
As much as 61% of working individuals aged over 50 declare that they would like to work, even if they had enough money to support themselves for the rest of their lives. This percentage is identical among older employees in both working and post-working age. White-collar workers were more likely to wish to remain professionally active than manual workers, especially among people in post-working age.

Those who would not wish to continue working, provided they had sufficient savings, evaluate their of their mental and physical condition as lower compared to those who declare their willingness to keep working. They are also systematically less satisfied with each aspect of their job, although it is worth noting that the differences are marginal. They live in households with a lower monthly income.

The key reasons why people aged over 50 do not take up work are their advanced age and poor health. Half of them believe that there are no suitable job openings near them and slightly fewer think they lack the necessary connections. Further reasons, shared by more than one-third of the older respondents, include the conviction of being insufficiently qualified, manifesting through inadequate education or lack of certificates and/or relevant experience. The reasons for limited job opportunities, which, compared to others, remain in the minority, are related to having to look after the household and care for a family member (Figure 10).

All of the reasons why older people are not taking up work, aside from age and health, are affecting more strongly women than men. The difference between the percentage of women and men for whom having to look after the household is an obstacle to employment is 15 percentage points, while in the case of having to care for a relative – 10 percentage points. Lack of suitable offers in the vicinity, inadequate education or lack of certificates are a greater obstacle for women than men (the difference is ca. 15 percentage points). Poor health, as well as inadequate qualifications, are affecting more strongly older people with lower education compared to individuals with higher education.

Figure 10. Reasons hindering older people in taking up employment (%)



N = 594.

Source: Own study based on the BKL Study 2017.

In conclusion, the situation of a large percentage of older respondents makes paid employment a necessity. They live in households with a relatively lower monthly income and their earnings are often a vital resource not just for them, but also for their families. On the other hand, for many work is a value in itself: it ranks high in the hierarchy of values and

brings satisfaction. The vast majority of respondents would not give it up, even if economic considerations would not matter. The most important reason why older people do not take up employment is their advanced age and health. Other obstacles to a larger extent affect women than men.

Future career plans

The pace of career development slows down significantly after the age of 50. People in this age group were much more likely than young individuals to hold a post of similar rank as they did five years prior to the study. A slightly higher percentage experienced a pay cut; a smaller percentage of older employees received a pay rise since that point in time.

A significant part of the respondents planned to stay in the labour market for the next 12 months from the survey year. One in four respondents in post-working age, employed on the basis of a contract of employment, planned to stop working. They indicated retirement as the main reason for giving up work.

In the group of working people in post-working age, one-fifth of the respondents would like to postpone retirement for as long as possible, or give it up entirely. The average age at which other people from this group plan to retire is 63.07 years. Among employees aged 50+ in working age, approx. 9% of the respondents would prefer to keep working for as long as possible. The projected retirement age of other respondents is close to what the older group declared and amounts to 62.74 years.

The expected retirement age is different for respondents of different genders.
On average, men in post-working age plan to retire at 66, while women from this age group – at 61. These values are therefore similar to the age at which most employees acquire pension rights. In the 50+ group of respondents in working age, the expected average age of retirement for both genders is lower and amounts to 64.4 for men and 60.5 for women.

More than half of working respondents aged over 50 expect to still have a source of income once they retire. More women than men are of this opinion, with the difference being 5 percentage points. 60% of older respondents working in white-collar jobs and 45% of respondents in manual jobs plan to combine work and retirement.

People who expect to keep earning while retired asses their health in more positive terms than those who have no such plans. Average monthly income in the first group is higher than that of people who do not wish to make extra money in addition to pension benefit, which might indicate that the loss of their income would have a greater impact on the household. People planning to continue work after retirement do not differ significantly from others in terms of satisfaction with particular aspects of their current job.

When asked about their current employer's expectations regarding acquisition of pension rights, half of the working respondents aged 50+ said that they would prefer to quit working and retire. One-third of working respondents claim that they would be expected to carry on working as before. This means that the majority of employers do not create special working conditions tailored to the elderly and see only two alternatives for them: to quit working or continue as before.

The expectation of ending employment upon reaching retirement age concerns a larger share of women (54%) than men (46%). Women are also more likely to be offered tailored employment forms (between 18% and 14%). Men are more likely to be expected to remain in their prior position (35%).

One-fifth of working respondents aged 50+ claim that they could continue their current work with a minimum of 20 working hours per week, for as long as possible. For others, the average age to which they could work in their current profession is 64 years. This average depends on gender and amounts to 66 years for men and 63 years for women. On average, men working in white-collar jobs state that they could continue up to the age of 67, while men working in manual jobs would be willing to carry on until they are 65. In the case of women, employment in white-collar jobs can continue until the age of 63, and in manual jobs – up to 62.

One-third of respondents in the group concerned declare that they could perform any work not requiring manual labour for 20 hours per week, past the working age threshold. One quarter would be willing to work in such manner up to this age threshold (60 years for women and 65 for men), while only 9% would wish for fewer working hours. Nearly one third of working respondents aged over 50 declare that a change of working conditions could entice them to remain professionally active for longer, rather than staying in their current job. This viewpoint is shared by more manual workers (34%) than white-collar workers (30%).

Job search over 50

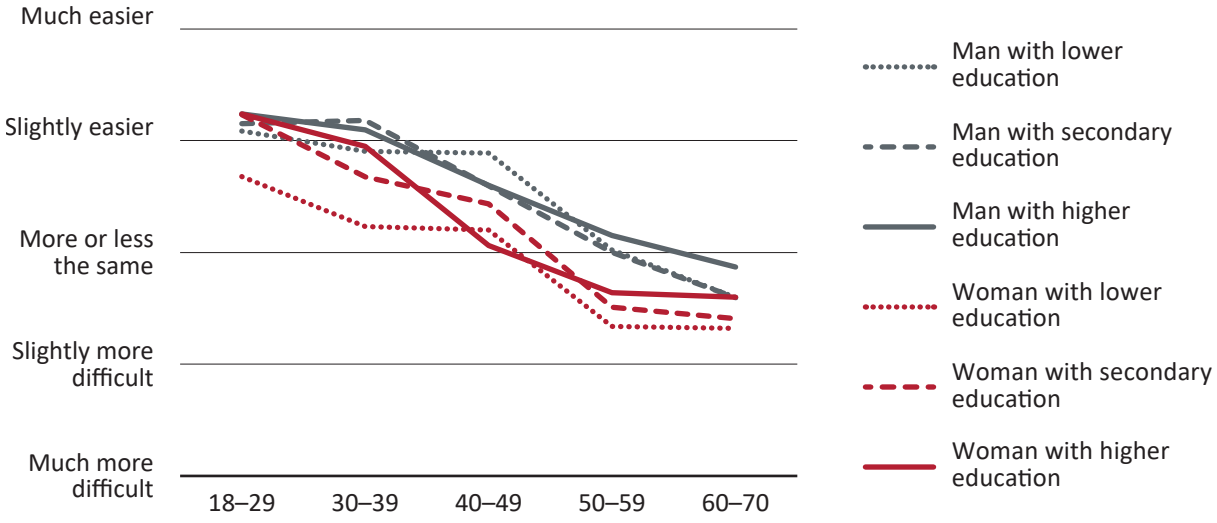
Looking for a job at the age over 50, in spite of a boom on the labour market, poses a great challenge for the respondents.

Compared to 5 years ago, in the year of the study, the assessment of difficulties in finding a job in the older age groups was much worse than in younger ones. Among respondents aged over 60, the average assessments in each gender and skills group were below the midpoint of the scale.

As with other age groups, in the oldest groups it was also men that felt more self-assured about their chances on the labour market (Figure 11). Individuals aged over 50, employed on the basis of a contract of employment, do not feel confident in a scenario where they could potentially lose their jobs. Over 40% of them believe that if they were to lose their jobs right now, finding work on similar terms would be difficult. Women deal with greater uncertainty: half of female respondents are convinced of the difficulties related to looking for a similar job, an opinion shared by 10 percentage points fewer male respondents. Among older men there are also more those who are certain they could easily find such an opening – they account for 15% of the group, compared to 10% of women sharing the same view.

Concerns about finding a new job are spread differently in groups differentiated on the basis of the nature of work. While nearly half of white-collar workers believe they would have a problem with finding a new job, among blue-collar workers this percentage is 8 percentage points lower.

Figure 11. Average ratings of difficulties in finding a job (compared to the situation five years ago) in different age groups of respondents



Total N = 3,670. Smallest sub-groups: men with higher education, 50–59 years and 60–70 years, N = 39.

Source: Own study based on the BKL Study 2017.

One may presume that this is caused by the complexity of their profession, availability of offers which fit both characteristics, and increased competition from younger people in the case of white-collar jobs.

6% of respondents aged 50 and more are currently looking for a job. A quarter of the job-seekers have been doing this for over a year. People who are currently not in employment are more often looking for a job, however, but this disproportion is not large – 60% of those looking for a job are currently working. In both groups, the key reason behind job search is the need to make additional money – as declared by nearly half of those employed and slightly over 40% of the unemployed engaged in job search. Aside from that, working people are first and foremost looking to change their job (55%), while those who are not working want to return to the labour market after a break (53%).

Two-thirds of the respondents aged 50 or more are searching for a job based on recommendations from friends and family. This job search strategy is popular in all age groups, but is it used most often only among the oldest respondents. While half of the older respondents declare that they use the internet for job searching, compared to other age groups this number is quite low. The same is true for direct contact with an employer,

as declared by one-third of the older respondents. Also, using the services of employment agencies is popular among people in this age group (30% of the older respondents).

Among the respondents currently working on the basis of an employment contract, 30% were hired by their current employer when they were over 50. Nearly two in five respondents state that they owe their current job to a recommendation from family or friends. In 17% of cases, the respondents themselves established direct contact with the employer. Other popular methods for securing a job include receiving an offer from an employer or recruitment agency (12%) or using the services of an employment agency (12%).

Conclusions

Professional activity and inactivity is clearly linked to gender and age, as well as health, educational attainment and family circumstances. Differences between men and women manifest above all at reproductive age, when the level of professional activity among mothers reduces slightly when they care for their children. A factor which is decidedly conducive to employment is education, as seen in particular in the case of women.

In recent years, the Polish labour market has witnessed a radical increase in the professional activity of individuals aged 50+, especially women. Work is important to them from an economic standpoint: older working people live in low-income households and often play an important role in supporting their families. More than half of older working respondents expect to have an additional source of income in addition to their pension. At the same time, over half of those employed over the age of 50 state that even if their financial situation allowed it, they would not wish to quit working. A significant proportion of older respondents expect that after they reach retirement age, their employer will expect them to remain employed on the same terms or quit their job. Lack of preferential terms of employment (e.g. reduced working hours or change in the nature of work) may be difficult for older employees, particularly as older respondents indicate health and age as the main barriers to taking up employment.

Annex

Logistic regression 1.

Dependent variable: engaged in gainful employment (analysis for all respondents).

	Men B	Men Significance	Men Exp(B)	Women B	Women Significance	Women Exp(B)
Constant	0.255	0.253	1.291	-0.273	0.257	0.761
Place of residence: rural areas	0.287	0.024	1.332	0.051	0.649	1.053
Age		0.000			0.000	
25–34	1.122	0.000	3.072	0.777	0.002	2.176
35–49	0.959	0.000	2.608	1.259	0.000	3.521
50–59	0.670	0.013	1.955	0.707	0.006	2.029
60–64	-0.281	0.325	0.755	-0.918	0.001	0.399
65–69	-1.801	0.000	0.165	-2.004	0.000	0.135
Currently in a relationship	0.583	0.000	1.791	0.186	0.144	1.204
Dependant child aged up to 6 years	0.364	0.174	1.439	-1.404	0.000	0.246
Health: below average	-0.828	0.000	0.437	-0.710	0.000	0.492
In formal education	-1.448	0.000	0,235	-0.798	0.001	0.450
Graduated		0.000			0.000	
secondary	0.506	0.000	1.659	0.807	0.000	2.241
higher	1.297	0.000	3.657	1.494	0.000	4.454
Model test	χ^2 =593.17 (p =0.000)			χ^2 =687.89 (p =0.000)		
Nagelkerke's R^2	0.379			0.380		
N	1,790			2,260		

Logistic regression 2.

Dependent variable: engaged in a job search (analysis for the unemployed).

	Men B	Men Significance	Men Exp(B)	Women B	Women Significance	Women Exp(B)
Constant	0.334	0.406	1.397	-0.323	0.491	0.724
Place of residence: rural areas	0.365	0.180	1.441	-0.190	0.494	0.827
Age		0.000			0.000	
25–34	-0.458	0.401	0.633	-0.294	0.571	0.745
35–49	-0.735	0.133	0.479	0.232	0.634	1.262
50–59	-1.800	0.001	0.165	-0.596	0.261	0.551
60–64	-3.099	0.000	0.045	-2.625	0.000	0.072
65–69	-4.546	0.000	0.011	-2.929	0.000	0.053
Currently in a relationship	-0.338	0.293	0.714	-0.980	0.001	0.375
Dependant child aged up to 6 years	-0.654	0.228	0.520	-1.205	0.002	0.300
Health: below average	-0.539	0.100	0.583	-0.776	0.015	0.460
In formal education	-2.272	0.000	0.103	-2.076	0.000	0.125
Graduated		0.136			0.194	
secondary	0.571	0.046	1.770	0.010	0.974	1.010
higher	0.329	0.542	1.389	0.573	0.102	1.774
Model test	χ^2 = 132.00 (p = 0.000)			χ^2 = 99.28 (p = 0.000)		
Nagelkerke's R^2	0.360			0.241		
N	521			939		

Organisational culture, strategy and personnel management. What drives innovation in Polish enterprises?

Piotr Prokopowicz

Do managers matter? This seemingly provocative question is in fact an issue which concerns both management sciences and the most innovative organisations in the world.

On the one hand, there is plenty of evidence demonstrating that the role of managers, especially senior managers, is being overestimated (Wasserman *et al.*, 2010). Some research suggests that the correlation between who occupies the top-level positions in organisations and their financial performance is marginal (Fitza, 2014). On the other hand, more evidence emerges implying that the typically under-appreciated middle management level has in fact a very significant impact on the success of enterprises. The quality of management staff is particularly vital in innovative sectors, where the development and implementation of new technological solutions is crucial (Mollick, 2012).

Similar conclusions were reached by one of the most innovative companies in the world – Google – which, as part of its Oxygen Project, studied teams and the impact of leaders on efficiency (Garvin *et al.*, 2013). By making use of something scientists rarely have a share in, namely access to huge amounts of high-quality data, they were able to confirm beyond any doubt that managers really do matter.

According to Google's research, a good manager supports and involves employees in decision-making, has a good rapport with them, fosters employee development, contributes to a culture of safety and has a clear visions of the future of the team and the organisation. To keep matters simple, good managers influence the success of their organisation by adopting a long-term perspective, using high-quality decision-making tools, developing a solid work culture and maintaining positive relationships with employees.

Which tools and strategies managers in Poland apply? To what extent do they enable or prevent making the most of employee potential? What type of enterprises make long-term plans and apply high-quality management tools? Do corporate culture, long-term perspective and high quality of tools for personnel management influence a company's efficiency and innovation? Finally, what actions can be taken by business, public institutions and scientists to improve the quality of management systems and managers of Polish enterprises? These are the questions I will attempt to answer in this Chapter, referring to the Human Capital Study.

Management in enterprises

Managing an organisation requires addressing a variety of issues. Should decisions be made solely by managers or should they consult employees? Should financial motivation be used for employees or should non-financial motivation be applied? Should corporate culture be developed based on values emphasising interpersonal relationships or market efficiency? How an organisation and its leaders solve those dilemmas has a bearing not only on the nature of an enterprise – its unique DNA – but to a large extent determines its success on the market. How do Polish companies address these challenges?

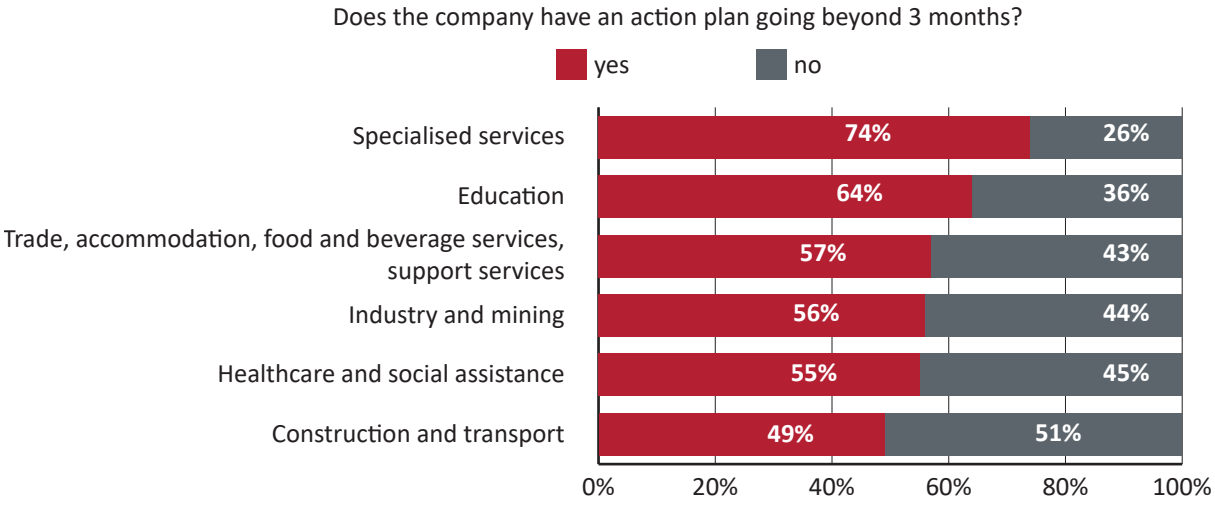
Long-term perspective

One of the crucial aspects allowing to grasp the difference between enterprises is the long-term perspective they adopt for their planned activities. Organisations which systematically plan their ventures are more likely to succeed on the market. What gives them this edge? First of all, making long-term plans enables to better prepare for changes in the business environment and react in advance. Second, involvement in the planning process alone benefits entrepreneurs in many ways, allowing them to better diagnose customer needs, understand their sector and more effectively recognise internal problems in their organisation.

So in what time perspective do Polish medium-sized and large enterprises plan their activities? 60% of organisations make plans in a perspective of more than 3 months. This

means that a significant share of medium-sized and large enterprises have no long-term plan and are not systematic in planning their activities.

Figure 1. Percentage of enterprises with an action plan that goes beyond the next 3 months, by sector (%)



Source: BKL Employer Study 2018, sample of medium-sized and large enterprises, N = 1,088. Main sectors of activity based on 6 categories of the Polish Classification of Activities (PKD) code.

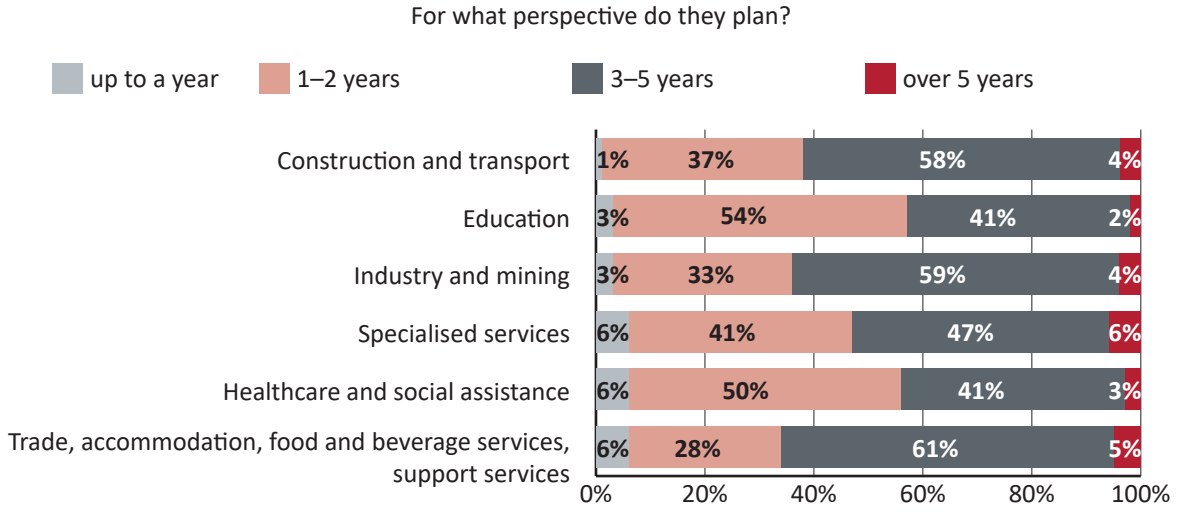
The situation is particularly critical in the construction and transport sectors, where the majority of companies (51%) do not make plans for the long-term perspective; the situation improved considerably in the specialised services sector, which includes IT and consulting companies, where nearly three quarters of organisations plan their activities (Figure 1).

Among the companies that plan their ventures in a perspective of more than 3 months, what share of these companies make plans in the short-, medium- and long-term perspective? 4% of the surveyed companies plan their activities in a perspective of less than a year, with the same percentage making plans for a 5+ year perspective. A planning perspective of 1–3 years is adopted by 40%, while 3–5 years – 52% of medium and large enterprises.

Major differences between sectors can also be observed in that regard. The largest group to be making plans in the medium-term perspective, meaning 1–5 years, comprises organisations from the construction and transport sector – in their case, planning is likely a result of market requirements. On the other hand, specialised services are a sector which

plans the most for the long term – as much as 6% of organisations among those planning for the future are planning for more than 5 years (Figure 2).

Figure 2. Percentage of enterprises planning their activities in a set time perspective in the group of companies making plans for more than 3 months, by sector (%)



Source: BKL Employer Study 2018, sample of medium-sized and large enterprises, N = 573. Main sectors of activity based on 6 categories of the Polish Classification of Activities (PKD) code.

Employee involvement in decision-making

One of the most important choices that managers in any organisation face concern the extent to which they involve employees in making decisions that are important to the company and to themselves. Ever since Kurt Lewin's frontier research (Lewin *et al.,* 1939), it is assumed that there are three basic methods of addressing this dilemma: decisions are made (1) solely by supervisors, without consulting employees (authoritarian model); (2) by supervisors with employee involvement (democratic or participatory model); (3) solely by employees, without supervisors' oversight (*laissez-faire* model).

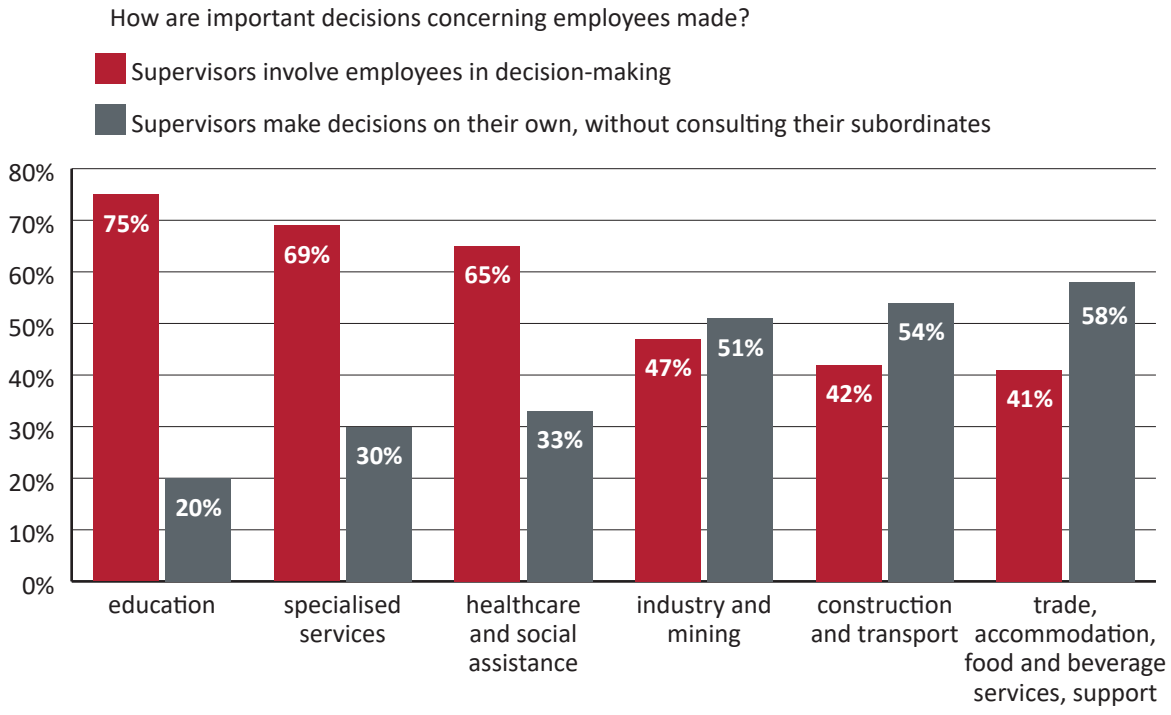
In 43% of Polish medium-sized and large enterprises decisions are made without consulting the employees, in 55% employees are involved in the process of making decisions that are important to them, while 2% of companies leave decisions to employees.

It can be observed that there is little variation in this respect between medium-sized and large enterprises. Much more pronounced differences can be seen as regards the involvement of employees in decision making processes across sectors.

Detailed data in this respect are shown in Figure 3.

The ones to have their employees involved in decision-making to the largest extent are managers in education, specialised services, as well as healthcare and social assistance. In industry, mining, trade, construction and transport sectors, the majority of companies make decisions without consulting their employees.

Figure 3. The manner in which decisions are made in the organisation in terms of employee involvement by industry (%)



Source: BKL Employer Study 2018, sample of medium-sized and large enterprises, N = 1,088. Main sectors of activity based on 6 categories of the Polish Classification of Activities (PKD) code. The figure does not include the model of decision making consisting in leaving decisions to employees on account of marginal numbers (< 5%).

Organisational culture

Organisations are not just power structures and the people within these structures. They are also norms, values and conduct models, which make employees of a particular organisation act in certain way. A system of norms, values and habits typical for an enterprise is called organisational culture (Prokopowicz *et al.*, 2018).

There are dozens of theories, concepts and models of organisational culture. One of the most popular models is the Competing Values Framework by Kim Cameron and Robert Quinn (2011). According to this theory and diagnostic model, each organisation is built upon values that are organised within two separate dimensions: flexibility-control and internal positioning-external positioning. By superimposing those dimensions over each other, we can differentiate between four types of organisational culture: clan, adhocracy, hierarchy and market. The authors of this concept consider values representing culture to be competitive towards one another. This means that it is very difficult for an enterprise to be simultaneously a clan and a market, or an adhocracy and a hierarchy.

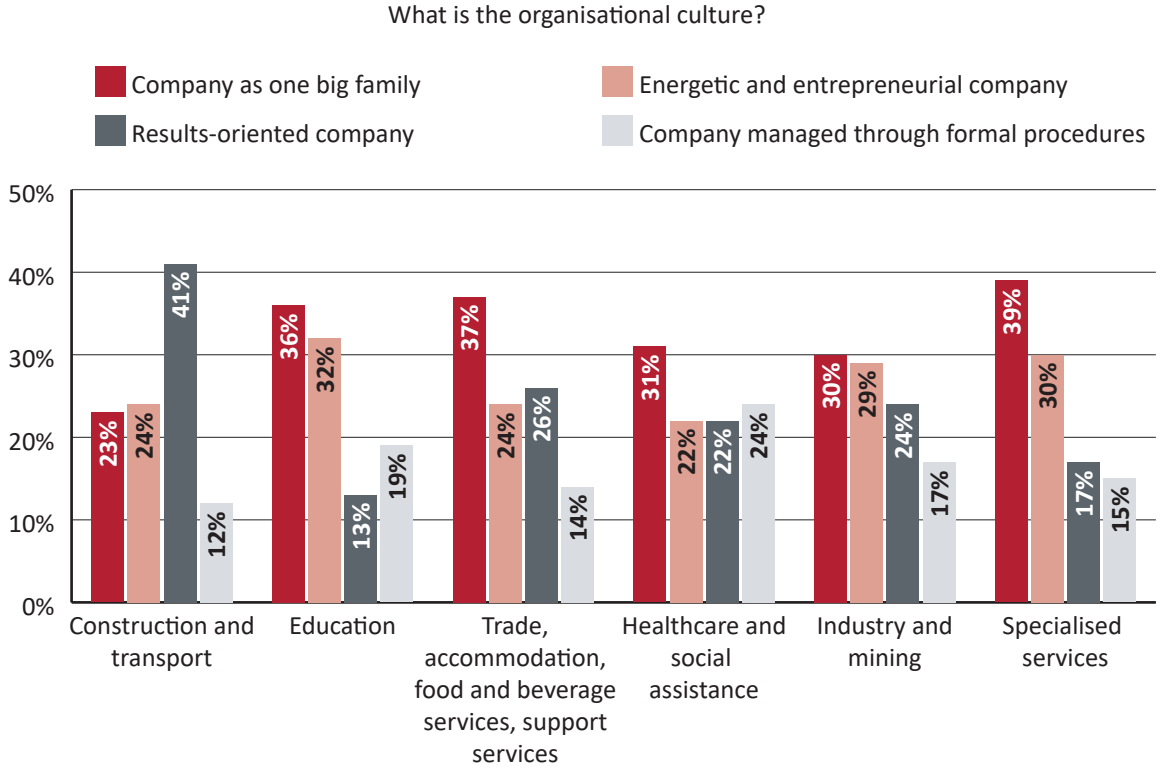
In the Human Capital Study, organisational culture in the meaning of the Competing Values Framework was diagnosed based on a question where respondents assigned a rank score (between 1 and 4), depending on the degree to which the following statements reflected work in their company:

- "Our company/institution resembles one big family and its management takes care of its employees" (clan culture).
- "Our company/institution is energetic and entrepreneurial, while the management is innovative and encourages to take the initiative and risk" (adhocracy culture).
- "Our company/institution is mainly results-oriented and focused on effective task performance, while the leaders are demanding taskmakers" (market culture).
- "Our company/institution is strictly organised and governed by formal procedures, while its leaders focus on efficient organisation and control" (hierarchy culture).

The most common organisational culture in Polish enterprises is the clan culture – in the case of 33% of large and small companies employees see their organisation as a big family. Adhocracy culture dominates in 28% of enterprises, with the market and hierarchy cultures found in 22% and 17% of the surveyed companies, respectively.

As expected, the predominant cultural values differ depending on the sector in which enterprises operate. In the construction and transport sectors, the largest category comprises results-oriented companies (41%), while in other sectors the most common category of values is 'company as a big family' (36% for education, 37% for trade, and food and beverage services, 31% for healthcare and 39% for specialised services). Adhocracy, used to describe an energetic and entrepreneurial company, is the type of culture found most frequently in education and specialised services (32% and 30% of companies in each sector, respectively, admit these to be their dominant values). The least common category of values, the bureaucracy culture (company governed by formal procedures), was found most often in healthcare, education, as well as industry and mining (24%, 19% and 17%, respectively). A detailed breakdown of culture categories by sector can be found in Figure 4.

Figure 4. Percentage of enterprises with dominant types of organisational culture, by sector (%)



Source: BKL Employer Study 2018, sample of medium-sized and large enterprises, N = 1,088. Main sectors of activity based on 6 categories of the Polish Classification of Activities (PKD) code.

Use of good HR practices

One of the most important aspects of management examined under the Human Capital Study is the extent to which Polish companies apply professional tools and practices for HR management, known as the High Performance Work Practices (HPWP).

HPWP comprise all personnel management practices, which were proven to influence an enterprise's efficiency (Combs *et al.,* 2006). For instance, HPWP include such tools and practices as measuring HR efficiency, using standardised recruitment and selection methods, as well as involving employees in decision-making.

The use of advanced HR techniques is vital for several reasons. Firstly, they influence the KPIs of an organisation. A very important study, which contributes to understanding the impact of high-quality HR practices on the efficiency of an organisations, is a study by the Work Foundation and the Institute for Employment Studies from Great Britain (Tamkin, 2004). According to analyses carried out by the authors, companies basing their personnel-related activities on high-performance HRM practices enjoy higher margin levels and productivity indicators. Moreover, each investment in HRM practices increased by 10% would lead to a rise in annual profit per employee of GBP 1,500. That is not all – good HR practices also affect the 'softer' dimensions of an organisation's activity, e.g. trust and greater employee commitment.

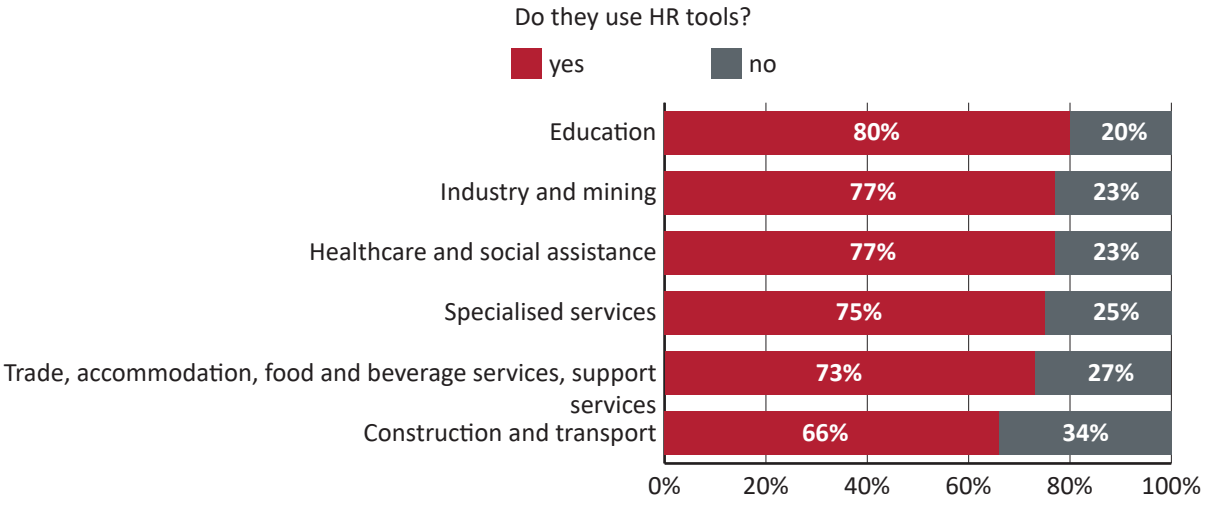
Secondly, high-performance HRM practices build market pressure and educate employees, who expect employers to use the best and most suitable management tools, thus contributing to better quality of management in enterprises.

Thirdly, HPWP translate into increased transparency of an organisation's management systems, which leads to greater satisfaction among potential and existing employees.

How do Polish enterprises participating in the surveys under the Human Capital Study use proven HR methods and practices? Three quarters of Polish medium and large enterprises use some HRM tools. Significant differences in the use of the tools can be observed between the sectors in which the surveyed organisations operate.

HRM tools are most commonly used in education (80%), industry and mining, as well as healthcare (77% each). The least developed in that regard is the construction and transport sector (only 66% of companies in that sector use HR tools) (Figure 5).

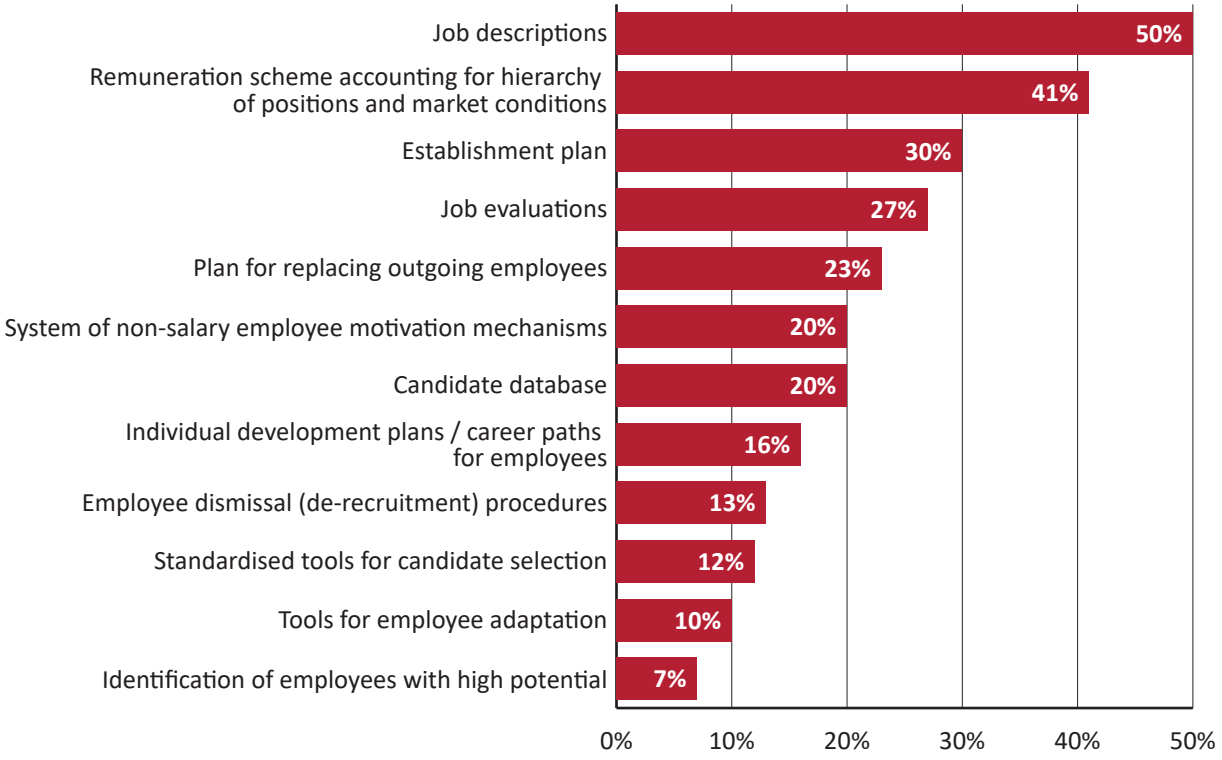
Figure 5. Percentage of companies using human resources (personnel) management tools, by main sector of activity (%).



Source: BKL Employer Study 2018, sample of medium-sized and large enterprises, N = 1,088. Main sectors of activity based on 6 categories of the Polish Classification of Activities (PKD) code.

It is also worth noting which specific HR tools are used by Polish medium-sized and large enterprises. The most commonly used personnel management tool in these enterprises are job descriptions – found in half of the medium-sized and large companies surveyed. 4 in 10 companies apply a salary differentiation system, while 30% have an establishment plan. The following tools are used to a marginal extent: standardised selection tools (12%), adaptation tools (10%) and identification of employees with high potential (7%) (Figure 6).

Figure 6. Percentage of companies using specific human resource (personnel) management tools (%).

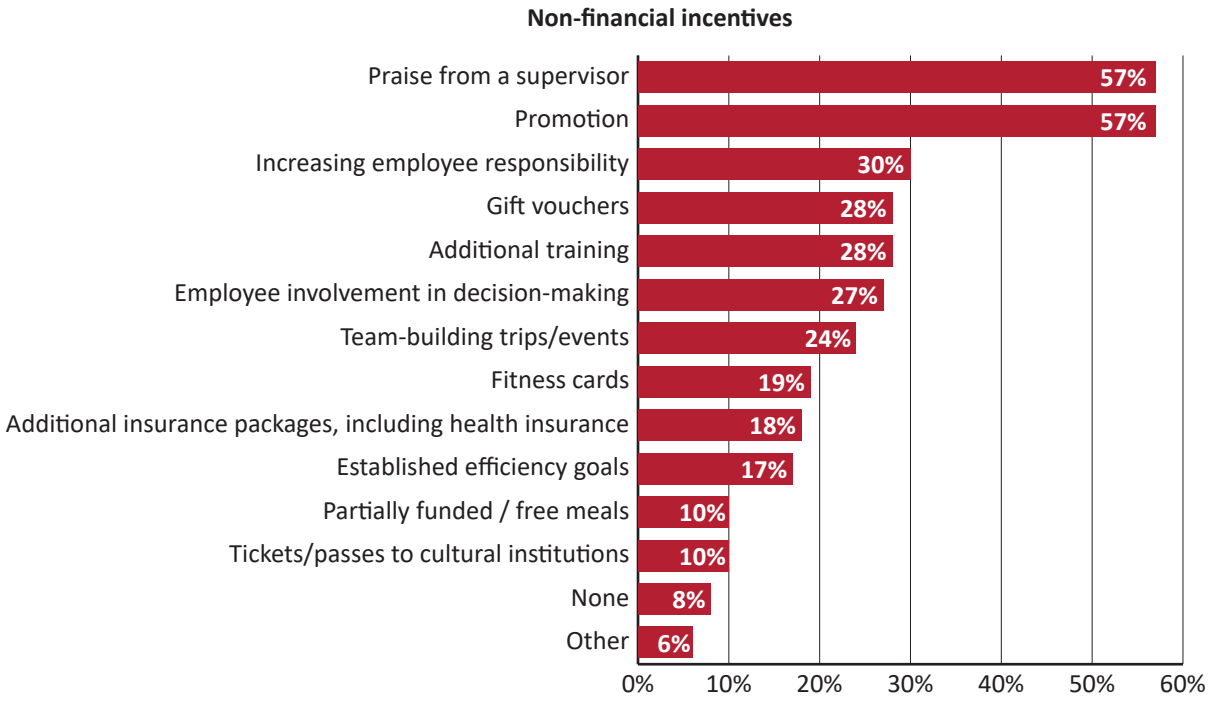


Source: BKL Employer Study 2018, sample of medium-sized and large enterprises, N = 1,088. The maximum value in the Figure is 60%.

How do Polish companies motivate their employees? The most common non-financial incentives used by Polish companies are: praise from a supervisor and promotion. These relatively simple methods are in place in 57% of Polish companies.

The methods much more frequently used for that purpose include ‘empowerment’, that is increasing employee responsibility (30%), additional training (28%), gift vouchers (28%), employee involvement in decision-making (27%) and team-building trips (24%). Less than 20% of Polish companies turn to fitness cards, establishing efficiency goals and additional insurance packages. 8% of companies use no – other than financial – employee motivation mechanisms. Detailed results are presented in Figure 7.

Figure 7. Percentage of organisations using specific, non-salary employee motivation mechanisms (%)

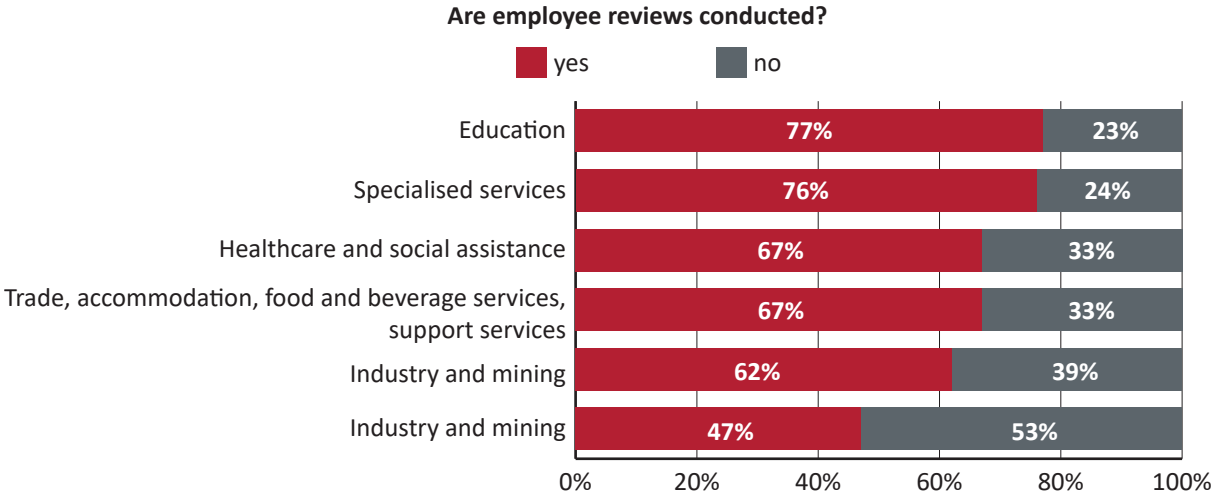


Source: BKL Employer Study 2018, sample of medium-sized and large enterprises, N = 1,088. Maximum value on the scale: 60%.

An important element of a professional personnel management system in enterprises involves conducting periodic reviews of individuals employed by the company – as implemented by 74% of the surveyed companies. The sectors which stand out in that regard (although each probably for a different reason) are education and specialised services, where almost 80% of enterprises conduct reviews.

In healthcare, trade, accommodation, food and beverage services, 67% of the companies surveyed conduct reviews; in industry and mining – slightly over 60%. The construction and transport sector paints a negative picture in that regard, with less than half of companies conducting employee reviews.

Figure 8. Percentage of companies conducting employee reviews, by main sector of activity (%)

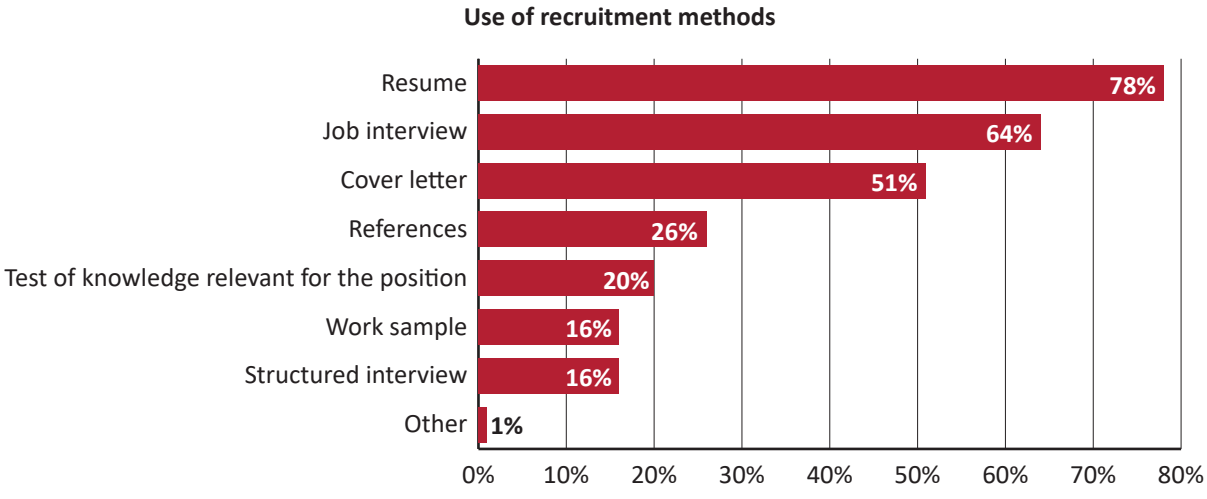


Source: BKL Employer Study 2018, sample of medium-sized and large enterprises, N = 1,088. Main sectors of activity based on 6 categories of the Polish Classification of Activities (PKD) code.

Each organisation's potential is determined not only by management systems, but also the potential of its employees, which is why recruitment and selection is such an essential area of activity. What recruitment tools Polish medium-sized and large companies use?

By far the most popular recruitment tools are resumes, job interviews and cover letters – each used respectively by 78%, 64% and 51% of the surveyed employers. For large and medium-sized companies these are relatively low percentages, which leads to the question: If these companies do not rely on the recruitment 'Big Three', what do they use? This result may imply that even bigger companies often use informal recruitment sources, such as personal preferences, connections and nominations. Detailed results are presented in Figure 9.

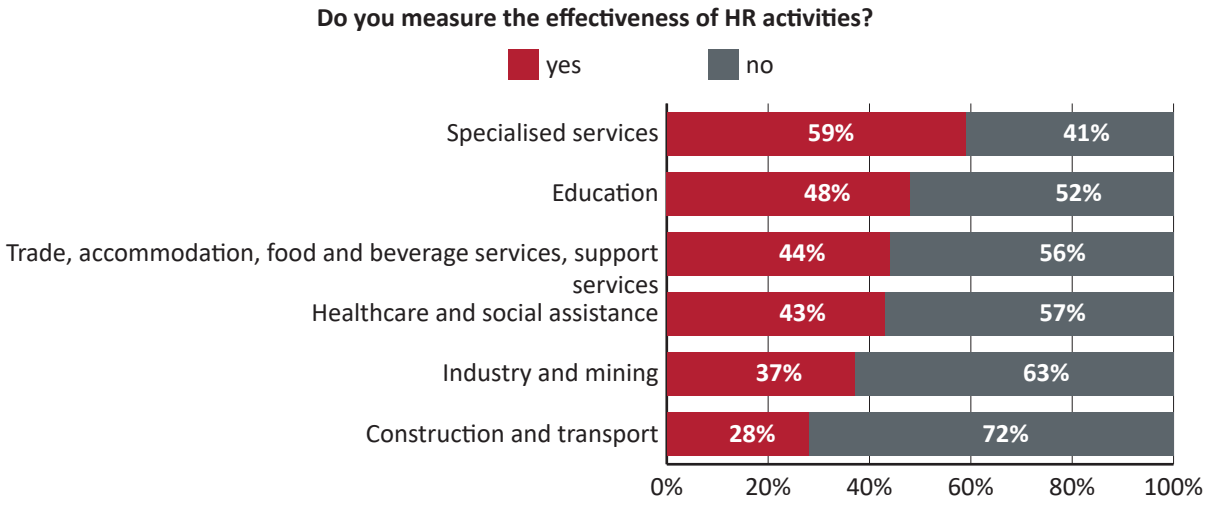
Figure 9. Percentage of companies using specific recruitment tools (%)



Source: BKL Employer Study 2018, sample of medium-sized and large enterprises, N = 1,088.

The final criterion for selecting and retaining personnel management methods and practices in organisations should be the evaluation of their effectiveness. Do Polish enterprises measure the effectiveness of their HR activities? Such activities are implemented by 43% of medium-sized and large companies; only in the specialised services sector this is done by the majority of organisations – 59%. In education, less than half of the companies surveyed measure the effectiveness of their activities (48%). The effectiveness of personnel management activities is measured to the smallest extent in industry and mining, as well as in construction and transport – 37% and 28%, respectively. Detailed results are presented in Figure 10.

Figure 10. Percentage of companies measuring the effectiveness of their human resource (personnel) management activities, by sector (%).



Source: BKL Employer Study 2018, sample of medium-sized and large enterprises, N = 1,088. Main sectors of activity based on 6 categories of the Polish Classification of Activities (PKD) code.

Looking at the presented study results, it may be concluded that the quality of management processes in medium-sized and large enterprises in Poland is far from perfect. That is true. Particularly in construction and transport as well as in industry and mining there is a low level of use of good personnel management practices. However, this data should be interpreted in the context of the international situation – the low quality of management staff and management processes is a situation that occurs across the globe. It is worth quoting here the research on personnel management knowledge conducted in the US (Rynes *et al.*, 2002) and the Netherlands (Sanders *et al.*, 2008), suggesting that even HR managers, who should have adequate knowledge in this area, are able to answer correctly only about 60% of questions on management.

Based a number of studies (Huselid and Becker, 1997), it may be concluded that the quality of HR processes, tools and practices translates into the efficiency of companies. Is it possible, however, to observe similar correlations in the BKL's research sample? This question is dealt with in the next section of this Chapter.

High-performance HR practices and innovations in organisations

One of the most important criteria for performance and building competitive advantage of modern enterprises is innovation, that is creating and implementing new solutions, in particular in the area of new services and products. In the BKL Study, we asked companies whether they managed to place any product or service innovations on the market in the last year. Can innovativeness in this area be predicted based on high-performance HR practices? How is creating and implementing new products and services influenced by organisational culture? Is long-term planning conducive to innovation? Or can differences in innovation levels be explained by an organisation's size and sector? In order to answer these questions, a HPWP index was created for the purposes of this Chapter.

The HPWP index

As mentioned above, high-performance HRM practices (HPWP, High Performance Work Practices) include all HR practices whose impact on company performance has been convincingly demonstrated. The HPWP group includes such practices as employee involvement in decision-making or using standardised recruitment tests or job descriptions (Pfeffer, 1998).

According to a meta-analysis by Combs and his colleagues (Combs *et al.,* 2006), the correlation between the high-performance HRM practices is particularly evident when these practices occur together to form an integrated system

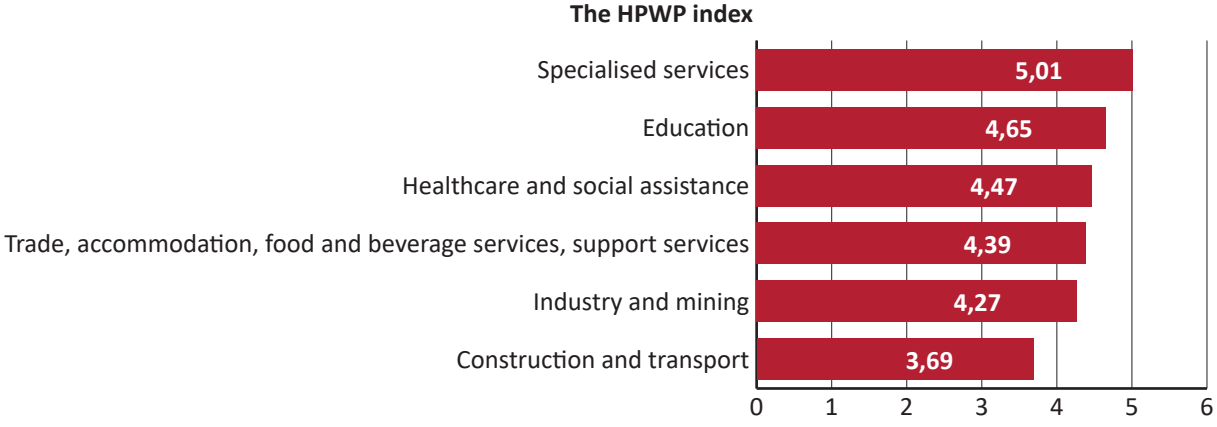
In order to reflect this correlation in BKL Study data, a HPWP index was devised. Index values are calculated based on variables presented in Table 1 as a simple sum of dichotomous variables. The higher the index value, the higher the number of high-performance HRM practices in an organisation.

Table 1. Variables used for the creation of the HPWP index

No	Variable	Values
1	Are decisions made with employees' involvement?	Yes (1) / No (0)
2	Does the organisation measure the effectiveness of its HR activities?	Yes (1) / No (0)
3	Does the organisation carry out employee reviews?	Yes (1) / No (0)
4	Does the organisation use any personnel management tools?	Yes (1) / No (0)
5	Does the organisation use any non-financial methods for motivating employees?	Yes (1) / No (0)
6	Does the organisation have a recruitment budget?	Yes (1) / No (0)
7	Does the organisation use resumes in the recruitment process?	Yes (1) / No (0)

The average index value in the sample of the surveyed enterprises is 4.43, with 4.38 in the category of medium-sized enterprises and 4.76 in large enterprises. Quite a significant variation in the value of the index can also be seen in the different sectors. Topping this list is the specialised services sector with index value exceeding 5, while the lowest value was recorded for construction and transport (3.69). Detailed index values for individual sectors are presented in Figure 11.

Figure 11. HPWP index value by sector



Source: BKL Employer Study 2018, sample of medium-sized and large enterprises, N = 1,088. Main sectors of activity based on 6 categories of the Polish Classification of Activities (PKD) code. Maximum index value is 7, minimum – 0.

HPWP and innovations

The innovativeness of companies is their potential to develop and implement new solutions, mainly in the area of products and services. Based on the analyses presented before, one may expect that companies which successfully implement innovations will have significantly developed HR processes, make long-term plans, and have a specific organisational culture based on innovation-driven values.

In order to test these predictions, a logistic regression was performed. The model dependent variable was the answer to the question whether the company has introduced product or service innovations in the last 12 months. The independent variables in the model were: the organisation's culture, its size, branch, HPWP index and having plan in place for a time horizon of more than 3 months. Details of the model are presented in Table 2.

By analysing the model one may conclude that the hierarchical culture of an organisation, HPWP index value and having of a plan in place for a period longer than 3 months provide statistically significant predictions for the chances of introducing product and services innovations, while the sector and size of an organisation do provide statistically significant predictions as regards innovations.

Compared to the clan culture, which is the most popular type of organisational culture in Poland, the hierarchy culture increases chances of introducing innovations by 142%. Each subsequent level of the HPWP index increases the chances for implementing innovations by about half (46%), while having a plan – by 110%.

While the result concerning both the HPWP index and activity planning perspective may be considered to be in line with the predictions, the result for organisational culture is somewhat surprising.

It turns out that the culture of adhocracy, in the case of which we could expect a higher level of innovativeness of enterprises, does not increase their chances of being innovative. Why? The answer may lie in what is behind the hierarchy culture, and what is in fact a key element of any innovative enterprise. In order to implement an innovation, not only a good idea is necessary (very often organisations have more than enough of those), but also an efficient process of transforming an idea into market reality. In this key area, companies

that are results-oriented and managed through formal procedures may have advantage over energetic and entrepreneurial companies as well as those which build their cultures on 'family' values.

Table 2. Factors affecting the implementation of product or service innovations

Variables	B	Exp(B)	Standard error	Standard error
Organisational culture	Adhocracy / An energetic and entrepreneurial company	0.25	1.284	0.211
Organisational culture	Market / A results-oriented company	0.354	1.425	0.23
Organisational culture	Hierarchy / A company managed through formal procedures	0.883	2.417**	0.232
HPWP index		0.414	1.461**	0.06
Plan for a period longer than 3 months		1.016	2.105**	0.195
Organisation's size		0.16	1.197	0.225
Sector	Education	-0.285	0.752	0.328
Sector	Trade, accommodation, food and beverage services, support services	-0.037	0.964	0.33
Sector	Healthcare and social assistance	-0.307	0.735	0.415
Sector	Industry and mining	-0.061	0.941	0.31
Sector	Specialised services	0.017	1.017	0.347
Constant		-3.476	0.031**	0.404
Model summary				
Cox-Snell R^2	0.126			
Nagelkerke's R^2	0.182			
Sample size	915			

* Coefficient significant when $p < 0.05$.
** Coefficient significant when $p < 0.01$.

Source: own study based on the 2018 BKL Study. Introduction by an organisation of product or service innovations is a dependent variable.

Recommendations

Based on the analysis of high-efficiency HR practices presented in this Chapter and the results of analyses based on empirical materials collected as part of the Human Capital Study project, several cautious recommendations may be formulated, aiming to improve the quality of management in Polish companies.

Business environment

The entities that can directly influence the quality of management in business organisations are clearly these entities themselves. In order to improve HR management processes, companies may in particular:

- create training programmes focusing on the development of fundamental managerial and leadership skills, including employee motivation and engagement, recruitment and selection or strategic thinking and planning;
- build evidence-based personnel management systems, using as a lever such methods as employee' empowerment, setting targets or standardised recruitment, selection and development methods;
- establish relationships with public and research institutions dealing with the development of management skills, as regards managers' participation in numerous postgraduate programmes and/or creating programmes accommodating the specific needs of companies;
- benefit more from support from experienced companies offering training and development services;
- create a separate organisational unit to carry out studies on organisation, handle personal processes as well as develop and implement an integrated HR management strategy.

Public institutions

Local and central public institutions may serve as facilitators and a bridge between organisations with management expertise and organisations seeking support. They may, in particular:

- establish platforms for communication and knowledge sharing between educational institutions, universities and business. The platforms will enable companies with less developed managerial skills to adopt best models from organisations with more developed skills and to learn from experts in modern management studies;
- establish, run and monitor consortia of companies, educational institutions and training companies for implementing long-term development programmes to establish managerial skills and standardised HR systems;
- offer financial and institutional support for small and medium-sized enterprises in developing managerial skills by organising conferences, study visits, etc.;
- create special-purpose funds for the development of managerial skills in sectors most in need.

Science and education

Educational institutions and universities are particularity responsible for skills development of managers at Polish companies. They may, in particular:

- integrate mandatory and optional management courses held by practitioners with appropriate research and theoretical knowledge into their curricula;
- encourage their researchers to carry out studies in the field of business effectiveness and establish innovation models tailored to the specific needs of a given sector;
- launch MBA programmes and postgraduate studies in innovative HR management methodologies, including modern participation models and employee autonomy;
- develop cooperation with businesses by means of joint research programmes in the area of organisational innovations.

Competitive advantage of national economies is determined by innovation and competitiveness of the companies that form these economies (Porter, 2011). Competitive advantage is most effectively built through cooperation among public institutions, educational institutions and business community towards the development of the key organisation success factor – managerial skills – as regards highly effective personal practices, strategic planning and encouraging employees to participate in management processes.

Conclusions

The culture of organisations, the time horizon for their actions and the quality of HR management processes are all important but frequently disregarded aspects determining the innovativeness of companies. The companies that participated in this edition of the BKL Study differed significantly in this regard, which, in turn, translated into differences in the level of implementation of service and product innovations.

Do medium-sized and large enterprises perform better in terms of the quality of their HR management systems, organisational culture and strategic planning compared to smaller enterprises in Poland? Are economic and market developments reflected in organisations' HR management processes? How fast do the changes in management processes occur in Poland? These questions will be analysed in next edition of panel studies under the BKL Study.

Bibliography

1. Cameron, K.S., & Quinn, R.E. (2011). *Diagnosing and changing organizational culture: Based on the competing values framework.* John Wiley & Sons.
2. Combs, J., Liu, Y., Hall, A., & Ketchen, D. (2006). *How much do high-performance work practices matter? A meta-analysis of their effects on organizational performance.* Personnel Psychology, 59(3), 501–528.
3. Fitza, M.A. (2014). *The use of variance decomposition in the investigation of CEO effects: How large must the CEO effect be to rule out chance?* Strategic Management Journal, 35(12), 1839–1852.
4. Garvin, D.A., Wagonfeld, A.B., & Kind, L. (2013). *Google's Project Oxygen: Do Managers Matter?* Harvard Business School.
5. Huselid, M.A., & Becker, B.E. (1997). *The Impact High Performance Work Systems, Implementation Effectiveness, And Alignment with Strategy On Shareholder Wealth.* In *Academy of Management Proceedings* (Vol. 1997, No. 1, pp. 144–148). Briarcliff Manor, NY 10510: Academy of Management.
6. Lewin, K., Lippitt, R., & White, R.K. (1939). *Patterns of aggressive behavior in experimentally created "social climates".* The Journal of Social Psychology, 10(2), 269–299.

7. Mollick, E. (2012). *People and process, suits and innovators: The role of individuals in firm performance.* Strategic Management Journal, 33(9), 1001–1015.
8. Pfeffer, J. (1998). *Seven practices of successful organizations.* California Management Review, 40, 96–124.
9. Porter, M.E. (2011). *Competitive advantage of nations: creating and sustaining superior performance.* Simon and Schuster.
10. Prokopowicz, P., Rudnicki, S. i Pawlak-Mihułka, J. (2018). *Siła kultury innowacji.* Kraków: Freenovation.
11. Rynes, S.L., Colbert, A.E., & Brown, K.G. (2002). *HR professionals' beliefs about effective human resource practices: Correspondence between research and practice.* Human Resource Management, 41(2), 149–174.
12. Sanders, K., van Riemsdijk, M., & Groen, B. (2008). *The gap between research and practice: a replication study on the HR professionals' beliefs about effective human resource practices.* The International Journal of Human Resource Management, 19(10), 1976–1988.
13. Tamkin, P. (2004). *High performance work practices*. Brighton, England: Institute for Employment Studies.
14. Wasserman, N., Anand, B., & Nohria, N. (2010). *When does leadership matter?* W: *Handbook of leadership theory and practice.* Boston: Harvard Business Press, 27–63.

Employment and skills needs of medium-sized and large companies

Marcin Kocór

Surveys carried out under the BKL Study serve mainly to identify the employment and skills needs among Polish companies. Then, following comparison with the study among Polish working age population, the survey allows us to make informed conclusions on the possible mismatches as regards the employees sought after in specific occupations and skills shortages or deficits. Analyses of data from previous (2010–2014) editions of the studies show that problems with recruiting certain categories of employees and skills mismatches are quite clear and persistent. In these five reference years, relatively few employers, i.e. one in five, looked for employees. The structure of this demand remained roughly the same throughout this period; skilled workers, professionals and service and sales workers were the top most frequently sought after employees (Kocór, Strzebońska and Dawid-Sawicka 2015). About 75% of employers searching for employees in 2010–2014 indicated problems with finding the right employees mainly due to the fact that the candidates lacked relevant skills (Kocór, Strzebońska and Dawid-Sawicka 2015). Job-related occupational skills, interpersonal and self-organisation skills were the ones most sought after and, at the same time, most frequently missing (Czarnik, Kocór 2015; Kocór 2017). Four years have passed since the last measurement performed as part of the previous BKL Study in 2014. Therefore, the employer perspective on the current situation on the labour market should be presented. Have the recruitment needs of Polish companies changed under the current economic conditions and who are companies looking for at present? Can the labour market accommodate their needs by providing suitable employees? What are the recruitment challenges Polish companies face? Finally, what skills do employers need and do any related mismatches occur?

In this Chapter, we will try to answer these questions by referring to the BKL data from the 2018 study.

Employment needs of companies

One of the main questions employers were asked under the BKL Study surveys is whether their company is currently looking for employees. In the previous edition of the study, in 2010–2014, about 1 in 5 employers confirmed they were looking for employees. The willingness to hire quite clearly depended on the size of the company; the larger the companies, the more frequently they searched for new employees (Table 1). As in 2018, only medium-sized and large companies were covered by the study, only these companies may be included in order to compare data from both these periods. In this case, it can be said that there has been an increase in recruitment needs and currently more medium-sized and large companies are looking for employees than in 2010–2014. Data in Table 1 allow us to extrapolate this trend and conclude that also small companies, that is with less than 50 employees, have bigger recruitment needs now than four years before.

While discussing the recruitment needs of Polish companies, it is worth asking what factors may affect them, thus increasing or decreasing the willingness of medium and large companies to seek employees. To answer this question, a logistic regression analysis was carried out to see how the different factors included in the model impact the projected dependent variable, which in this case is the likelihood that a given company is looking for employees.

The advantage of the logistic regression is that it provides a synthetic view of the different variables and shows how individual variables impact the search for employees, while controlling for the remaining variables. Hence, when considering two companies, of which one is from the central region and the other, for example, from the southern region, it can be determined how the difference in locations affects the likelihood of looking for employees, with the values of all the other factors remaining the same. Apart from the fact that one company is located in central Poland and the other in southern Poland, all the other variables stay the same, *i.e.* they operate in the same sector, achieve the same level of profit, are equally innovative and have action plans going beyond 3 months. A statistically significant net effect result means that the impact is positive or negative as compared to other variables in the model. It should be noted, though, that the likelihood of looking for employees may depend also on other factors not included in the model.

Table 1. Percentage of companies with different employee numbers seeking new employees

Number of employees	2010	2011	2012	2013	2014	2018
1–49	16%	17%	17%	14%	17%	x
50–249	21%	22%	22%	18%	22%	32%
250+	43%	43%	42%	37%	45%	49%
50+	27%	28%	28%	23%	27%	35%
Total	16%	17%	17%	14%	17%	35%
Sample	15,840	16,158	15,999	15,999	16,013	1,036

Source: BKL Employer Study 2010–2014, 2018 BKL Employer Study.

The results in Table 2 show how the likelihood of looking for employees changes depending on the factors included. For a full logistic regression model with main parameters, see table A.1 in the Annex. As shown above, in the 3rd quarter of 2018, 35% of medium-sized and large companies in total looked for employees. When considering their sectors and as compared to the reference category, *i.e.* the construction and transport sector (38%), it may be concluded that healthcare and social assistance workers were more frequently sought after (48%). Significant employment difficulties and shortages in healthcare are the reasons behind such a large demand in this sector (Manpower 2019). In turn, relatively the fewest employees were sought after by companies in education (19%).

Table 2. Percentage of medium-sized and large companies looking for employees, based on logistic regression model (%)

Total	**35**
construction and transport	**38****
education	19**
trade, hospitality and food service	41
healthcare and social assistance	48*
industry and mining	38
specialised services	34
no innovations in the last 12 months	**30**
innovations in the last 12 months	46**
no profits in the last 12 months	**23**
profits in the last 12 months	39*
no action plans going beyond 3 months	**29**
action plans going beyond 3 months in place	40
central	**31**
southern	44*
eastern	32
north-western	51*
south-western	9**
northern	41

Asterisks indicate the significance of a logistical regression coefficient comparing a given category to the reference category (in bold): *p < 0.05; **p < 0.01. No asterisk means no significance (no effect in the population).

Source: Own study based on BKL Employer Study 2018.

The likelihood of medium-sized and large companies looking for employees is very clearly influenced by the development prospects of entities, with the other factors being controlled for. The companies that declared innovations and profits introduced and achieved in the previous 12 months showed greater tendency to look for employees (46% and 39%, respectively).

The geographical distribution of the likelihood of medium-sized and large employers looking for employees is quite interesting. Compared to the benchmark, that is the central region (Mazowieckie and Łódzkie voivodeships), and with the rest variables controlled for, employers from southern Poland (Śląskie and Małopolskie voivodeships) and from the north-western region (Lubuskie, Warmińsko-Mazurskie and Zachodniopomorskie voivodeships) more often looked for employees, 44% and 51%, respectively. Medium-sized and large companies from the south-western region (Dolnośląskie and Opolskie voivodeships) definitely less frequently looked for employees, with the likelihood at 9% and the other variables controlled for.

Occupational structure of demand and related mismatches

Apart from the general level of demand for employees, it is equally important to determine the structure of the demand by indicating occupations and positions where employers have vacancies. Table 3 shows the current results as compared to 2014 results. Again, it should be noted here that the 2018 study covered only medium-sized and large entities, so only these companies should be included in the comparison with data from the previous BKL Study.

Nevertheless, the four years that have passed since the study saw some interesting developments in the demand for specific employees. The demand for professionals has declined among medium-sized and large companies, particularly those with over 250 employees (a drop of nearly 15 pp vs 2014). At the same time, demand for manual workers, both skilled (such as operators and assemblers) and unskilled, has risen. This change is quite significant; while in 2014, manual workers were sought after by 50% of medium-sized and large employers looking for employees, in 2018 the value rose to 60%. The tendency is particularly strong among the largest entities with over 250 employees. However, we need to wait for further results to be able to determine whether or not this is a temporary change in a quite strong tendency over the previous BKL Study period (Kocór, Strzebońska and Dawid-Sawicka 2015). We should wait for the next results, especially since the chance to ask questions to the same entities again (as part of a panel sample) will allow to capture possible changes more precisely. At the moment, however, it may be concluded that medium-sized and large companies are equally in need of manual workers and specialised employees

(managers, professionals and associate professionals), who are sought after by 60% of employers looking for employees.

By comparing the recruitment needs of employers to potentially available employees, possible structural areas of this recruitment mismatch can be estimated. Two things must be kept in mind though. Firstly, because of the study methodology adopted in 2018, questions were asked only to medium-sized and large companies (with at least 50 employees). Therefore, the estimation excludes the needs of the smallest economic entities. Secondly, potential employees include both economically inactive people (the unemployed[1], graduates), as well as people in employment considering changing their job. Both categories will be included in the presented analyses.

Table 3. Demand structure for employees in individual occupations, by company size (in %)

Occupation	2018 50–249	2018 250+	2018 Total	2014 1–49	2014 50–249	2014 250+	2014 Total
1 Senior officials and managers	7	9	7	4	8	13	4
2 Professionals	35	39	35	21	40	53	22
3 Technicians and associate professionals	18	21	19	15	15	22	15
4 Clerical support workers	11	14	12	8	11	14	8
5 Service and sales workers	16	14	15	22	13	12	21
7 Craft and related trades workers	21	32	24	30	29	23	30
8 Plant and machine operators, and assemblers	16	25	18	14	15	15	14
9 Elementary occupations	16	21	17	8	7	6	8
N	284	73	357	2,485	110	61	2,656

Source: Own study based on BKL Employer Study 2014, 2018.

The data in Table 4 indicate that the unemployed primarily declare willingness to take on work in less specialised occupations, for example, as clerical support workers, service and sales workers and elementary workers. This is mainly because these people are usually

[1] Under the BKL Study, the status of an unemployed person is determined according to GUS's definition which states that the unemployed are the people who are not employed at the moment of the study, but are actively looking for work and are available to take up work in the next week.

less educated and in general their position on the market is worse. However, looking at the occupational structure of demand for employees, there may exist an employment gap in the case of both manual workers and, primarily, intellectual workers, in particular professionals.

Even taking into account the willingness of some employees to change their jobs, the demand for the top sought after occupations among employers may still not be met. It is also worth noting that those who declare willingness to change their jobs will probably look for a job in their current occupation or similar occupations in terms of responsibilities.

Table 4. Occupational structure among the unemployed and employees wishing to change their job (in %)

Occupation	Unemployed	Employed	Total
1 Senior officials and managers	3	4	4
2 Professionals	6	29	19
3 Technicians and associate professionals	11	13	12
4 Clerical support workers	25	6	14
5 Service and sales workers	16	13	14
7 Craft and related trades workers	11	17	14
8 Plant and machine operators, and assemblers	9	3	5
9 Elementary occupations	20	15	18
N	84	64	148

Source: Own study based on BKL Employer Study 2018.

A general summary of these labour demand and supply structures may be the employment mismatch indicator, used in the reports from the previous studies, *i.e.* the dissimilarity index showing the level of structural mismatch (Czarnik, Kocór 2015; Czarnik, Kocór and Strzebońska 2014)[2].

The dissimilarity index estimates approximately the smallest percentage of job-seekers who would need to look for work in other occupations in order for the employment needs of employers to be fully met.

In 2018, as for the needs of medium-sized and large companies this index was 39%, taking into account the unemployed job-seekers, 23% – when considering possible transfers among people willing to change their jobs, and 26% – when both groups are included. This means that for the current recruitment needs of employers to be met, approximately 1 in 4 job-seekers would have to look for a job in other occupations or retrain.

Demand for skills and related mismatches

When considering demand for skills and related mismatches, it should be noted that the skills classification employed in the current 2018 BKL Study differs from the one used in the previous 2010–2014 editions, and thus their results are not directly comparable.

[2] The dissimilarity index, proposed by Otis Dudley Duncan, is indicated as *D* and formally calculated using the following formula:

$$D = \frac{1}{2}\sum_{i=1}^{k}\left|\frac{b_i}{b} - \frac{w_i}{w}\right|$$

where *k* is the number of occupational categories covered, *b*i – the number of the unemployed seeking work in occupation *i*, *b* – the total number of the unemployed, *w*i – the number of vacancies in occupation *i,* and *w* – the total number of vacancies. The index value ranges from 0 to 100 (or from 0 to 1, if it is calculated to show proportions). 0 corresponds to a perfect match between the two percentage structures (labour demand and supply), while 100 indicates that people only seek jobs in occupations in which employers do not look for employees, *i.e* the two structures are completely different.

Table 5. Skills required by employers in the different occupational groups (major occupational categories ISCO 08, sub-major on the scale of 1 – irrelevant for the given occupation, to 5 – very important for the given occupation)

Skill	MANAG	PROF	TECH	CLER	SERV	SKILL	OPER	UNSKILL	Total
willingness to accept personal responsibility	4.54	4.36	4.32	4.18	3.84	3.96	3.77	3.64	4.18
time management skills, ability to meet deadliness	4.53	4.27	4.33	4.22	4.00	3.65	3.67	3.66	4.12
ability to organise oneself	4.45	4.32	4,14	4.26	3.92	3.80	3.55	3.78	4.10
good communication skills, ability to express oneself clearly	4.46	4.42	4.25	4.40	4.12	3.47	3.46	3.56	4.10
high interpersonal skills	4.29	4.34	4.21	4.36	3.89	3.51	3.42	3.62	4.03
ability to cope with stress	4.42	4.27	4.03	4.29	3.83	3.57	3.71	3.35	4.02
teamwork skills	4.27	4.19	3.90	4.13	3.92	3.74	3.59	3.53	3.98
learning new things	4.26	4.18	4.04	3.97	3.59	3.78	3.36	3.18	3.92
inventiveness, creativity	4.26	4.12	4.03	3.97	3.58	3.53	3.24	2.99	3.84
ability to analyse information and draw conclusions	4.38	4.15	4.01	4.08	3.35	3.30	3.05	2.96	3.81
fluency in Polish	4.35	4.20	3.91	4.06	3.17	2.70	2.82	2.66	3.67
computer, tablet, smartphone literacy	4.34	3.93	3.55	4.16	2.87	2.72	2.39	1.95	3.44
general physical fitness	3.02	3.11	3.31	3.13	3.43	3.80	3.82	3.82	3.35
conflict handling	4.24	3.76	3.33	3.20	2.97	2.49	2.31	2.27	3.28
simple calculation skills	3.89	3.36	3.43	3.88	3.03	2.67	2.68	2.41	3.22
ability to operate machines, tools and devices	3.26	2.90	3.47	2.86	2.54	3.96	3.52	2.92	3.21
coordinating the work of others	4.40	3.50	3.06	3.12	2.81	2.33	2.06	2.04	3.12
willingness to work non-standard hours	3.32	3.00	3.18	2.89	2.94	3.17	3.22	2.98	3.11
using specialist computer programs	3.99	3.55	3.23	3.10	2.48	2.55	2.17	1.77	3.10
administrative work and record keeping	4.22	3.47	3.27	3.76	2.91	2.15	2.07	1.66	3.10
international cooperation	3.42	3.16	2.79	3.22	2.89	2.40	2.07	2.40	2.87
advance mathematical calculation skills	3.69	2.95	2.83	2.50	2.19	1.97	1.79	1.56	2.64
willingness to make frequent trips and change workplaces	3.17	2.60	2.82	2.26	2.21	2.47	2.56	1.88	2.62
assembly and repair of machines and technical devices	2.39	2.16	2.65	1.74	1.76	3.72	2.90	2.21	2.51
artistic skills	2.39	2.45	2.02	2.05	2.03	1.87	1.62	1.53	2.12
N	163	314	123	41	59	130	125	56	1,015

MANAG: managers, PROF: professionals, TECH: technicians and associate professionals, CLER: clerical support workers, SERV: personal service and sales workers, SKILL: skilled workers, OPER: plant and machine operators, and assemblers, UNSKILL: unskilled workers.

Source: Own study based on BKL Employer Study 2018.

Although some of the skills overlap[3], the current classification is much more detailed.

According to employers, and regardless of the key occupations asked about, the most sought after skills include: **self-organisation and ability to meet deadliness** (willingness to accept personal responsibility, time management and meeting deadliness, ability to organise oneself, ability to cope with stress), **interpersonal skills** (good communication skills, ability to express oneself clearly, high interpersonal skills, team work skills, fluency in Polish) and **cognitive skills** (learning new things, inventiveness, creativity, ability to analyse information and draw conclusions).

In assessing the usefulness of individual skills, a rather specific division into intellectual and manual occupations can be observed. In the case of the former ones, employers definitely more often value the three general categories of skills, *i.e.* self-organisation, interpersonal and cognitive skills. In manual occupations, these skills are also important but not as much as in intellectual occupations. In addition, general physical fitness and technical skills: ability to operate machines, tools and devices, assembly and repair of machines and technical devices are also regarded as highly useful in manual occupations.

When looking at the different occupations, it is difficult to pinpoint those requiring specific skills. Managers are an exception. In this case, apart from the relatively highest expectations as regards the three above-indicated categories of skills, employers also require a markedly higher than in other occupations level of the following skills: conflict handling, simple calculation skills, coordinating the work of others, using specialist computer programs and administrative work and record keeping.

It should also be noted that, despite the change in skills classifications used in the BKL Study now and in 2010–2014, the requirements of employers as regards the most useful vocational skills have remained largely the same. In the previous editions of the study and in the 2018 edition, in addition to the specific vocational skills, employers considered self-organisational,

[3] The skills the wording of which is the same in the 2010–2014 and 2018–2023 editions include: ability to analyse information and draw conclusions, fluency in Polish, general physical fitness and artistic skills. The following skills were formulated slightly differently in the two editions (the text shown in brackets are the skills as formulated in 2010–2014 surveys): ability to organise oneself (self-organisational skills, initiative, keeping deadliness), administrative work and record keeping (organisation and execution of office work). The questions regarding the other skills were new and more detailed.

interpersonal and cognitive skills to be the ones most useful (Kocór, Strzebońska, Dawid-Sawicka 2015).

The reports and analyses summing up the previous 2010–2014 BKL Studies compare the structure of the skills needed by employers with the structure of the skills based on self-assessments of the unemployed and/or job-seekers in particular occupations. This way, it could be estimated which skills needs of employers could possibly be met by hiring inactive people or people thinking about changing their job. Such analyses proved helpful for employers seeking employees. By hiring people with required skills, such employers could tackle existing skill shortages. However, skills mismatches may take various forms from skills surpluses/shortages to skills gaps (Kocór 2019). A skills surplus or shortage is when the requirements of employers as regards knowledge, abilities or qualifications are, respectively, higher or lower than the skills of the employees present in the labour market. In turn, a skills gap is when the employees in a given company or sector as a whole have lower skills than required. Therefore, skills surplus or shortage refers to individuals, *i.e.* it is the individuals whose level of skills is too low or too high, while the skills gap refers to companies, sectors or the economy as a whole.

Table 6. Skills self-assessment among employees in the different occupational groups (major occupational categories ISCO 08, sub-major on the scale of 1 – irrelevant for the given occupation, to 5 – very important for the given occupation)

Skill	MANAG	PROF	TECH	CLER	SERV	SKILL	OPER	UNSKILL	Total
ability to organise oneself	4.46	4.21	4.12	4.19	3.88	4.03	4.11	3.63	4.10
high interpersonal skills	4.25	4.08	4.01	4.15	4.15	4.04	3.98	3.98	4.07
teamwork skills	4.22	4.09	4.11	4.04	3.95	4.03	3.93	4.01	4.05
willingness to accept personal responsibility	4.48	4.12	4.13	4.02	3.87	4.06	3.85	3.61	4.04
good communication skills, ability to express oneself clearly	4.33	4.12	3.99	3.99	4.11	3.89	3.91	3.73	4.03
simple calculation skills	4.29	4.31	4.12	4.07	3.84	3.73	3.93	3.39	4.01
learning new things	4.29	4.19	4.08	3.96	3.74	3.86	3.70	3.55	3.96
time management skills, ability to meet deadliness	4.28	4.08	3.93	3.88	3.81	3.75	3.83	3.59	3.92
fluency in Polish	4.22	4.24	3.95	3.91	3.70	3.56	3.58	3.17	3.86
ability to analyse information and draw conclusions	4.22	4.21	3.99	3.91	3.50	3.61	3.51	3.09	3.82
inventiveness, creativity	4.06	3.95	3.91	3.76	3.61	3.82	3.58	3.29	3.79
computer, tablet, smartphone literacy	4.30	4.18	4.00	4.00	3.52	3.37	3.45	2.62	3.77
ability to cope with stress	4.15	3.75	3.68	3.49	3.49	3.62	3.68	3.36	3.67
conflict handling	3.90	3.55	3.69	3.44	3.31	3.23	3.29	2.83	3.44
general physical fitness	3.56	3.37	3.42	3.24	3.34	3.65	3.59	3.21	3.43
coordinating the work of others	4.26	3.45	3.51	3.28	3.11	3.01	3.05	2.51	3.30
ability to operate machines, tools and devices	3.46	3.09	3.43	3.32	2.66	3.76	3.74	2.84	3.29
international cooperation	3.78	3.43	3.29	3.25	3.07	3.10	3.26	2.88	3.27
willingness to work non-standard hours	3.48	3.07	3.09	2.94	3.25	3.23	3.37	3.21	3.19
administrative work and record keeping	3.95	3.62	3.67	3.62	2.78	2.35	2.51	2.06	3.14
willingness to make frequent trips and change workplaces	3.60	3.16	2.92	2.81	2.81	2.84	3.13	2.89	3.02
using specialist computer programmes	3.64	3.54	3.42	3.12	2.48	2.47	2.37	1.62	2.95
advance mathematical calculation skills	3.31	3.13	2.94	2.89	2.57	2.46	2.49	1.95	2.78
artistic skills	2.58	2.90	2.67	2.65	2.57	2.20	2.41	2.11	2.56
assembly and repair of machines and technical devices	2.48	2.01	2.34	2.36	1.81	3.18	3.03	2.05	2.40
N	69	192	124	70	110	131	88	49	834

MANAG: managers, PROF: professionals, TECH: technicians and associate professionals, CLER: clerical support workers, SERV: personal service and sales workers, SKILL: skilled workers, OPER: plant and machine operators, and assemblers, UNSKILL: unskilled workers.

Source: Own study based on the BKL Population Study 2017, 2018.

First, the structure of skills shortage or surplus in Poland should be presented. To this end, the requirements of employers as regards the needed level of vocational skills in a given occupation have been compared to the level of skills among employees hired at particular positions according to their self-assessment (comparison based on major occupation groups according to ISCO 08 classification, with the groups marked with one-digit codes)[4]. Table 6 presents the results of skills self-assessments of employees.

All in all, it may be said that the structure of the skills self-assessments of employees corresponds to the structure of demand for skills. This does not mean that the level of required skills matches the level attained by employees; such a 'matching' structure is presented below in Table 7. However, employees relatively highly assess the categories of skills most useful at work, *i.e.* **interpersonal, self-organisational and cognitive skills**. Yet, the emphases are distributed differently, which means that the level of the given skill differs from one occupation to another. This is more evident once the two structures are compared – the demand and the skills acquired.

The mismatch structure as regards the different skills was estimated by comparing data on the structure of needs declared by employers with employees' self-assessments of the skills covered (data in Tables 5 and 6). However, a direct comparison between employers' requirements and the level of skills declared by employees may be misleading. For example, a teacher may believe his general physical fitness to be high but without a reference to a manual work of, say, a locksmith this information will hardly be useful in the context of working conditions of this manual occupation. Therefore, to make the two results more true to life and before their comparison, the employers' requirements and the employees' self-assessments should be compared to the requirements and self-assessments for other skills in other occupations. The resulting requirements of employers regarding the level of skills can be read as relative to other occupations, but also to other skills. For example, employers

[4] As population surveys were carried out in 2018 on a panel sample, the respondents were asked to assess how their skills have changed as compared to the 2017 survey rather than to self-assess their current level of skills. Thus, the 2017 skills self-assessments served as a starting point and were then modified according to the level of change declared by respondents. If the respondents declared a major increase in their skills, then 1 was added to the base result. If the increase was only minor, then 0.5 was added to the 2017 skills level. Similarly, in the case of a major or minor decrease in skills 1 or 0.5, respectively, was deducted. If the respondents reported no changes in their skills, then the 2017 level was taken into account without any adjustments. Next, the results were compared against the original 5-point scale based on empirical distributions.

require professionals to score 4.15 (on a 5-point scale) in 'Analysing information and drawing conclusions'; yet, this information in itself is hardly meaningful. However, if we know that the professionals are required to score an average of 3.63 in all skills, then we can conclude that in relation to the other skills 'Information analysis and drawing conclusions' is rated higher by employers (the difference being 0.52). Still, this does not show whether or not a higher level of this skill is required in other occupations. Given that, in general, for all the jobs the average level of the skill is 3.66 (the difference is 0.49), then it can be said that compared to other occupations professionals should demonstrate higher ability to analyse information and draw conclusions.

This same 'double centering'[5] approach should be used again when drawing conclusions about the level of employees' skills, and only then can the results for skills demand and supply be compared, as presented in Table 7.

Positive values (red) mean a relative surplus of skills compared to employers' requirements, while negative values (blue) mean a relative deficit of possessed skills as compared to employers' requirements. The higher the cell value, the greater the surplus/deficit of a given skill in a given profession.

[5] Double centering, in the area of both occupational and skills categories, shows how significant a skill is in a given area as compared to other skills and how significant it is in a given profession as compared to other professions. Mathematically, this activity may be described by the following formula:

$$c_{kz} = x_{kz} - \bar{x}_z - \bar{x}_k + \bar{x}$$

In this equation, $\bar{x}_{kz}$ means the average level of a skill required in *z* profession, $\bar{x}_z$ is the average level of all skill-related requirements in *z* profession, $\bar{x}_k$ – the average level of the requirements for *k* skills in all professions, and $\bar{x}$ – the general level of all requirements among the total of professions. After double centring, zero value means average level of requirements or self-assessment examined in reference to all skills and professions altogether.

Table 7. Skills balance as a difference between self-assessment and requirement (double-centered data)

Skill	MANAG	PROF	TECH	CLER	SERV	SKILL	OPER	UNSKILL
willingness to accept personal responsibility	0.19	-0.05	-0.05	0.05	0.08	0.03	-0.18	-0.07
time management skills, ability to meet deadliness	0.09	0.09	-0.17	-0.04	-0.05	0.12	-0.02	-0.02
ability to organise oneself	0.15	-0.03	0.01	0.03	-0.10	0.05	0.19	-0.30
good communication skills, ability to express oneself clearly	0.07	-0.16	-0.17	-0.25	-0.01	0.30	0.14	0.08
high interpersonal skills	0.03	-0.25	-0.24	-0.18	0.12	0.28	0.11	0.14
ability to cope with stress	0.20	-0.11	0.01	-0.36	-0.07	0.20	-0.07	0.19
teamwork skills	0.00	-0.11	0.15	-0.07	-0.12	0.02	-0.12	0.24
learning new things	0.10	0.01	0.00	0.02	0.01	-0.17	-0.11	0.15
inventiveness, creativity	-0.04	-0.07	-0.07	-0.09	-0.01	0.13	-0.02	0.17
ability to analyse information and draw conclusions	-0.06	0.10	-0.03	-0.11	0.04	0.09	0.04	-0.06
fluency in Polish	-0.25	-0.14	-0.18	-0.30	0.21	0.43	0.13	0.10
computer, tablet, smartphone literacy	-0.29	-0.06	0.09	-0.45	0.20	0.08	0.30	0.13
general physical fitness	0.74	0.40	0.20	0.27	-0.09	-0.27	-0.55	-0.70
conflict handling	-0.48	-0.41	0.11	0.06	0.00	0.28	0.32	0.13
simple calculation skills	-0.20	0.29	-0.02	-0.45	0.01	0.14	0.14	0.09
ability to operate machines, tools and devices	0.28	0.21	-0.07	0.51	0.00	-0.44	-0.21	-0.29
coordinating the work of others	-0.31	-0.28	0.18	-0.04	-0.07	0.20	0.31	0.01
willingness to work non-standard hours	0.23	0.08	-0.12	0.09	0.18	-0.18	-0.29	0.01
using specialist computer programmes	-0.14	0.14	0.30	0.20	0.01	-0.18	-0.10	-0.23
administrative work and record keeping	-0.21	0.15	0.35	-0.12	-0.27	-0.06	-0.01	0.17
international cooperation	0.09	-0.06	0.12	-0.28	-0.29	0.11	0.40	-0.08
advance mathematical calculation skills	-0.47	0.03	-0.09	0.26	0.09	0.08	0.09	0.01
willingness to make frequent trips and change workplaces	0.10	0.17	-0.34	0.18	0.07	-0.28	-0.28	0.39
assembly and repair of machines and technical devices	0.32	0.01	-0.19	0.81	0.07	-0.63	-0.16	-0.22
artistic skills	-0.13	0.06	0.22	0.24	0.01	-0.31	-0.05	-0.03

To make this balance easier to read, let us take a look at the skill 'ability to operate machines, tools and devices' for clerical support workers. A positive value means that they have a surplus of this skill. It is a relative surplus, as it refers to the assessment of all other skills of clerical support workers, and also to the assessment of this skill as conducted by employees in other professions. In this case, the surplus results from the fact that employers consider such skills to be relatively less useful in office work compared to other skills (e.g. being able to do relatively simple calculations), but also compared to other professions (these skills are valued higher in the case of skilled workers). On the other hand, clerical support workers themselves rated the level of their skills regarding the operation of machines, tools and technical equipment as relatively high compared to other skills they possess, as well as compared to the representatives of other professions.

Assessing in this way the balance of skills used in the survey broken down by major professional categories, one may formulate a few conclusions concerning the structure of mismatches. As in the previous editions of the BKL, a certain division into the intellectual and physical professions may be observed (Czarnik and Kocór 2015). In intellectual professions, employers put more emphasis on the usefulness of self-organisation, interpersonal and cognitive skills, and – although these are the most desired in every profession in general – the self-assessments by white-collar employees as regards their skills of this kind seem to be relatively lower, and thus a small deficit in this are is visible. In contrast, in manual work, these skills are less useful, and workers of various specialisations, although they rate them relatively lower compared to their other skills, generally have a surplus of these. This specific difference in balancing the different skills between intellectual and physical professions is even more pronounced in the case of the two other skills: physical fitness and computer, tablet and smartphone literacy. Physical fitness is less useful in intellectual professions than in physical work, but managers, professionals, technicians and associate professionals as well as clerical support workers assess their level of this skill as relatively high, and that is why there is a surplus of it in their case. In turn, in manual jobs, physical fitness is very important, and in view of the high requirements of employers, it turns out that the employees have a deficit of it.

The opposite is true for the ability to operate modern electronic devices (computer, tablet and smartphone). This skill is particularly important in intellectual professions and it turns out that workers in these professions show a deficit in this area (except for technicians and associate professionals). In blue-collar jobs, according to employers, this skill is relatively less

useful and in view of the quite high self-assessment of this skill by persons employed in such professions, it turns out that they have a surplus of this skill.

Another quite characteristic difference between the representatives of white-collar and manual professions is the willingness to work non-standard hours and willingness to make frequent trips and change jobs. White-collar workers (with the exception of technicians and associate professionals) have a surplus of both these skills, meaning they evaluate their availability relatively higher than required by employers in these professions. In turn, manual workers (with the exception of unskilled workers) have a deficiency of such availability, which means that they are relatively less willing to change working hours and jobs than expected by employers in these professions.

A **synthetic indicator** of mismatch may serve as a summary of the presented balance of skills, giving an overview of the current skills mismatch. The mismatch estimates presented in Table 8 have been calculated as the average difference between the average level of employers' requirements for a given skill in particular professions and the average level of assessment of the possessed skills by those working in a given profession[6]. The average level of skills possessed was deducted from the average level of requirements – a positive value means a surplus of the skills possessed compared to the required level in a given profession (skills surplus), and a negative values means possessing a lower level of skills than required in a given profession (skills deficit).

The percentage values obtained indicate what percentage of the people employed have on average a higher level of skills compared to employers' needs in the case of a surplus of these skills (taking into account all skills required by employers and at the same time employees' self-assessment concerning these skills), what percentage have on average skills that are tailored to employers' needs, and what percentage of employees have on average a lower level of skills compared to employers' requirements. As a result, it is possible to estimate what part in general, and in this case what part of employees, have skills matching employers' requirements, and what part have a surplus or deficiency of these in such a breakdown.

[6] Details on this measure together with indication of its advantages and disadvantages were discussed in: Kocór 2019.

Table 8. Level of employee skills mismatch (%)

Year	skills deficiency	skills match	skills surplus	Sample
2,010	17	69	14	7,522
2,011	15	71	15	7,477
2,012	16	70	14	7,546
2,013	15	69	16	7,565
2,014	13	68	18	7,662
2,018	14	70	15	834

Note: for 2010–2014, the estimates concern all entities, however, due to the structure of the sample, the estimates from 2018 concern medium-sized and large companies only.

Generally, it may be concluded that in 2018, the level of skills mismatch was slightly lower than in the previous years, however, this may result from the fact that in 2018 the survey included only medium-sized and large companies. Other analyses show that these entities employ workers possessing more appropriate skills (Kocór 2019). That is why conclusions concerning this difference caution should be drawn carefully, and one should wait for the future editions of the Study.

Conclusions

In the four years that have passed since the last edition of the BKL Study in 2014, there have been some changes in the labour market which consist mostly in increased recruitment difficulties (Manpower 2018).

These growing recruitment challenges are also shown in the current edition of the BKL survey, as indicated by 68% of employers in companies with more than 49 employees compared to 58–67% in 2010–2014. At the same time, the percentage of companies seeking employees has grown, however, it is hard to say whether it is a result of these recruitment difficulties or their cause. To answer this question, we will have to wait for the future editions of the Study.

However, in this light, general skills-related requirements and their structure did not change. Although the classification of skills used in BKL Study was changed between the two editions

(it was made more precise), the same categories of skills are still relevant to employers for key positions in companies: self-organisational, interpersonal and cognitive.

The importance attached to these skills – and this is actually true regardless of the position – is also shown by other studies from that period (CEAAP and IDEA Institute 2019; Manpower 2015, 2018). Therefore, it may be concluded that possessing these skills is essential for finding a job in Poland. Of course, this does not mean that professional skills do not matter – job-specific knowledge, skills, abilities or attitudes are necessary, but it is the general skills that seem to be the most important to employers.

Similarly to the skills requirements, also the nature of the skills mismatch on the Polish labour market seems to be stable. Its overall size remains at a similar level – and roughly 15% of the employees have either too high skills compared to the requirements of the job (skills surplus) and the same percentage possess too low skills (skills deficit). The structure of the skills mismatch resembles the one from the previous period of the BKL survey – it is determined primarily by the nature of work, broken down by intellectual and manual jobs. White-collar employees have a relatively higher deficit of the key self-organisational, interpersonal and cognitive skills. On the other hand, in the case of manual workers, a deficit can be observed as concerns their willingness to work non-standard hours and change jobs.

Bibliography

1. **CEAAP and Instytut IDEA. 2019.** *Analiza zapotrzebowania na kompetencje w gospodarce i na rynku pracy wraz z badaniem wartości docelowej wspólnego wskaźnika długoterminowego POWER w obszarze szkolnictwa wyższego.* Warszawa.
2. Czarnik, Szymon and Marcin Kocór. 2015. *Zawody i kompetencje – konfrontacja popytu z podażą. Pp. 19–38 in (Nie)wykorzystany potencjał. Szanse i bariery na polskim rynku pracy. Vol. 2015, edited by J. Górniak. Warszawa: Polska Agencja Rozwoju Przedsiębiorczości.*
3. *Czarnik, Szymon, Marcin Kocór, and Anna Strzebońska. 2014. Bilans potrzeb pracodawców i możliwości rynku pracy w sytuacji dekoniunktury. ss. 19–47 in Kompetencje Polaków a potrzeby polskiej gospodarki, edited by J. (red.)* Górniak. Warszawa: Polska Agencja Rozwoju Przedsiębiorczości.
4. Kocór, Marcin. 2017. *Skills Shortages and Mismatches on the Polish Labour Market and Public Policy Recommendations.* Zarządzanie Publiczne 4(42):38–52.

5. Kocór, Marcin. 2019. *Nadwyżka czy deficyt kompetencji? Przyczyny i konsekwencje niedopasowania na rynku pracy.* Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
6. Kocór, Marcin, Anna Strzebońska, and Monika Dawid-Sawicka. 2015. *Rynek pracy widziany oczami pracodawców.* Warszawa.
7. Manpower. 2015. *2015 Talent Shortage Survey*
8. Manpower. 2018. *Solving the Talent Shortage*
9. *Manpower. 2019. Niedobór talentów w branży medycznej*

Annex

Table A.1 Factors influencing companies' search for employees (results of modelling using logistic regression)

Variables		B	Exp(B)	Stand. error
Main sector of operation (ref. construction and transport)	education	-0.901	**0.406****	0.347
Main sector of operation (ref. construction and transport)	trade, hospitality and food service	0.415	**1.514**	0.307
Main sector of operation (ref. construction and transport)	healthcare and social assistance	0.833	**2.301***	0.403
Main sector of operation (ref. construction and transport)	industry and mining	-0.112	**0.894**	0.292
Main sector of operation (ref. construction and transport)	specialised services	-0.149	**0.861**	0.328
Product or service innovations during the last year	yes	0.740	**2.096****	0.227
Profit during the last year	yes	0.497	**1.643***	0.229
Plans to innovate during the next year	yes	-0.402	**0.669**	0.223
Having an action plan for a period beyond 3 months	yes	0.378	**1.459***	0.188
Region acc. to GUS classification (ref. central)	southern	0.650	**1.915***	0.258
Region acc. to GUS classification (ref. central)	eastern	0.464	**1.590**	0.251
Region acc. to GUS classification (ref. central)	north-western	0.628	**1.874***	0.267
Region acc. to GUS classification (ref. central)	south-western	-1.197	**0.302****	0.449
Region acc. to GUS classification (ref. central)	northern	0.431	**1.539**	0.240
Constant		-1.519	**0.219***	0.336
Model summary				
Cox-Snell R^2				0.124
Nagelkerke's R^2				0.171
Hosmer-Lemeshow test				p=0.647
Sample size				1,035

Significant coefficient: * with $p < 0.05$, ** with $p < 0.01$.

Source: Own study based on BKL Employer Study 2018.

The dependent variable, that is the probability of a company searching for employees, can take two values: 1 – if a company is looking for employees at the time of the survey or 0 if not.

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